

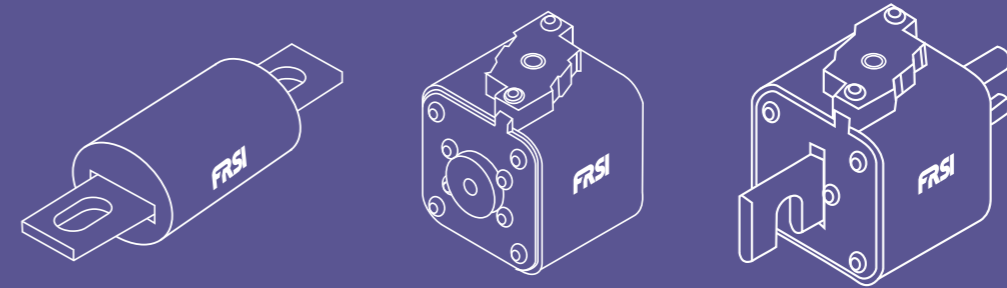
*样本所述的产品资料以实物为准,若有变更本公司恕不另行通知,欢迎致电咨询。
*The product information described in the Guide should be based on the material object. If there is any change, we will not inform you otherwise. Welcome to call us for consultation.

FRSI 弗而兹电气



Fuse for Semiconductor & Locomotive Protection Product Selection Guide

半导体器件&机车保护用熔断器 产品选型手册



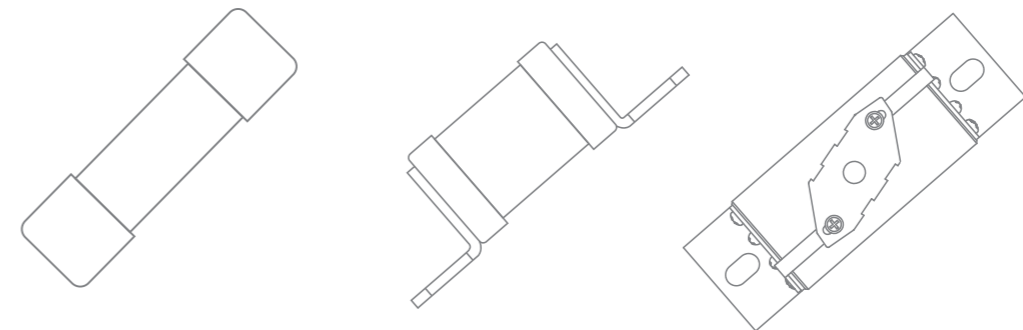
FRSI 弗而兹电气
浙江弗而兹电气科技有限公司
Zhejiang FRSI Electric Technology Co.,Ltd.

地址Address:
浙江省乐清市北白象镇东大街512号
官方网站Website:
<http://www.frsidq.com>

传真Fax:
0577-6198 6869
服务电话Tel:
0577-6198 6868



欢迎关注弗而兹
官方微信公众号
Wechat Public Account



FRSI 弗而兹电气

保护电路
更保护你

More Than
Protecting You





Company Profile

企业简介

我们是谁？

浙江弗而兹电气科技有限公司(以下简称弗而兹电气)是一家新成立的高科技公司。公司主营生产产品为低压熔断器和隔离开关,覆盖电力、通信、新能源等领域。公司秉承德国和日本的经营理念,以市场为主导,专注于电力保护行业的细分市场,即熔断器保护,做精做专,力争成为全国乃至全球领先的熔断器保护服务商。

我们为社会带来什么？

- 1.为客户创造价值,为行业注入新鲜血液和活力。弗而兹电气积极开拓市场合作伙伴,坚持以市场为导向,技术为支持,以市场带领技术,以技术服务市场的原则,为电力、通信和新能源行业提供可靠的、与时俱进的熔断器保护解决方案。
- 2.推动产业良性发展。弗而兹电气主张开放、合作、共赢,与客户合作伙伴及友商合作创新,积极参与和支持行业主流标准和新标准的制定,为产业发展贡献自己的力量。推动社会可持续发展。作为负责任的企业公民,弗而兹电气始终坚持和响应国家的环保号召,在生产过程中尽全力消除污染,最终实现无污染。弗而兹电气投身于开发新能源电动汽车电池保护用熔断器和充电桩保护用熔断器,为新能源电动汽车的安全提供可靠的产品和技术支持,从而推动新能源电动汽车行业的发展,实现降低汽车污染的目标。
- 3.为奋斗者提供舞台。弗而兹电气为所有奋斗的员工提供一个公平竞争的舞台,以责任贡献来评价和提升员工,使有才华有能力有担当的人才,能够快速成长,实现自我价值。

我们坚持什么？

弗而兹电气坚持聚焦在自己的专业领域,抵制其他诱惑,不走捷径,拒绝机会主义,踏踏实实,放眼未来,厚积薄发;坚持以客户为中心,以市场为中心,以技术为中心,艰苦奋斗,勇闯未来。

Who we are?

Zhejiang FRSI Electric Technology Co.,Ltd. is a leading company in the electrical fuse and switch industry. We focus on designing, manufacturing and selling electrical fuse and fuse-switch-disconnector. We also provide fuse protection solutions for our clients.

What we bring to clients and society?

