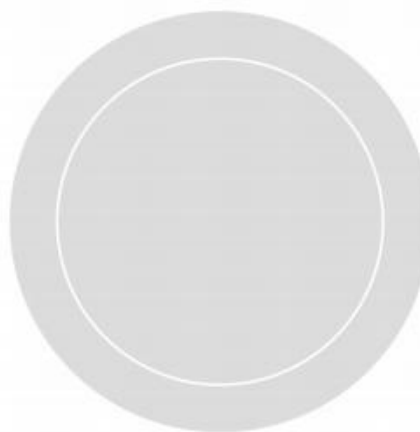


CFriend[®]

FUSE MANUAL

FRIENDSHIP EVERYWHERE,
TRUST ANYTIME





ABOUT CFRIEND

CFriend Electric(CFreind for short) is always adhering to the core philosophy of "Friendship, Trust". We devote to the power protection industry for several years and focusing on the manufacturing of excellent low and high voltage fuses. CFriend is perceiving social responsibility and striving for the usage of safer, cleaner, and more efficient power energy to ensure the safety and enterprise interests of the power users, which is the goals that all CFriend staffs are always pursuing. To realize these goals and stimulate sustainable development, we're always make the balance among enterprise development, social progress and environmental protection, trying our best to make everyone get the benefits. CFriend is paying more attention to the environmental protection in all aspects, such as how to design and manufacture excellent products, which kind of practical and delicate service we should offer to our customers, how to cooperate with excellent suppliers, how to evaluate risks and chance, and how to fulfill social responsibility. Besides, CFriend has formed the habit of interactivity between community and all the staffs, regarding safe, friendly, pleasant working conditions, observing the health, safety, and growth of staffs as the task. In this fast-changing times, "Friendship Everywhere, Trust Any time" is one of the most sincere confession.



Inheriting many years of professional technology and service experience, cfriend has outstanding achievements in power grid, new energy photovoltaic, wind power, electric vehicle, metallurgy, rectifier inverter, communication power supply, railway, large construction machinery and other industries. In addition, cfriend develops the habit of interaction with the society and all colleagues, and takes the pursuit of safety, fraternity and beautiful occupational environment as its own duty to constantly observe the concerns of employees' health, safety and growth. In this fast changing era, cfriend's most sincere confession is that "friendship is unlimited, it can accommodate all over the world; choose no regret and trust for life".

IATF 16949:2016 is a technical specification for the international automobile industry, which is based on ISO9001 and added to the technical specification of automobile industry. This specification is completely consistent with ISO9001:2000, but it is more focused on defect prevention and reducing quality fluctuation and waste in auto parts supply chain. The certification means that yourong electrician (Kunshan) factory has taken the lead in the qualification of auto parts suppliers. It also marks that cfriend has reached a new level in enterprise management and quality control, and also provides favorable guarantee for better service to the majority of new energy vehicle customers.

In the face of the fast changing new era, cfriend will continue to take root in China's fertile soil, face the world, constantly improve itself with a more positive attitude, serve customers delicately, and make efforts to give back to the society.



COMPANY QUALIFICATIONS





TABLE OF CONTENTS

Pboy-EV series

- 10 -Pboy-American standard series
 - 19 -Pboy-BS88 series
 - 25 -Pboy-European square body series
 - 32 -Pboy-Base series
-

Solar PV series

- 35 -PV series
 - 40 -PV 1500Vdc series
-

Common (High speed) fuse series

- 46 -French standard cylindrical series
-

Common fuse series

- 49 -NH fuse
-

High speed fuse series

- 53 -North America Series
 - 57 -American standard base
 - 58 -Fuses for automobiles
 - 59 -BS88 series
 - 63 -European square body series
-

Base series

- 84 -European Square body series
 - 85 -Base series
-



CFriend-- FOCUS ON HIGH AND LOW VOLTAGE FUSES

CUSTOMER WILL ADD VALUE BASED ON OUR PRODUCT AND SERVICE
SOCIETY AND STAFF WILL BENEFIT FROM OUR DEVELOPMENT



So far, DC fuses for EV use only (Pboy series) include American standard (EVAE, EVXE, EVHE, EVPE, EVGE and etc.), British standard (AET, AMT, PEF, GEF, PMF and etc.), square body (DFH, DFN, DGH, DGC and etc.) .

Pboy - EV FUSE

Pboy series are not only for the regular requirements, but also for the special customize requirements from customers.

Under the situation of global energy conservation and clean energy, many countries have adjusted development strategy one by one, accelerating the distribution in new energy industry and global industrial ecology is reconstructing. EV industry will be the first to be involved in, several famous vehicle manufacturers have invested large amount of capital and technical resource in EV market, moreover, relevant countries have proposed "Schedule for forbidden to the sales of fuel vehicles". To grab this opportunity, CFriend has issued the development strategy for new energy products few years earlier. In recent years, CFriend has greatly invested in R&D for the protection products such as EV, HEV and etc., developing the fuses which are applicable in EV and charging piles(stations).

With excellent material and advanced technique, products from CFriend have great performance, CFriend offers plenty of fuses and guarantee all the products that we supplied.

Pboy series continue to make the product design more creative(having multiple national patents for design of fuse element assignment, spot welding for contacts)

Material selection(99.95% pure Ag; class H tube for high-temperature, anti-flame and vibration; one time forming contacts; suitable ratio of quartz sand)

Process control(automatic fuse element punching guarantees the consistence of fuse element; full monitoring for automatic equipment and high precision instrument and SOP guide)

Product control(unique tracking information for each piece of "quality tracking code",which will stop the fake product to damage our brand; using high temperature and corrosion resistance printing technique in the product model printing,which will ensure the information useful under severe situation; full process test for the products).

At present, we have DC voltage class for your choice, such as 125Vdc, 220Vdc, 500Vdc, 660Vdc, 750/800Vdc and 1000Vdc. Pboy series conform to GB13539.1,IEC60269-1,GB/T13539.4/IEC60269-4,ELV, ISO8820-1/8,GB/T31465.1/6,JASOD622, RoHS 2.0.



WHAT PBOY ENJOYS?

Pboy series enjoy advanced technology in innovative design(array structure of fuse element, multiple patents for contacts spot-welding), material selection (99.95% pure Ag fuse element, grade H high temperature resistance, -resistant tube) and process control (automatic fuse element punching equipment, high precision instrument, full-check in performance). International standard DC voltage class can be chosen , such as 125Vdc, 220Vdc, 500Vdc,660Vdc, 750Vdc, 800Vdc,1000Vdc.The products conform to IEC60269-1,GB13539.1,IEC60269-4,JASOD622,ISO8820-1/8,GB/T31465.1/6,RoHS.

FEATURES OF PBOY SERIES:

Full range protection gR/EV characteristics.

More accurate and faster fusing time, higher breaking capacity.

Professional choice for DC system requirement, low temperature rise and power loss.

Multiple way of mounting:(flush bolt-on,axial bolt-on) .

Resistant for 240°C high temperature and vibration.

Approved by CE, CB,CCC,UL.

PERFORMANCE DESCRIPTION

1.Operation Environment

*Operation Temperature:-40°C~+85°C.

*Installation Site:Altitude is no more than 3000m.

*Atmospheric conditions:Atmosphere is clean, the relative humidity is no more than 50%, when it reached at the highest temperature of 40°C; when at lower temperature, the relative humidity is higher.