We create values for our clients, and bring fresh energy to the industry. We are proud to be recognized by markets, and believe that the spirit of engineering and craftsman will lead us to a further success.

We promote development for the industry. We always propose more corporation and finally achieve an all-win result. Thus, we actively participate in most of the industrial activities, to contribute our efforts.

We insist the sustainable development to society. As a responsible corporate citizen, we are trying our best to eliminate the pollution during the production, and provide products which are environment-friendly to our clients.

We provide an impartial platform for our employees. We are more concerned on the personality of our employees, and encourage them to be more innovative and effective. Employees are evaluated and promoted by their contribution to the company, such as innovation, concentration and professionalism.

We, FRSI, will always look forward to the corporation with you!

Contents

目录

FRM系列半导体器件保护用快速熔断器

FRM Series Fast Fuse For Semiconductor Protection

FRM系列P型平板式快速熔断器 FRM Series P-type Flat-plate Fast Fuse	02~04
FRM系列FP型平板式快速熔断器 FRM Series FP-type Flat-plate Fast Fuse	05
FRM系列SP型平板式快速熔断器 FRM Series SP-type Flat-plate Fast Fuse	05~06
FRM系列UN型母线勾叉式快速熔断器 FRM Series UN-Type Cross-slots Fast Fuse	07~08
FRM系列Z型刀插式快速熔断器 FRM Series Z-type Knife-inserted Fast Fuse	09
FRM系列LUN型母线连接式快速熔断器 FRM Series LUN-type Bus-connection Fast Fuse	10
FRM系列LB型母线螺栓式快速熔断器 FRM Series LB-type Bus-bolted Fast Fuse	11
FRM系列MN型母线连接式快速熔断器 FRM Series MN-type Bus-connection Fast Fuse	11
FRM系列MB型插刀母式快速熔断器 FRM Series MB-type Bus-bolted Fast Fuse	12
FRM系列Z型刀插双指示快速熔断器 FRM Series Z-type Knife-inserted Double-indication Fast Fuse	13

FRB系列半导体器件保护用快速熔断器

FRB Series Fast Fuse For Semiconductor Protection

FRB系列MB型圆管螺栓式快速熔断器 FRB Series MB-type Round Tube Bolted Fast Fuse	14
FRB系列P型圆管平板式快速熔断器 FRB Series P-type Round Tube Flat-plate Fast Fuse	15

FRG系列半导体器件保护用快速熔断器

FRG Series Fast Fuse For Semiconductor Protection

FRG系列凳子脚快速熔断器 FRG Series Stool-feet Fast Fuse	16~17
--	-------

FRC系列半导体器件保护用快速熔断器

FRC Series Fast Fuse For Semiconductor Protection

FRC系列圆筒帽形快速熔断器 FRC Series Cylinder Cap Fast Fuse	17
---	----

IGBT晶体管保护用快速熔断器

IGBT Series Fast Fuse For Transistor Protection

FRM系列LB型母线螺栓式快速熔断器 FRM Series LB-type Bus-bolted Fast Fuse	18
---	----

机车保护用直流快速熔断器

DC Fast Fuse For Locomotive Protection

FDM系列P型直流快速熔断器 FDM Series P-type DC Fast Fuse	23
FDM系列MN型直流快速熔断器 FDM Series MN-type DC Fast Fuse	23
FDM系列LB型直流快速熔断器 FDM Series LB-type DC Fast Fuse	24~25
FDC系列圆筒帽型直流快速熔断器 FDC Series Cylinder Cap DC Fast Fuse	25

半导体器件保护用熔断器专用底座

Specialized Fuse Base For Semiconductor Protection

FH系列P型熔断器专用底座 FH Series P-type Specialized Fuse Base	19
FH系列UN型熔断器专用底座 FH Series UN-type Specialized Fuse Base	19
FH系列Z型熔断器专用底座 FH Series Z-type Specialized Fuse Base	19~20
FH系列LUN型熔断器专用底座 FH Series LUN-type Specialized Fuse Base	20
FH系列MB型熔断器专用底座 FH Series MB-type Specialized Fuse Base	21

半导体器件保护用熔断器

Fast Fuse For Semiconductor Protection

概述 Overview

- 符合GB/T 13539.4、IEC60269-4和UL248-13标准；
- 额定电压: AC130V,150V,230V,250V,400V,500V,690V,700V,800V,900V,100V,1250V,1300V,1500V,2000V
DC150V,250V,440V,500V,800V,1000V
- 更高直流电压请与公司技术部门联系；
- 功能等级: aR, gR；
- aR用于半导体器件短路故障系统保护, gR用于半导体器件短路系统保护以及提高线路上的电缆和导线系统保护；
- 额定分断能力: AC100kA
- 功耗及I²t数据可向技术部门索取；
- 重量及装箱数可向公司市场部索取。

- It meets GB/T 13539.4, IEC 60269-4 and UL248-13 standards.
- Rated voltage: AC130V,150V,230V,250V,400V,500V,690V,700V,800V,900V,100V,1250V,1300V,1500V,2000V
DC150V,250V,440V,500V,800V,1000V
- For higher DC voltage, please contact the company's Technical Department.
- Functional Level: aR, gR;
- aR is used for short-circuit fault system protection of semiconductor devices, gR is used for short-circuit system protection of semiconductor devices and for improving cable and wire system protection on lines.
- Rated breaking capacity: AC100kA
- Power consumption and I²t data can be obtained from Technical Departments.
- The weight and packing number can be obtained from the Marketing Department of the company.