For example, in 20%, the relative humidity can reach 90%,secondary condensation may happen occasionally because of the change of temperature.

2.Protection Category:gR/EV

3.Breaking Capacity:50kA(125Vdc、220Vdc);20kA(500Vdc、660Vdc/
750Vdc、800Vdc、1000Vdc)



Pboy- EVAU/EVAE/EVXU/EVXE/EVHH/EVHE /EVPE/EVGE

DC High Speed Fuse

EVAU-500S

- S: Compact Type
A: Standard Type
- Current
- E: US-Type mounting
U: Axial mounting
H: Flush End Mounting
- A: 125 Vdc
X: 220 Vdc
H: 500 Vdc
P: 660 Vdc/750 Vdc
G: 800 Vdc
- For electric vehicle use only

【FEATURES】

- Fuse element of pure Ag, more faster and more accurate.
- Automatic punching for fuse element, digital system control, higher precision
- Several control process for guaranteeing the conformity
- Unique spot-welding process, lower contacting resistance
- Grade H imported tube resisting high temperature and corrosion, more safe and reliable
- Integrated contacts, lower contacting resistance , low temperature rise and power loss
- Thicken layer of copper contacts, 48 hrs of salt-spray test
- High precision quartz sand, unique extinction, superior extinction
- gR/EV characteristics, full range protection
- Unique "quality tracking code" for each product

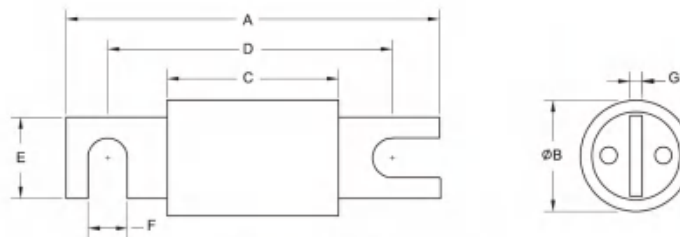


EV axial mounting 125Vdc 5/500A

[SELECTION TABLE]

Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t(A ² S)	Total I ² t(A ² S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t(A ² S)	Total I ² t(A ² S)	Power loss (W)
EVAU-A	5	EVAU-5A	RN222490	2	15	1.5	EVAU-S	5	EVAU-5S	RN222495	2	15	2
	10	EVAU-10A	RN222500	5	20	2		10	EVAU-10S	RN222505	5	20	2.5
	15	EVAU-15A	RN222510	15	55	2		15	EVAU-15S	RN222515	15	55	2.5
	20	EVAU-20A	RN222520	30	150	3		20	EVAU-20S	RN222525	30	150	3.5
	25	EVAU-25A	RN222530	35	240	3.5		25	EVAU-25S	RN222535	35	240	4
	30	EVAU-30A	RN222540	65	350	3.7		30	EVAU-30S	RN222545	65	350	4.2
	35	EVAU-35A	RN222550	75	550	4.1		35	EVAU-35S	RN222555	75	550	4.6
	40	EVAU-40A	RN222560	85	700	4.7		40	EVAU-40S	RN222565	85	700	5.2
	50	EVAU-50A	RN222570	150	1000	5.3		50	EVAU-50S	RN222575	150	1000	5.8
	60	EVAU-60A	RN222580	280	2100	6		60	EVAU-60S	RN222585	280	2100	6.5
	70	EVAU-70A	RN222590	500	4000	6.8		70	EVAU-70S	RN222595	500	4000	7.3
	80	EVAU-80A	RN222600	700	6500	7.5		80	EVAU-80S	RN222605	700	6500	8
	90	EVAU-90A	RN222610	900	8500	7.7		90	EVAU-90S	RN222615	900	8500	8.2
	100	EVAU-100A	RN222620	1300	12000	8.9		100	EVAU-100S	RN222625	1300	12000	9.4
	125	EVAU-125A	RN222630	1950	20000	10		125	EVAU-125S	RN222635	1950	20000	10.5
	150	EVAU-150A	RN222640	2900	27000	11.8		150	EVAU-150S	RN222645	2900	27000	12.3
	175	EVAU-175A	RN222650	3600	34500	15		175	EVAU-175S	RN222655	3600	34500	15.5
	200	EVAU-200A	RN222660	4700	43000	18		200	EVAU-200S	RN222665	4700	43000	18.5
	225	EVAU-225A	RN222670	6500	59000	20		225	EVAU-225S	RN222675	6500	59000	20.5
	250	EVAU-250A	RN222680	7600	70000	21.3		250	EVAU-250S	RN222685	7600	70000	21.8
275	EVAU-275A	RN222690	8650	75000	23	275	EVAU-275S	RN222695	8650	75000	23.5		
300	EVAU-300A	RN222700	11000	105000	25	300	EVAU-300S	RN222705	11000	105000	25.5		
325	EVAU-325A	RN222710	13500	123000	29	325	EVAU-325S	RN222715	13500	123000	29.5		
350	EVAU-350A	RN222720	16200	155000	32	350	EVAU-350S	RN222725	16200	155000	32.5		
400	EVAU-400A	RN222730	21000	170000	33	400	EVAU-400S	RN222735	21000	170000	33.5		
							500	EVAU-500S	RN222737	26000	245000	39	
Matched Bases	BEA-400U		Page32				Matched Bases	BEA-500S		Page32			

[DIMENSIONS]



【EVAU-A/S】 Unit: mm

[DIMENSIONS] EVAU 125Vdc 5-400A

Model	A	B	C	D	E	F	G
EVAU-A	81	25	37	61	18	8.5	3.2
EVAU-S	65	25	26	48	18	8.5	3.2

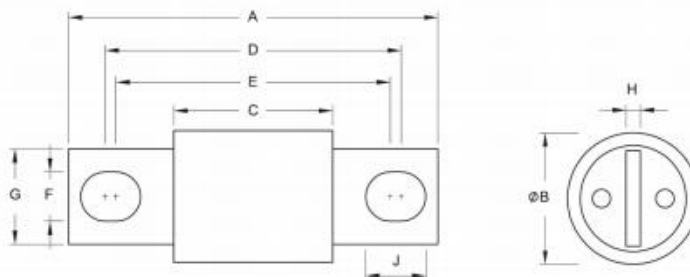
EV US-type mounting 125Vdc 5-800A

[SELECTION TABLE]

Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t (A ² S)	Total I ² t (A ² S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t (A ² S)	Total I ² t (A ² S)	Power loss (W)	
EVAE	5	EVAE-5A	RN222740	2	15	1.5	EVAE	225	EVAE-225A	RN222920	6500	59000	17.8	
	10	EVAE-10A	RN222750	5	20	1.8		250	EVAE-250A	RN222930	7600	70000	20.8	
	15	EVAE-15A	RN222760	15	55	1.8		275	EVAE-275A	RN222940	8650	75000	22	
	20	EVAE-20A	RN222770	30	150	3		300	EVAE-300A	RN222950	11000	105000	23	
	25	EVAE-25A	RN222780	35	240	3.3		325	EVAE-325A	RN222960	13500	123000	25.5	
	30	EVAE-30A	RN222790	65	350	3.5		350	EVAE-350A	RN222970	16200	155000	29.7	
	35	EVAE-35A	RN222800	75	550	4.1		400	EVAE-400A	RN222980	21000	170000	31	
	40	EVAE-40A	RN222810	85	700	4.7		450	EVAE-450A	RN222990	24700	220000	35	
	50	EVAE-50A	RN222820	150	1000	5		500	EVAE-500A	RN223000	28000	235000	37	
	60	EVAE-60A	RN222830	280	2100	6		600	EVAE-600A	RN223010	40500	290000	44	
	70	EVAE-70A	RN222840	500	4000	6.5		700	EVAE-700A	RN223020	53000	334000	47	
	80	EVAE-80A	RN222850	700	6500	7		800	EVAE-800A	RN223030	69500	480000	55	
	90	EVAE-90A	RN222860	900	8500	7								
	100	EVAE-100A	RN222870	1300	12000	8								
	125	EVAE-125A	RN222880	1950	20000	9								
	150	EVAE-150A	RN222890	2900	27000	11								
175	EVAE-175A	RN222900	3600	34500	13									
200	EVAE-200A	RN222910	4700	43000	17									
Matched Bases		BEA-400		Page32										

*If you require above 450A products, please contact with CFriend Electric or local dealer

[DIMENSIONS]



【EVAE】 Unit: mm

[DIMENSIONS] EVAE 125Vdc 5-800A

Model	A	B	C	D	E	F	G	H	J
EVAE-5A-400A	68	25	29	54	50	9	18	3.2	11
EVAE-450A-800A	89	36	31	65	48	10.5	26	6	19

EV US-type mounting 220Vdc 5-800A

[SELECTION TABLE]

Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t (A ² S)	Total I ² t (A ² S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t (A ² S)	Total I ² t (A ² S)	Power loss (W)	
EVXU	5	EVXU-5A	RN223040	1.6	10	2	EVXE	5	EVXE-5A	RN223220	1.6	10	1.6	
	10	EVXU-10A	RN223050	4	21	2		10	EVXE-10A	RN223230	4	20	1.8	
	15	EVXU-15A	RN223060	12	48	2.1		15	EVXE-15A	RN223240	12	47	2	
	20	EVXU-20A	RN223070	26	120	3.5		20	EVXE-20A	RN223250	26	122	3.3	
	25	EVXU-25A	RN223080	33	380	3.7		25	EVXE-25A	RN223260	33	320	3.5	
	30	EVXU-30A	RN223090	60	500	4		30	EVXE-30A	RN223270	60	360	3.8	
	35	EVXU-35A	RN223100	73	650	5		35	EVXE-35A	RN223280	73	510	4.7	
	40	EVXU-40A	RN223110	80	800	5.5		40	EVXE-40A	RN223290	80	600	5	
	50	EVXU-50A	RN223120	135	1550	7		50	EVXE-50A	RN223300	135	800	6.9	
	60	EVXU-60A	RN223130	170	1700	7.5		60	EVXE-60A	RN223310	170	1500	7	
	70	EVXU-70A	RN223140	330	2460	8		70	EVXE-70A	RN223320	330	1650	7.7	
	80	EVXU-80A	RN223150	430	2750	9		80	EVXE-80A	RN223330	430	2400	8.5	
	90	EVXU-90A	RN223160	550	3600	9		90	EVXE-90A	RN223340	550	2700	8.5	
	100	EVXU-100A	RN223170	790	4900	10		100	EVXE-100A	RN223350	790	3610	9	
	125	EVXU-125A	RN223180	1170	7000	11		125	EVXE-125A	RN223360	1170	4910	10.5	
	150	EVXU-150A	RN223190	1700	9500	13		150	EVXE-150A	RN223370	1700	7100	12	
	175	EVXU-175A	RN223200	2300	12500	18		175	EVXE-175A	RN223380	2300	9000	16.7	
	200	EVXU-200A	RN223210	2600	14000	21		200	EVXE-200A	RN223390	2600	12000	19.8	
									225	EVXE-225A	RN223400	3200	14000	20
									250	EVXE-250A	RN223410	4000	18000	22
							275	EVXE-275A	RN223420	4800	22100	24		
							300	EVXE-300A	RN223430	5970	33000	25.5		
							325	EVXE-325A	RN223440	6500	40500	28		
							350	EVXE-350A	RN223450	10200	48050	32		
							400	EVXE-400A	RN223460	14000	66000	35		
							450	EVXE-450A	RN223470	23900	99500	36		
							500	EVXE-500A	RN223480	26800	118000	40		
							600	EVXE-600A	RN223490	40000	195000	48		
							700	EVXE-700A	RN223500	49000	206000	60		
							800	EVXE-800A	RN223510	59000	239000	70		

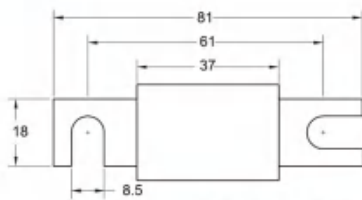
Matched Bases BEX-200U

Page32

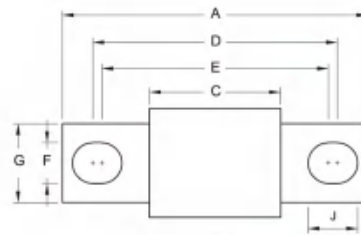
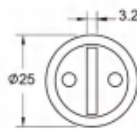
Matched Bases BEX-XXX

Page32

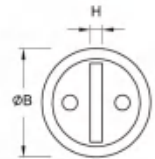
[DIMENSIONS]



【EVXU】 Unit: mm



【EVXE】 Unit: mm



[DIMENSIONS] EVXE 220Vdc 5-800A

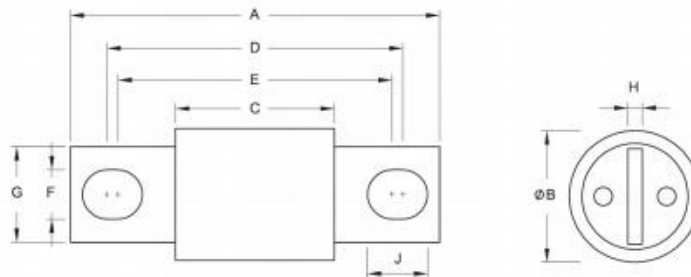
Model	A	B	C	D	E	F	G	H	J
EVXE-5A-60A	78	20	37	62.5	52.5	9	15	3.2	14
EVXE-70A-200A	81	25	37	65	56	9	18	3.2	13.5
EVXE-225A-400A	82.5	30	38.5	65.5	58.5	9	22	5	12.5
EVXE-450A-600A	99	36	41	75	58	10.5	26	6	19
EVXE-700A-800A	95	51	38	75.5	56.5	10.5	38	6	20

EV US-type mounting 500Vdc 5-1000A

【SELECTION TABLE】

Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A²S)	Total I²t (A²S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A²S)	Total I²t (A²S)	Power loss (W)
EVHE	5	EVHE-5A	RN323650	2	30	2.2	EVHE	175	EVHE-175A	RN323810	1740	8050	33
	10	EVHE-10A	RN323660	4	55	3		200	EVHE-200A	RN323820	2100	9900	36
	15	EVHE-15A	RN323670	10	70	3.6		225	EVHE-225A	RN323830	4300	20500	38
	20	EVHE-20A	RN323680	23	100	4.5		250	EVHE-250A	RN323840	6000	30700	40
	25	EVHE-25A	RN323690	26	115	5.3		275	EVHE-275A	RN323850	8100	39000	43
	30	EVHE-30A	RN323700	30	140	6		300	EVHE-300A	RN323860	12000	48900	48
	35	EVHE-35A	RN323710	39	160	6.6		325	EVHE-325A	RN323870	14200	61800	51
	40	EVHE-40A	RN323720	80	330	7		350	EVHE-350A	RN323880	16300	70800	55
	50	EVHE-50A	RN323730	150	450	7.5		400	EVHE-400A	RN323890	20500	93000	70
	60	EVHE-60A	RN323740	210	700	9.3		450	EVHE-450A	RN323900	24000	127000	77
	70	EVHE-70A	RN323750	330	1300	10		500	EVHE-500A	RN323910	26000	145000	80
	80	EVHE-80A	RN323760	370	1600	12		600	EVHE-600A	RN323920	39700	196000	101
	90	EVHE-90A	RN323770	400	1900	15		700	EVHE-700A	RN323930	57000	246000	110
	100	EVHE-100A	RN323780	630	2300	16		800	EVHE-800A	RN323940	79000	389000	120
	125	EVHE-125A	RN323790	900	3000	25		900	EVHE-900A	RN323950	88050	439000	128
150	EVHE-150A	RN323800	1500	5500	30	1000	EVHE-1000A	RN323960	105000	480500	135		
Matched Bases		BEH-XXX		Page32									

【DIMENSIONS】



【EVHE】 Unit: mm

【DIMENSIONS】 EVHE 500Vdc 5-1000A

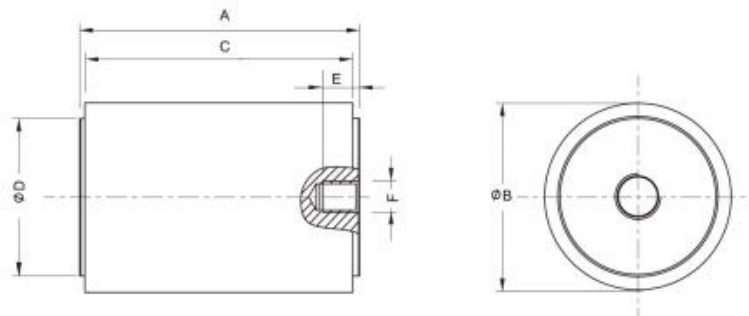
Model	A	B	C	D	E	F	G	H	J
EVHE-5A-60A	81	20	40	65.5	55.5	9	15	3.2	14
EVHE-70A-100A	92	25	48	76	67	9	18	3.2	13.5
EVHE-125A-200A	92	30	48	75	68	9	22	5	12.5
EVHE-225A-400A	111	36	53	87	70	10.5	26	6	19
EVHE-450A-600A	110	51	53	90	71	10.5	38	6	20
EVHE-700A-800A	161	63.3	53	129.5	90.5	13.5	50	10	33
EVHE-900A-1000A	Refer to the drawing								

EV flush end mounting 500Vdc 5-600A

[SELECTION TABLE]

Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A²S)	Total I²t (A²S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A²S)	Total I²t (A²S)	Power loss (W)
EVHH	5	EVHH-5A	RN223970	2	30	2.2	EVHH	175	EVHH-175A	RN224130	1740	8050	33
	10	EVHH-10A	RN223980	4	55	3		200	EVHH-200A	RN224140	2100	9900	36
	15	EVHH-15A	RN223990	10	70	3.6		225	EVHH-225A	RN224150	4300	20500	39
	20	EVHH-20A	RN224000	23	100	4.5		250	EVHH-250A	RN224160	6000	30700	40
	25	EVHH-25A	RN224010	26	115	5.3		275	EVHH-275A	RN224170	8100	39000	43
	30	EVHH-30A	RN224020	30	140	6		300	EVHH-300A	RN224180	12000	48900	48
	35	EVHH-35A	RN224030	39	160	6.6		325	EVHH-325A	RN224190	14200	61800	51
	40	EVHH-40A	RN224040	80	330	7		350	EVHH-350A	RN224200	16300	70800	55
	50	EVHH-50A	RN224050	150	450	7.5		400	EVHH-400A	RN224210	20500	93000	70
	60	EVHH-60A	RN224060	210	700	9		450	EVHH-450A	RN224220	24000	127000	77
	70	EVHH-70A	RN224070	330	1300	10		500	EVHH-500A	RN224230	26000	145000	80
	80	EVHH-80A	RN224080	370	1600	12		600	EVHH-600A	RN224240	39700	196000	101
	90	EVHH-90A	RN224090	400	1900	15							
	100	EVHH-100A	RN224100	630	2300	16							
	125	EVHH-125A	RN224110	900	3000	25							
150	EVHH-150A	RN224120	1500	5500	30								

[DIMENSIONS]



【EVHH】 Unit: mm

[DIMENSIONS] EVHH 500Vdc 5-600A

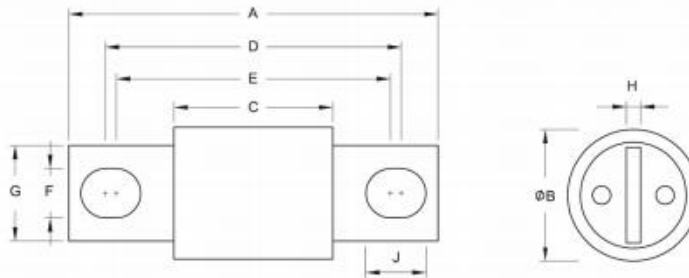
Model	A	B	C	D	E	F
EVHH-5A-60A	53	20	51	16	min-8	M6
EVHH-70A-100A	53	25	51	20	min-8	M6
EVHH-125A-200A	53	30	51	25	min-8	M8
EVHH-225A-400A	53	36	51	30	min-8	M8
EVHH-450A-600A	53	51	51	44.6	min-10	M10
EVHH-225B-400B	53	30	51	25	min-6	M6

I EV US-type mounting 660Vdc/750Vdc 5-800A

【SELECTION TABLE】

Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t (A ² S)	Total I ² t (A ² S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t (A ² S)	Total I ² t (A ² S)	Power loss (W)
EVPE	5	EVPE-5A	RN224610	2	18	2.2	EVPE	150	EVPE-150A	RN224760	2970	12700	30
	10	EVPE-10A	RN224620	4	30	3		175	EVPE-175A	RN224770	4000	18600	33
	15	EVPE-15A	RN224630	10	55	3.6		200	EVPE-200A	RN224780	5500	23000	36
	20	EVPE-20A	RN224640	23	170	4.5		225	EVPE-225A	RN224790	7700	52900	38
	25	EVPE-25A	RN224650	26	230	5.3		250	EVPE-250A	RN224800	9900	64900	40
	30	EVPE-30A	RN224660	30	330	6		275	EVPE-275A	RN224810	10500	69950	43
	35	EVPE-35A	RN224670	39	550	6.6		300	EVPE-300A	RN224820	17000	104900	48
	40	EVPE-40A	RN224680	80	660	7		325	EVPE-325A	RN224830	19060	119900	51
	50	EVPE-50A	RN224690	150	800	7.5		350	EVPE-350A	RN224840	23600	138900	55
	60	EVPE-60A	RN224700	210	980	9.3		400	EVPE-400A	RN224850	30000	157900	70
	70	EVPE-70A	RN224710	330	2000	10		450	EVPE-450A	RN224860	35000	209900	77
	80	EVPE-80A	RN224720	370	2400	12		500	EVPE-500A	RN224870	45000	260500	80
	90	EVPE-90A	RN224730	600	2800	15		600	EVPE-600A	RN224880	55000	320000	101
	100	EVPE-100A	RN224740	700	3500	16		700	EVPE-700A	RN224890	64000	359000	110
125	EVPE-125A	RN224750	1870	7600	25	800	EVPE-800A	RN224900	79000	469000	120		
BEP-XXX			Page32										