工作环境 Working Environment

- 环境温度: 环境温度不超过40°C, 24h测得的平均值不超过35°C, 一年内测得的平均低于该值; 周围空气温度最低值为-5°C。
- 大气条件: 空气是干净的, 其相对湿度在最高温度为40°C时不超过50%。在较低温度下可以有较高的相对湿度。例如, 在20°C时, 相对湿度可达90%。由于温度变化发生在产品本体上的凝露情况必须采取措施。
- 污染等级: 3级
- 安装条件: 熔断器应安装在无显著摇动和冲击, 无足以腐蚀金属和破坏绝缘得气体及导电尘埃的场所中。

注: 当熔断器使用条件和规定不相符时, 用户应与我公司协商。

- Ambient temperature: ambient temperature does not exceed 40°C and the average value measured in 24 hours does not exceed 35°C and the average value measured in one year is lower than that; the minimum ambient air temperature is -5°C.
- Atmospheric Conditions: The air is clean, and its relative humidity does not exceed 50% at the highest temperature of 40°C. The relative humidity can be higher at lower temperatures. For example, the relative humidity can reach 90% at 20°C. Because the temperature change occurs in the condensation of the product body, measures must be taken.
- Pollution Level: Level 3
- Installation Conditions: Fuses shall be installed in places where there is no significant shaking and impact, and where there is no enough corrosion of metals and destruction of insulated gases and conductive dust.

Note: Users should consult with our company when the fuse operating conditions and regulations do not meet requirements.

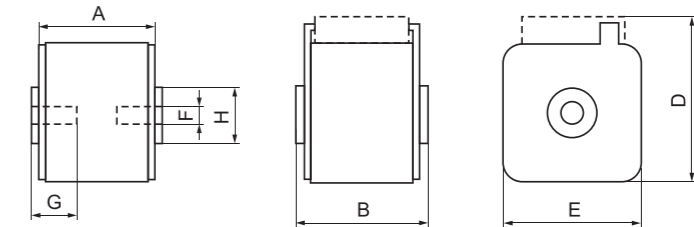


FRM P型系列平板式快速熔断器(Class:aR)

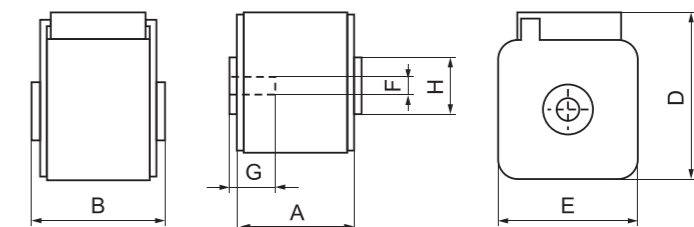
FRM Series P-type Flat-plate Fast Fuse

产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A(max)	B	D	E	F	G	H
FRM30P51(K)	IEC / UL AC690/700V	40~630	50	51	43(59)	43	M8	5	17
FRM31P51(K)		200~800 * 550V 900	50	51	50(69)	50	M8	8	20
FRM32P51(K)		400~1250 * 600V 1100/1250	50	51	60(77)	60	M10	10	24
FRM33aP54(K)		500~1600	50	54	72(89)	72	M10	10	45
FRM33P51(K)	DC500V	500~2000 * 600V 1800 * 550V 2000	50	51	75(92)	75	M12	12	40
FRM34P60(K)		1500~2500	53	60	85(97)	85	M12	10	54
FRM35P60(K)		1600~3200	55	60	105(117)	105	M16	14	70
FRM36P60(K)		2300~3600	55	60	120(132)	120	M16	14	84

注: 当FRM32P51(K)电流为1100~1250A时, B=65mm; 当FRM33P51(K)电流为1600~2000A时, B=65mm
Note: when FRM32P51(K)'s current is 1100~1250A, B=65mm; when FRM33P51(K)'s current is 1600~2000A, B=65mm



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A(max)	B	D	E	F	G	H
FRM60P75(K)	IEC/UL AC1000V	50~400	74	75	43(59)	43	M8	5	17
FRM61P75(K)		160~630	74	75	50(69)	50	M8	8	20
FRM62P75(K)		250~800	74	75	60(77)	60	M10	10	24
FRM63aP78(K)		315~1250	74	78	72(89)	72	M10	10	45
FRM63P75(K)	AC1250/1300V	315~1400	74	75	75(92)	75	M12	10	40
FRM60P80(K)		50~400	80	81	43(59)	43	M8	5	17
FRM61P80(K)		160~630	80	81	50(69)	50	M8	8	20
FRM62P80(K)		250~800	80	81	60(77)	60	M10	10	24
FRM63P80(K)	DC800/1000V	315~1400	80	81	75(92)	75	M12	10	40
FRM72P90(K)		250~800	80	90	60(77)	60	M10	10	24
FRM73P90(K)		315~1400	80	90	75(92)	75	M12	10	40
FRM74P90(K)		1500~2500	84	90	85(97)	85	M12	10	54
FRM75P90(K)	DC800/1000V	1600~3000	84	90	105(117)	105	M12	10	70
FRM76P90(K)		2300~3600	84	90	120(132)	120	M16	14	84