【DIMENSIONS】



【EVPE】 Unit: mm

【DIMENSIONS】 EVPE 660Vdc/750Vdc 5-800A

Model	A	B	C	D	E	F	G	H	J
EVPE-5A-60A	111	20	70	95.5	85.5	9	15	3.2	14
EVPE-70A-100A	112	25	68	96	87	9	18	3.2	13.5
EVPE-125A-200A	129	36	71	105	88	10.5	26	6	19
EVPE-225A-400A	129	51	72	109	90	10.5	38	6	20
EVPE-450A-600A	180	63.3	72	148.5	109.5	13.5	50	10	33
EVPE-700A-800A	Refer to the drawing								

EVGE US-type mounting 800Vdc 5-600A

[SELECTION TABLE]

Spec.	Amp	Model	Ordering No.	Pre-arcing It (A² S)	Total It (A² S)	Power loss (W)
EVGE	5	EVGE-5A	RN229490	3	18	2.5
	10	EVGE-10A	RN229500	8	48	4
	15	EVGE-15A	RN229510	13	62	5
	20	EVGE-20A	RN229520	25	120	6
	25	EVGE-25A	RN229530	38	190	7.5
	30	EVGE-30A	RN229540	55	275	8.5
	35	EVGE-35A	RN229550	85	425	9.5
	40	EVGE-40A	RN229560	110	570	10
	50	EVGE-50A	RN229570	170	840	11
	60	EVGE-60A	RN229580	280	1370	13
	70	EVGE-70A	RN229590	360	2300	10
	80	EVGE-80A	RN229600	410	2650	12
	90	EVGE-90A	RN229610	670	3150	15
	100	EVGE-100A	RN229620	780	3850	16
	125	EVGE-125A	RN229630	1530	7200	25
	150	EVGE-150A	RN229640	2850	11300	29
	175	EVGE-175A	RN229650	3800	17300	32
	200	EVGE-200A	RN229660	5200	21500	35
	225	EVGE-225A	RN229670	7700	52900	38
	250	EVGE-250A	RN229680	9900	64900	40
	275	EVGE-275A	RN229690	10500	69950	43
	300	EVGE-300A	RN229700	17000	104900	48
	325	EVGE-325A	RN229710	19060	119900	51
	350	EVGE-350A	RN229720	23600	138900	55
400	EVGE-400A	RN229730	30000	157900	70	
450	EVGE-450A	RN229740	37900	199500	85	
500	EVGE-500A	RN229750	51500	287000	95	
600	EVGE-600A	RN229760	73100	387000	110	

*If you require 700A-800A products, please contact with CFriend Electric or local dealer



ADD: NO.153,Youyi North Rd,
Kunshan City,China

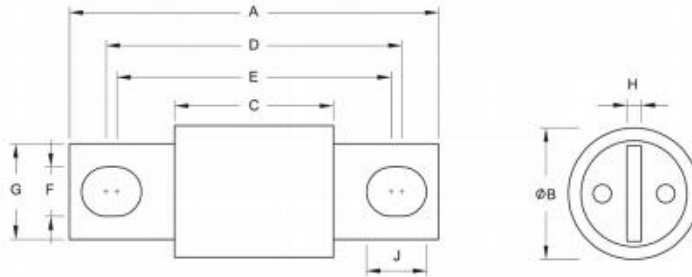


Tel: +86-512-36698841/42
Fax: +86-512-36698843



Web: www.cfriend-electric.com
E-mail: sales@cfriend-electric.com

[DIMENSIONS] : EVGE 800Vdc 5-600A



【EVPE】 Unit:mm

[DIMENSIONS] : EVGE 800Vdc 5-600A

型号	A	B	C	D	E	F	G	H	J
EVGE-5A-60A	111	20	70	95.5	85.5	9	15	3.2	14
EVGE-70A-100A	112	25	68	96	87	9	18	3.2	13.5
EVGE-125A-200A	129	36	71	105	88	10.5	26	6	19
EVGE-225A-400A	129	51	72	109	90	10.5	38	6	20
EVGE-450A-600A	180	63.3	72	148.5	109.5	13.5	50	10	33

PBOY- BS88 Series **AET/AMT/XET/XMT/PEF/PMF/GEF** **EV10-D/EV10-P/PCT EV**



【FEATURES】

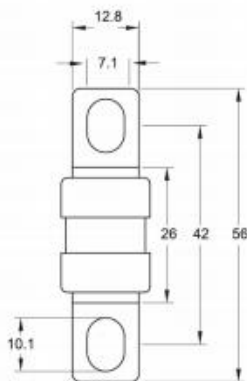
- Compact appearance,space saving,more lighter and convenient
- Small Size and highly cost effective
- Strong SPD resistance
- High strength ceramic tube,excellent performance in high temperature resistance
- Pure Ag design,more faster and more accurate
- Unique process of punching welding and connecting,smaller contacting resistance,lower temperature rise and power loss

AET/AMT 125Vdc 6-450A

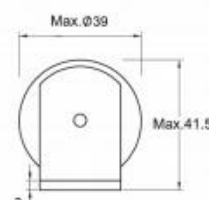
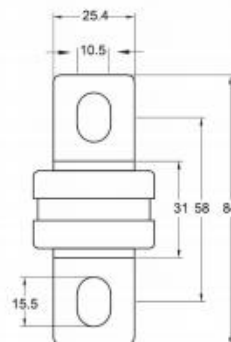
【SELECTION TABLE】

Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A ² S)	Total I ² t (A ² S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A ² S)	Total I ² t (A ² S)	Power loss (W)		
AET	6	AET-6 EV	RN302735	2	9	2	AMT	160	AMT-160 EV	RN302885	1000	7000	17		
	10	AET-10 EV	RN302745	4	18	2.3		200	AMT-200 EV	RN302895	2100	15000	23		
	12	AET-12 EV	RN302755	6.5	24	2.5		250	AMT-250 EV	RN302905	2980	20600	26		
	16	AET-16 EV	RN302765	23	80	3		315	AMT-315 EV	RN302915	6300	43000	33		
	20	AET-20 EV	RN302775	30	110	4		355	AMT-355 EV	RN302925	7900	65000	35		
	25	AET-25 EV	RN302785	35	190	4.2		400	AMT-400 EV	RN302935	13080	80000	40		
	32	AET-32 EV	RN302795	40	400	4.7		450	AMT-450 EV	RN302945	19800	150000	43		
	35	AET-35 EV	RN302805	50	550	5									
	40	AET-40 EV	RN302806	70	900	6									
	50	AET-50 EV	RN302815	90	1200	6.5									
	63	AET-63 EV	RN302825	150	1700	8									
	80	AET-80 EV	RN302835	270	2300	9.5									
	100	AET-100 EV	RN302845	550	4000	10									
	125	AET-125 EV	RN302855	700	6500	12									
	160	AET-160 EV	RN302865	1000	8600	16									
	180	AET-180 EV	RN302875	1660	13500	19									
	Matched Bases		SEP-200	Page32				Matched Bases		SMP-500	Page32				

【DIMENSIONS】



【AET】 Unit: mm



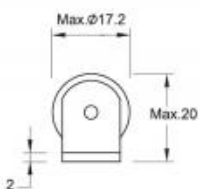
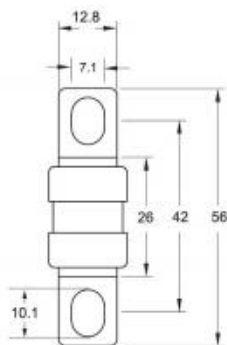
【AMT】 Unit: mm

XET/XMT 220Vdc 6-355A

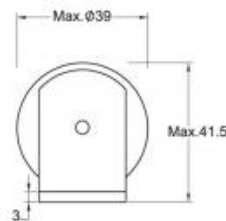
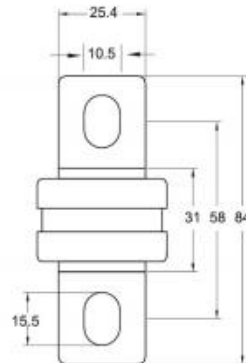
【SELECTION TABLE】

Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A²S)	Total I²t (A²S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A²S)	Total I²t (A²S)	Power loss (W)
XET	6	XET-6 EV	RN326170	3	10	2	XMT	160	XMT-160 EV	RN326300	1100	7400	18
	10	XET-10 EV	RN326180	6	22	2.5		200	XMT-200 EV	RN326310	2300	16000	24
	12	XET-12 EV	RN326190	8	26	2.7		250	XMT-250 EV	RN326320	2900	22000	25
	16	XET-16 EV	RN326200	28	10	3		315	XMT-315 EV	RN326330	6500	45000	32
	20	XET-20 EV	RN326210	39	144	4		355	XMT-355 EV	RN326340	8000	57000	37
	25	XET-25 EV	RN326220	42	235	4.4							
	32	XET-32 EV	RN326230	49	500	4.9							
	35	XET-35 EV	RN326240	60	600	5							
	40	XET-40A EV	RN326245	100	1388	6.9							
	50	XET-50 EV	RN326250	169	2000	8.6							
	63	XET-63 EV	RN326260	279	2400	11							
	80	XET-80 EV	RN326270	660	4300	13							
	100	XET-100 EV	RN326280	870	6500	17							
125	XET-125 EV	RN326290	890	7800	19								
Matched Bases		SEP-200	Page32				Matched Bases		SMP-500	Page32			

【DIMENSIONS】



【XET】 Unit: mm



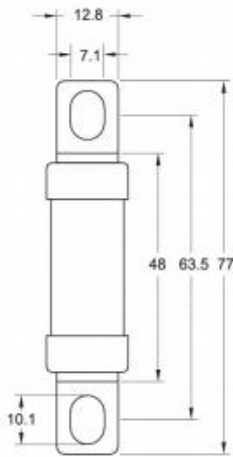
【XMT】 Unit: mm

PEF/PMF 660Vdc 6-400A / GEF 800Vdc 12-100A

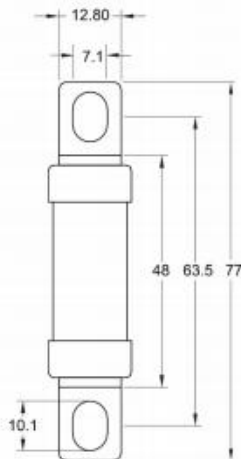
【SELECTION TABLE】

Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t (A ² S)	Total I ² t (A ² S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t (A ² S)	Total I ² t (A ² S)	Power loss (W)
PEF	6	PEF6 EV	RN502095	2	8	2	PMF	125	PMF125 EV	RN302413	750	2800	21
	10	PEF10 EV	RN502105	6	15	2.5		160	PMF160 EV	RN302414	900	4500	22.5
	12	PEF12 EV	RN502115	12	24	3		180	PMF180 EV	RN302415	1300	7500	24
	16	PEF16 EV	RN502125	17	38	5		200	PMF200 EV	RN302425	2000	12000	33
	20	PEF20 EV	RN502135	20	53	5		225	PMF225 EV	RN302435	3000	18600	36
	25	PEF25 EV	RN502145	23	75	5.5		250	PMF250 EV	RN302445	4900	21000	39
	32	PEF32 EV	RN502155	28	98	6.8		280	PMF280 EV	RN302455	6500	32000	43
	35	PEF35 EV	RN502225	33	150	7		315	PMF315 EV	RN302465	8900	45000	46
	40	PEF40 EV	RN502235	50	200	8		350	PMF350 EV	RN302475	13500	70000	50
	45	PEF45 EV	RN502245	80	350	9		400	PMF400 EV	RN302476	14000	75000	53
	50	PEF50 EV	RN502255	100	500	11							
	63	PEF63 EV	RN502265	120	650	12.5							
	71	PEF71 EV	RN502275	190	900	14							
	80	PEF80 EV	RN502285	230	1300	16							
90	PEF90 EV	RN502295	350	1900	17.6								
100	PEF100 EV	RN502305	500	2300	19								
GEF	12	GEF12-EV	RN528250	12	30	4.2	GEF	45	GEF45-EV	RN528320	90	540	10.5
	16	GEF16-EV	RN528260	17	54	4.5		50	GEF50-EV	RN528330	110	660	13
	20	GEF20-EV	RN528270	20	80	5.1		63	GEF63-EV	RN528340	130	780	14.5
	25	GEF25-EV	RN528280	23	105	5.6		71	GEF71-EV	RN528350	220	1320	16
	32	GEF32-EV	RN528290	30	120	6.7		80	GEF80-EV	RN528360	290	1760	20
	35	GEF35-EV	RN528300	36	180	7.8		100	GEF100-EV	RN528365	630	3750	25
	40	GEF40-EV	RN528310	55	330	9.5							
Matched Bases		SEP-200		Page32			Matched Bases		SEP-200		Page32		

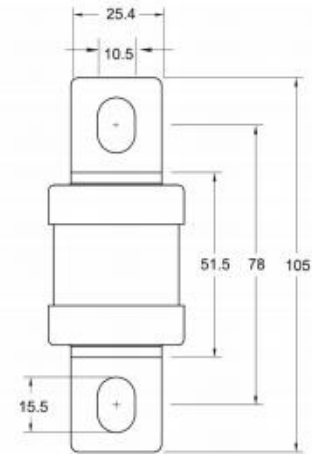
【DIMENSIONS】



【PEF】 Unit: mm



【GEF】 Unit: mm



【PMF】 Unit: mm

【SELECTION TABLE】 EV10-AD 500Vdc 1- 50A

Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A²S)	Total I²t (A² S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A²S)	Total I²t (A² S)	Power loss (W)
EV10-AD	1	EV10-1AD	RN226081	0.98	1.68	1.36	EV10-AD	15	EV10-15AD	RN226115	9.8	98	3.44
	2	EV10-2AD	RN226082	1.68	4.75	1.54		20	EV10-20AD	RN226125	16.8	165	3.78
	4	EV10-4AD	RN226083	5.6	15	1.97		25	EV10-25AD	RN226135	30	300	3.95
	6	EV10-6AD	RN226084	13.3	36	2.24		30	EV10-30AD	RN226145	47	490	4.2
	8	EV10-8AD	RN226086	26	70	2.38		35	EV10-35AD	RN226155	55	530	4.5
	10	EV10-10AD	RN226095	42	126	2.94		40	EV10-40AD	RN226165	62	600	5
	12	EV10-12AD	RN226105	45	130	3		50	EV10-50AD	RN326168	98	885	8