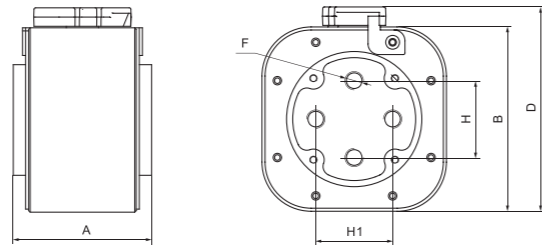


FRM P型系列平板式快速熔断器(Class:aR)

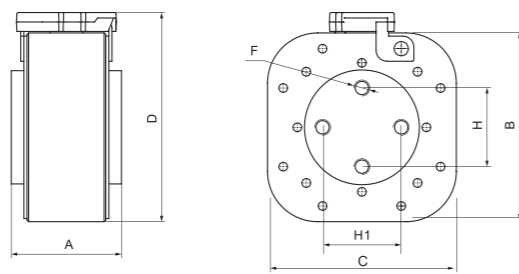
FRM Series P-type Flat-plate Fast Fuse



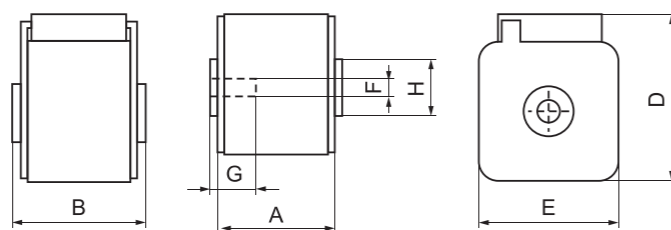
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)					
			A	B	D	H	H1	F
FRM36P460K	AC500/690V	2500~3900	60	120	134	50	50	4xM12
FRM66P480K	AC800V	2500~3900	80	120	134	50	50	4xM12
FRM76P490K	AC1000V	2500~3900	90	120	134	50	50	4xM12
FRM86P4100K	AC1250V	2500~3600	100	120	134	50	50	4xM12
FRM116P4130K	AC1500V	1800~3000	130	120	134	50	50	4xM12



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A	B	C	D	H	H1	F
FRM65P480K	AC800V	1000~3200	80	105	105	125	33	33	4xM10
FRM75P490K	IEC AC1000V	1250~2500	90	105	105	125	33	33	4xM10
FRM115P4130K	AC1500V	1250~2000	130	105	105	125	33	33	4xM10



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A(max)	B	D	E	F	G	H
FRM86P100(K)	IEC/UL AC1000V AC1250/1300V	2300~3200	94	100	120(132)	120	M16	14	84

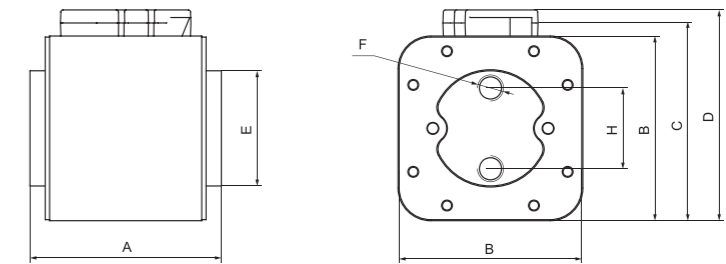


FRM P型系列平板式快速熔断器(Class:aR)

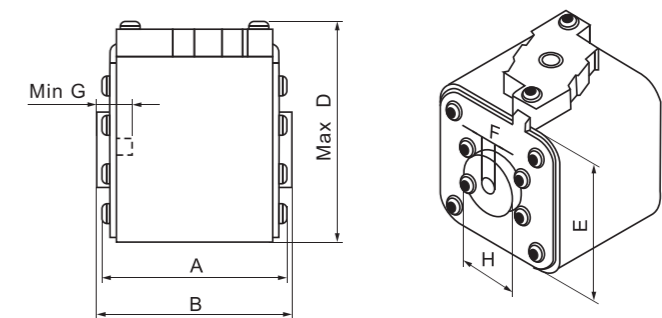
FRM Series P-type Flat-plate Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A	B	C	D	E	F	H
FRM33aP256K	IEC / UL AC690/700V	250~2000	56	72	88	112	46	2xM8	30
FRM35P263K		1600~3000	63	105	117	142	70	2xM12	40
FRM63aP278K	IEC/UL AC1000V AC1250/1300V	630~1500	78	72	88	112	46	2xM8	30
FRM65P280K	AC800/1000V	1600~2500	80	105	117	142	70	2xM12	40
FRM75P290K	IEC/UL AC1000V AC1250/1300V	1250~2500	90	105	117	142	70	2xM12	40



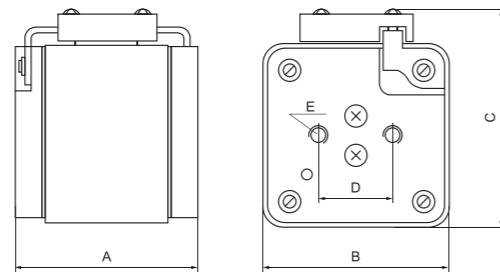
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A(max)	B	D	E	F	G	H
FRM64P80(K)	AC800V IEC AC1000V	1250~2200	74	80	85(97)	85	M12	10	54
FRM65P80(K)		1600~2800	74	80	105(117)	105	M16	14	70
FRM66P80(K)		2300~3600	74	80	120(132)	120	M16	14	84