【DIMENSIONS】 PCT EV 660Vdc 6-20A

Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A²S)	Total I²t (A² S)	Power loss (W)
PCT EV	6	PCT6 EV	RN226640	1.8	11	2
	10	PCT10 EV	RN226650	7	44	3
	12	PCT12 EV	RN226660	10	60	3
	16	PCT16 EV	RN226670	16	100	6
	20	PCT20 EV	RN226680	32	190	7

【DIMENSIONS】 EV10-AP/PP 1000Vdc 1-50A

Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A²S)	Total I²t (A² S)	Power loss (W)
EV10-AP	1	EV10-1AP	RN226093	0.7	1.2	1.4
	2	EV10-2AP	RN226094	1.2	1.4	1.1
	3	EV10-3AP	RN226096	1.4	2	1.4
	4	EV10-4AP	RN226097	1.5	3	1.6
	5	EV10-5AP	RN226098	1.9	5	1.7
	6	EV10-6AP	RN226085	2	9	2
	8	EV10-8AP	RN226080	3	32	2.2
	10	EV10-10AP	RN226090	7	70	2.6
	12	EV10-12AP	RN226100	12	120	2.8
	15	EV10-15AP	RN226110	22	220	3.5
	20	EV10-20AP	RN226120	34	350	2.6
	25	EV10-25AP	RN226130	65	943	3.6
	30	EV10-30AP	RN226140	120	1400	4.2
	35	EV10-35AP	RN226150	145	2530	4.5
	40	EV10-40AP	RN226160	158	2800	4.7
	50	EV10-50PP	RN226163	230	3910	6.5
50	EV10-50AP	RN226166	289	4750	8	

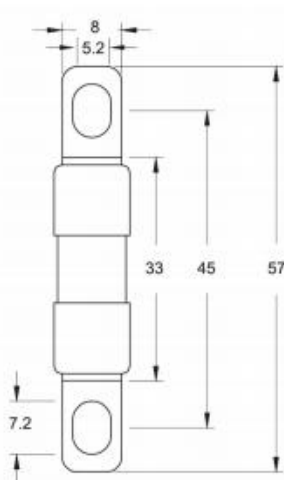
Matched Bases SC101AP Page32

Remark: Voltage for EV10-35AP and EV10-40AP is 700Vdc.
Voltage for EV10-50AP is 500Vdc.Voltage for EV10-50PP is 700Vdc.

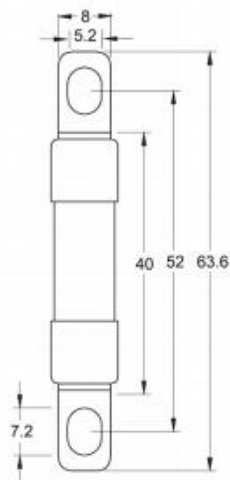


[SELECTION TABLE] EV10-HP 1000VDC 1-50A

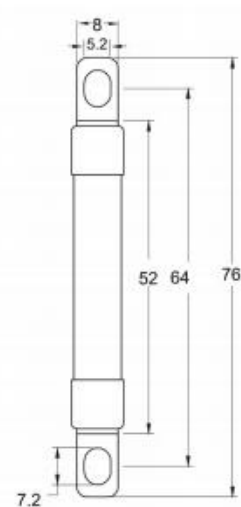
Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t (A ² S)	Total I ² t (A ² S)	Power loss (W)
EV10-HP	1	EV10-1HP	RN233570	-	-	-
	2	EV10-2HP	RN233580	-	-	-
	3	EV10-3HP	RN233590	-	-	-
	4	EV10-4HP	RN233600	-	-	-
	5	EV10-5HP	RN233610	-	-	-
	6	EV10-6HP	RN233620	-	-	-
	8	EV10-8HP	RN233630	-	-	-
	10	EV10-10HP	RN233640	-	-	-
	12	EV10-12HP	RN233650	9	38	3
	15	EV10-15HP	RN233660	15	65	3
	20	EV10-20HP	RN233670	32	123	4
	25	EV10-25HP	RN233680	63	198	4
	30	EV10-30HP	RN233690	100	320	6.5
	35	EV10-35HP	RN233700	120	360	7
	40	EV10-40HP	RN233710	1900	5900	8
50	EV10-50HP	RN233730	3800	11000	9	
Matched Bases		SC101AP	Page32			

[DIMENSIONS] EV10-AD/EV10-AP/PCT EV

【EV10-AD】 Unit: mm



【EV10-AP】 Unit: mm



【PCT-EV】 Unit: mm

Pboy- Square Body series

DFN/DFH/DFB/DGC/DGH

DC Fast-acting Fuses

【FEATURES】

- Minimum total joule integral, low power loss, high breaking capacity
- Pure DC characteristics, suitable for electric vehicle application
- More reliable and safe in inductive loop, more safe and faster in extinction
- gR protection characteristics, more effective in protecting components and cables.
- Compact appearance, space saving, more convenient to mount
- High strength ceramic tube, excellent performance in high temperature resistance, better mechanical strength and electric insulation
- Pure Ag design, excellent performance
- Unique spot-welding process, lower temperature rise and power loss
- More suitable for low and middle temperature rise in MSD

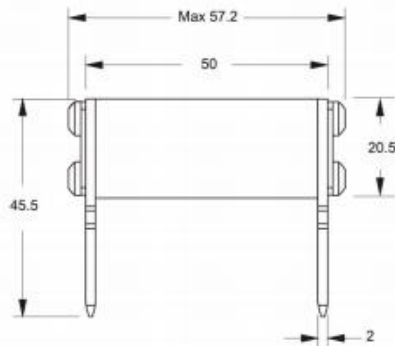


I Flush Plug Mounting 660Vdc/750Vdc 32-630A

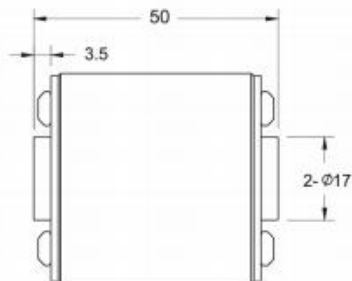
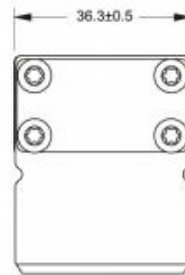
[SELECTION TABLE]

Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A ² S)	Total I ² t (A ² S)	Power loss (W)	Spec.	Amp	Model	Ordering No.	Pre-arcing Pt (A ² S)	Total I ² t (A ² S)	Power loss (W)
000	32	DFN9032AN	RN226510	40	270	10	1*	40	DFH8040AI-G	RN326350	40	270	9
	35	DFN9035AN	RN226520	55	334	11		50	DFH8050AI-G	RN326360	77	525	11
	40	DFN9040AN	RN226530	69	460	12		63	DFH8063AI-G	RN326370	115	770	14
	50	DFN9050AN	RN226540	115	770	15		80	DFH8080AI-G	RN326380	185	1250	18
	63	DFN9063AN	RN226550	215	1450	16		100	DFH8100AI-G	RN326390	360	2450	21
	80	DFN9080AN	RN226560	380	2500	19		125	DFH8125AI-G	RN326400	550	3700	26
	100	DFN9100AN	RN226570	689	4600	24		160	DFH8160AI-G	RN326410	1100	7500	30
	125	DFN9125AN	RN226580	1200	8500	28		200	DFH8200AI-G	RN326420	2300	15500	39
	160	DFN9160AN	RN226590	2300	16000	32		250	DFH8250AI-G	RN326430	4400	29000	46
	200	DFN9200AN	RN226600	4200	28000	37		315	DFH8315AI-G	RN326440	7500	46000	67
	250	DFN9250AN	RN226610	7750	51500	42		350	DFH8350AI-G	RN326450	13000	70000	69
	315	DFN9315AN	RN226620	12000	80000	52		400	DFH8400AI-G	RN326460	18000	140000	74
	350	DFN9350AN	RN226630	14000	85900	63		450	DFH8450AI-G	RN326470	22000	145000	79
									500	DFH8500AI-G	RN326480	29000	186000
							550	DFH8550AI-G	RN326490	38000	230000	86	
							630	DFH8630AI-G	RN326500	49500	320000	88	

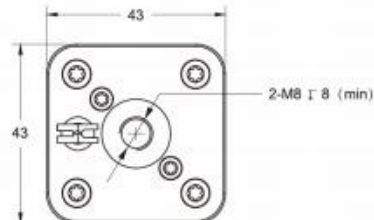
[DIMENSIONS]



【DFN 9*** AN】 Unit: mm



【DFH 8*** AI-G】 Unit: mm

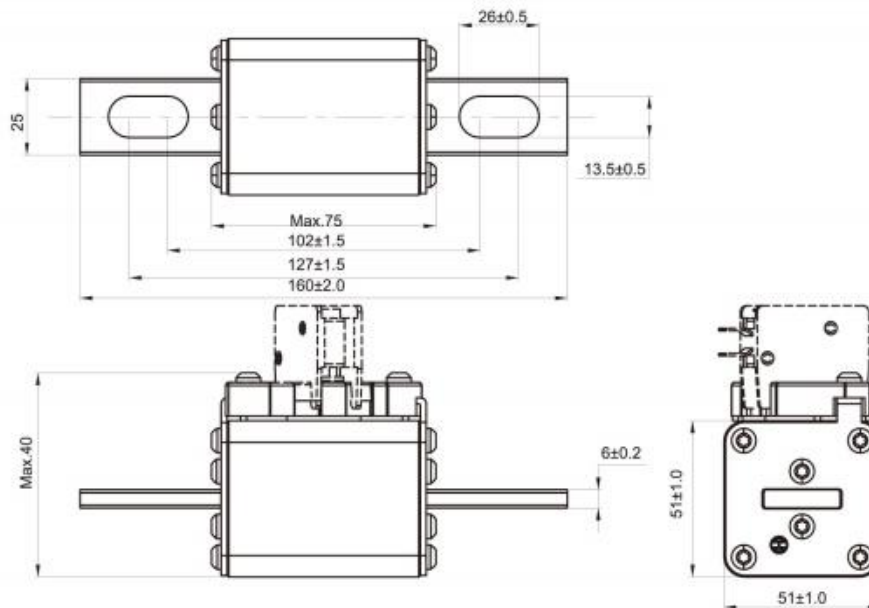


I US-type mounting 750Vdc 125-630A

[SELECTION TABLE]

Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t(A ² S)	Total I ² t (A ² S)	Power loss (W)
1	125	DGE1012JK	RN330122	1700	4760	23
	160	DGE1016JK	RN330123	2800	8300	28
	200	DGE1020JK	RN330124	4700	13800	32
	250	DGE1025JK	RN330130	8600	25600	40
	315	DGE1031JK	RN330140	12900	38600	48
	350	DGE1035JK	RN330150	15900	47900	53
	400	DGE1040JK	RN330160	21100	63400	58
	450	DGE1045JK	RN330170	29200	87800	62
	500	DGE1050JK	RN330180	41000	125000	65
	550	DGE1055JK	RN330190	48500	146000	72
	630	DGE1063JK	RN330200	63500	192000	82

[DIMENSIONS]



[DGE] Unit: mm

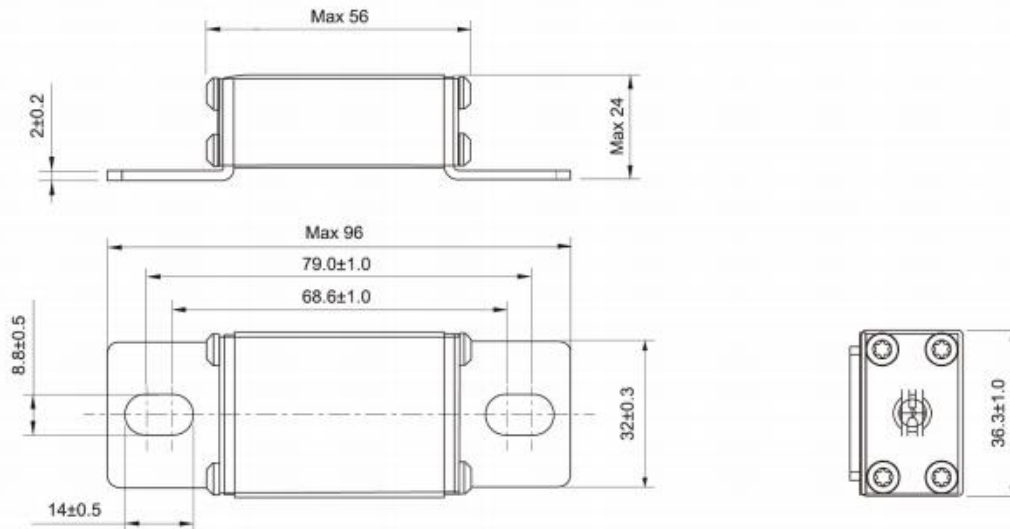
I Type T Mounting 750Vdc/800Vdc 25-350A

[SELECTION TABLE]

Spec.	Amp	Model	Ordering No.	Pre-arcing I ² t(A ² S)	Total I ² t (A ² S)	Power loss (W)
000	25	BGT9025UI	TN227150	40	270	10
	32	BGT9032UI	TN227160	55	334	11
	40	BGT9040UI	TN227170	69	460	12
	50	BGT9050UI	TN227180	115	770	15
	63	BGT9063UI	TN227190	215	1450	16
	80	BGT9080UI	TN227200	380	2500	19
	100	BGT9100UI	TN227210	698	4600	24
	125	BGT9125UI	TN227220	1200	8500	28
	160	BGT9160UI	TN227230	2300	16000	32
	200	BGT9200UI	TN227240	4200	28000	37
	250	BGT9250UI	TN227250	7750	51500	42
	315	BGT9315UI	TN227260	12000	80500	52
	350	BGT9350UI	TN227270	13000	90000	63

*If you require 1000Vdc products, please contact with CFriend Electric or local dealer

[DIMENSIONS]



【BGT】 Unit: mm