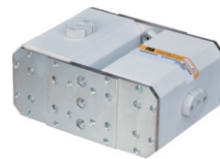
FRM FP型系列平板式快速熔断器(Class:aR) FRM Series FP-type Flat-plate Fast Fuse



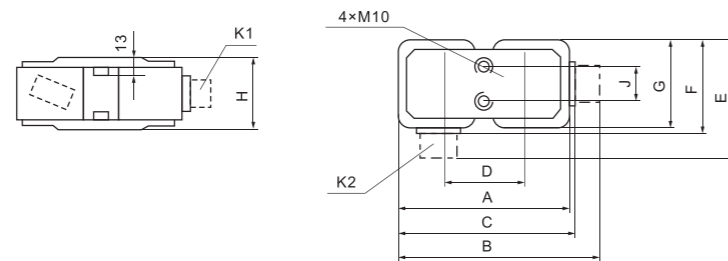
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)				
			A	B	C(max)	D	E
FRM33FP58K	IEC AC690V	1000~2000	58	75	90	30	2xM10
FRM63FP76K	AC800V	1000~1800	76	75	90	30	2xM10
FRM64FP80K	IEC AC1000V	1500~2000	80	85	100	30	2xM10
FRM73FP87K	IEC AC1000V	1000~1800	87	75	90	30	2xM10
FRM113FP130K	AC1500/2000V	350~900	130	75	90	30	2xM10



FRM SP型系列平板式快速熔断器(Class:aR) FRM Series SP-type Flat-plate Fast Fuse



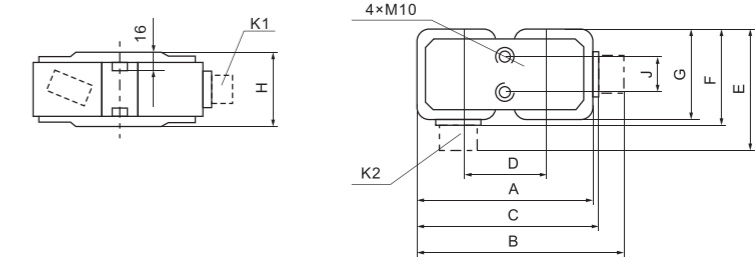
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	D	E	F	G	H	J
FRM33SP54K	IEC AC690V	2000~4000	166	203	178	105	111	86	75	54	40
FRM63SP78K	AC800V	1600~3600	166	203	178	105	111	86	75	78	40
FRM63SP83K	IEC AC1000V	1600~3600	166	203	178	105	111	86	78	83	40
FRM113SP130K	AC1500/2000V	700~1800	166	203	178	105	111	86	75	130	40



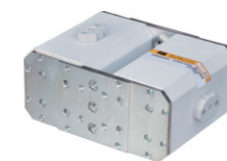
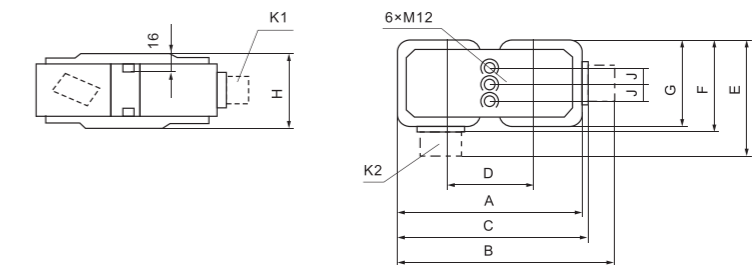
FRM SP型系列平板式快速熔断器(Class:aR) FRM Series SP-type Flat-plate Fast Fuse



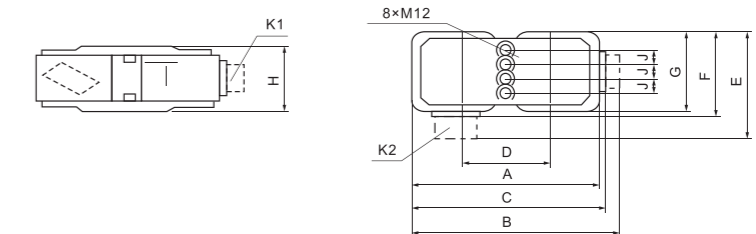
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	D	E	F	G	H	J
FRM34SP60K	IEC AC690V	2800~4800	195	232	207	105	122	97	85	60	40
FRM64SP80K	AC800/1000V	2800~3600	195	232	207	105	122	97	85	80	40



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	D	E	F	G	H	J
FRM35SP60K	IEC AC690V	3600~6000	232	269	244	110	142	117	105	60	31
FRM65SP84K	AC800/1000V	2500~5000	232	269	244	110	142	117	105	84	31



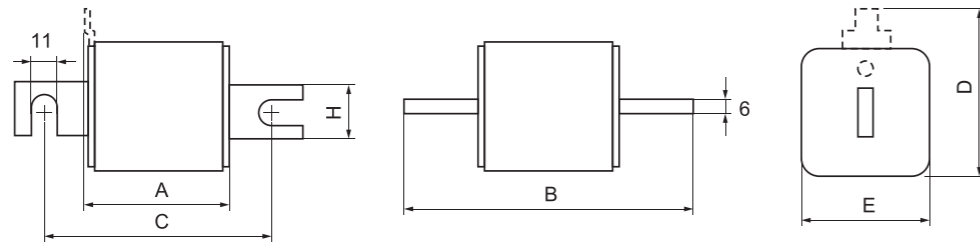
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	D	E	F	G	H	J
FRM36SP60K	IEC AC690V	4600~7000	262	299	274	128	157	132	130	60	30
FRM66SP80K	AC800V	4600~7000	262	299	274	128	157	132	130	80	30
FRM76SP90K	IEC AC1000V	4600~6400	262	299	274	128	157	132	130	90	30



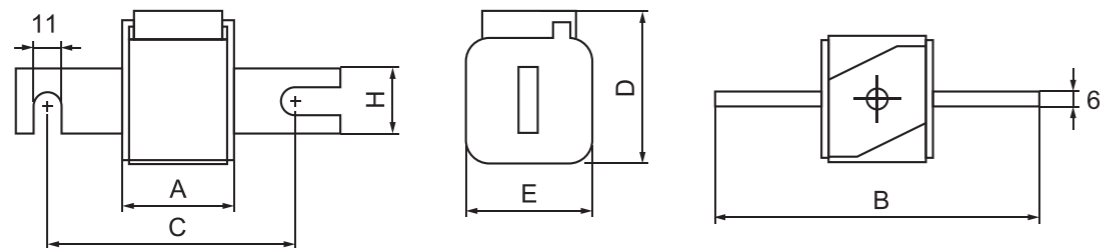
FRM UN型系列母线勾叉式快速熔断器(Class:aR)
FRM Series UN-Type Cross-slots Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)					
			A(max)	B	C	D	E	H
FRM30UN80(T)	IEC/UL AC690/700V	40~630	50	104	78	43(58)	43	20
FRM31UN80(T)		200~800 *550V 900	50	108	78	50(66)	50	25
FRM32UN80(T)		550~1000 *600V 1100/1250	50	108	78	60(75)	60	25
FRM33UN80(T)		500~1600 *600V 1800 *550V 2000	50	109	78	75(90)	75	36
FRM30UN110(T)		40~630	50	134	108	43(58)	43	20
FRM31UN110(T)		200~800 *550V 900	50	138	108	50(66)	50	25
FRM32UN110(T)		550~1000 *600V 1100/1250	50	138	108	60(75)	60	25
FRM33UN110(T)		500~1600 *600V 1800 *550V 2000	51	139	108	75(90)	75	36



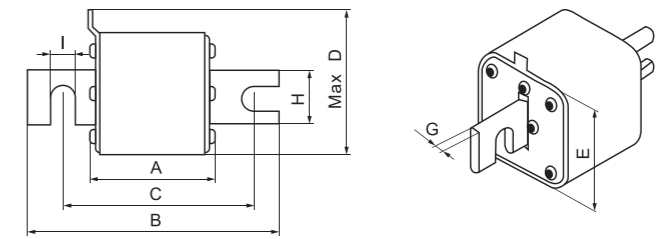
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)					
			A(max)	B	C	D	E	H
FRM30UN80K	IEC/UL AC690/700V	40~630	50	104	78	58	43	20
FRM31UN80K		200~800 *550V 900	50	108	78	69	50	25
FRM32UN80K		550~1000 *600V 1100/1250	50	108	78	77	60	25
FRM33UN80K		500~1600 *600V 1800 *550V 2000	50	109	78	92	75	36
FRM30UN110K		40~630	50	134	108	59	43	20
FRM31UN110K		200~800 *550V 900	50	138	108	69	50	25
FRM32UN110K		550~1000 *600V 1100/1250	50	138	108	77	60	25
FRM33UN110K		500~1600 *600V 1800 *550V 2000	51	139	108	92	75	36



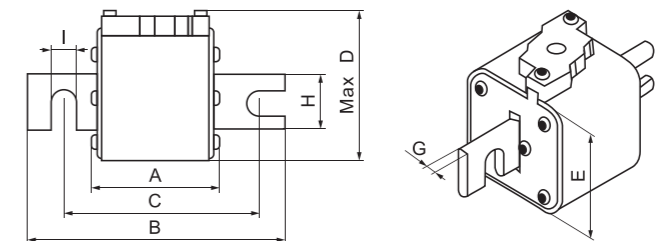
FRM UN型系列母线勾叉式快速熔断器(Class:aR)
FRM Series UN-Type Cross-slots Fast Fuse



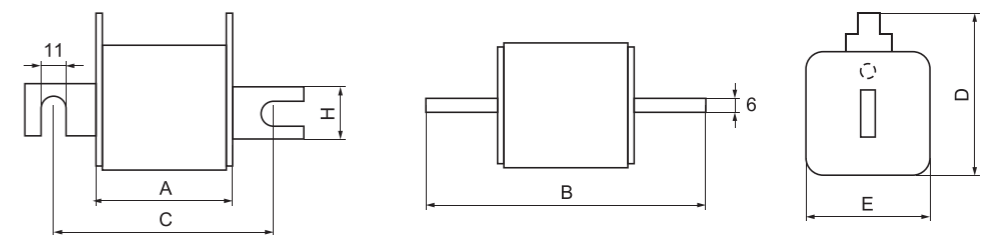
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A(max)	B	C	D	E	G	H	I
FRM60UN110T	IEC/UL AC1000V AC1250V/1300V	50~400	80	138	108	61	43	6	20	11
FRM61UN110T		160~630	80	138	108	66	50	6	25	11
FRM62UN110T		250~800	80	138	108	71	60	6	25	11
FRM63UN110T		315~1400	80	138	108	92	75	6	36	11



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A(max)	B	C	D	E	G	H	I
FRM60UN110K	IEC/UL AC1000V AC1250V/1300V	50~400	80	138	108	61	43	6	20	11
FRM61UN110K		160~630	80	138	108	69	50	6	25	11
FRM62UN110K		250~800	80	138	108	75	60	6	25	11
FRM63UN110K		315~1400	80	138	108	92	75	6	36	11



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)					
			A(max)	B	C	D	E	H
FRM61UN110TT	AC1000V	100~450	73	135	110	63	48	25
FRM62UN110TT	AC1000V	400~630	73	149	110	72	58	25
	AC900V	710						
	AC800V	800						
	AC690V	900						

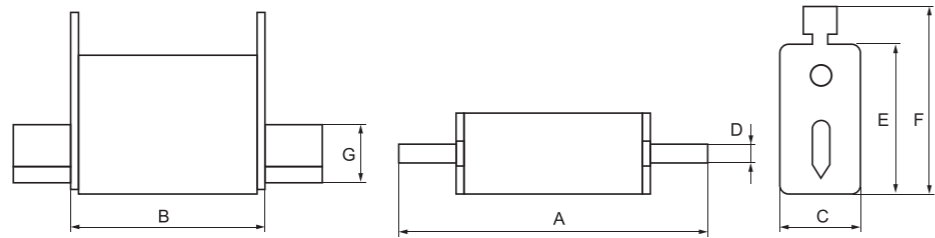


FRM Z型系列插入式刀型快速熔断器(Class:aR)

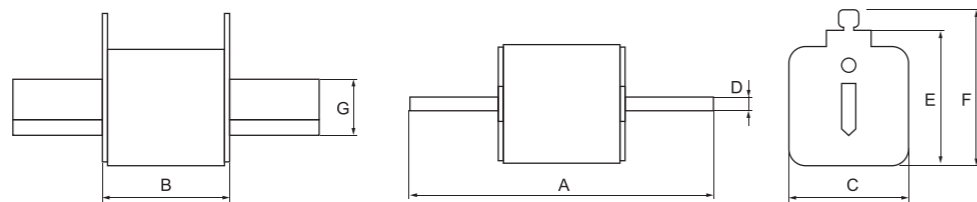
FRM Series Z-type Knife-inserted Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A	B(max)	C	D	E	F	G
FRM000Z78 (NGTC000)	IEC/UL AC690/700V	10~315	78	54	21	6	40	53	15
FRM00Z78 (NGTC00)	IEC/UL AC690/700V	20~400	78	54	30	6	48	61	15
	IEC/UL AC1000V	20~225							



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A	B(max)	C	D	E	F	G
FRM0Z125	UL AC1000V	10~224	125	68	30	6	48	61	15
FRM61Z135(NGTC1)	IEC/UL AC690/700V	40~400	135	75	48	6	48	65	20
FRM62Z150(NGTC2)		200~700	150	75	58	6	58	73	25
FRM63Z150(NGTC3)		500~900	150	75	68	6	74	86	32
FRM63Z150		1000~1400	150	75	71	6	74	86	32
FRM75Z200(NGTC4)		630~2000	200	97	100	6	102	113	50

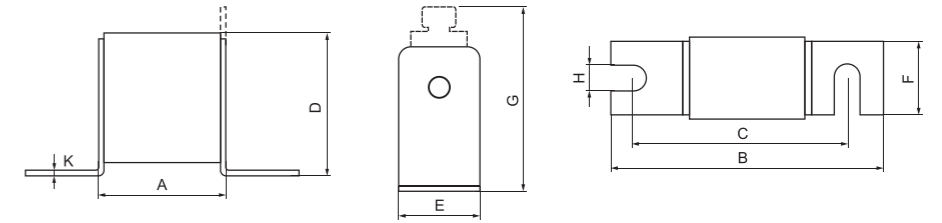


FRM LUN型系列母线连接式快速熔断器(Class:aR)

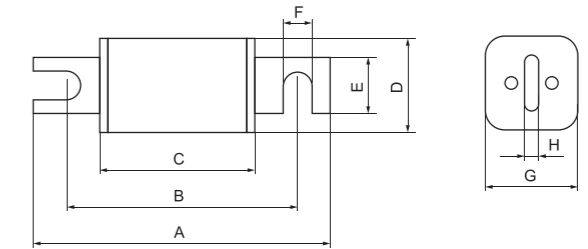
FRM Series LUN-type Bus-connection Fast Fuse



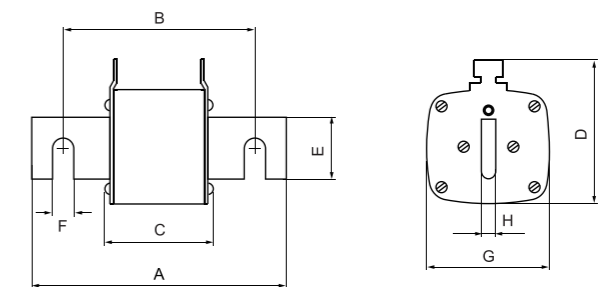
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	D	E	F	(G)	H	K
FRM000LUN80(T) (NGTC000)	IEC/UL AC690/700V	10~315	54	100	78	40	21	20	(51)	8	2
FRM00LUN80(T) (NGT00)		25~400	54	100	78	51	30	28	(67)	10	2
FRM00LUN80(T)	IEC/UL AC1000V	20~315	54	100	78	51	30	28	(67)	10	2



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A	B	C(max)	D	E	F	G	H
NGT1	GB 400/690V	100~250	140	110	68	48	25	11	48	6
NGT2		200~400	140	110	68	58	25	11	58	6
NGT3		355~630	140	110	68	68	36	11	68	6
NGT4	IEC/UL AC690/700V	630~2000	200	150	90	113	50	16.5	97	8
	AC1000V	630~1600								



NGT1~3

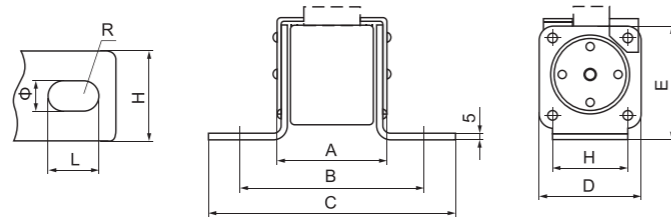


NGT4

FRM LB型系列母线螺栓式快速熔断器(Class:aR)
FRM Series LB-type Bus-bolted Fast Fuse



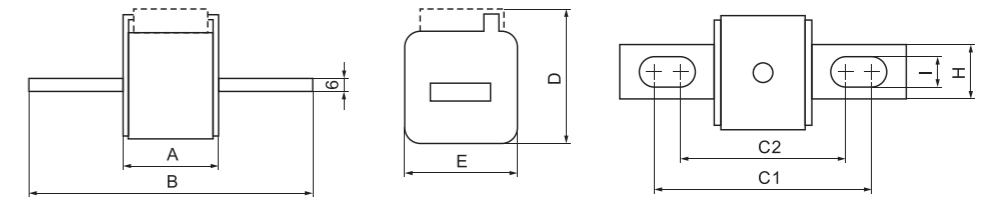
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A(max)	B	C	D	E	H	I	ΦB
FRM32LB104(K) (RS4/RS8)	AC500/690V	80~400	63	104	136	58	64	32	17	11
FRM62LB128(K) (RS4/RS8)	AC800/1000V	80~400	87	128	160	58	64	32	17	11
FRM33LB100(K) (RS4/RS8)	AC500/690V	400~800	63	99	139	72	77.5	50	20	13
FRM63LB124(K) (RS4/RS8)	AC800/1000V	400~800	87	123	163	72	77.5	50	20	13
FRM34LB113(K) (RS4/RS8)	AC500/690V	800~1250	67	113	153	85	90.5	60	20	16.5
FRM64LB133(K)	AC800/1000V	800~1250	87	133	173	85	90.5	60	20	16.5



FRM MB型系列插刀母线式快速熔断器(Class:aR)
FRM Series MB-type Bus-bolted Fast Fuse



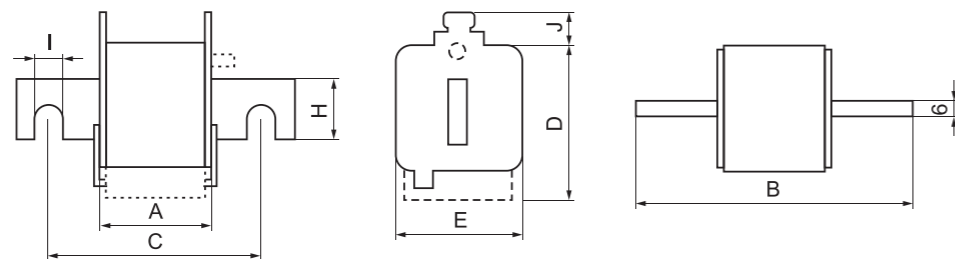
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A(max)	B	C1	C2	D	E	H	I
FRM30MB78K	IEC/UL AC690/700V	40~630	50	110	85	72	59	43	20	10
FRM31MB90K		200~900	50	135	104	78	69	50	25	14
FRM32MB90K		400~1250	50	135	105	78	77	60	25	14
FRM33MB90K		500~2000	51	135	106	78	92	75	36	16
FRM30MB115K	DC500V	40~630	50	148	123	110	59	43	20	10
FRM31MB115K		200~900	50	157	126	100	69	50	25	14
FRM32MB115K		400~1250	50	159	125	99	77	60	25	14
FRM33MB115K		500~2000	51	155	125	97	92	75	36	16



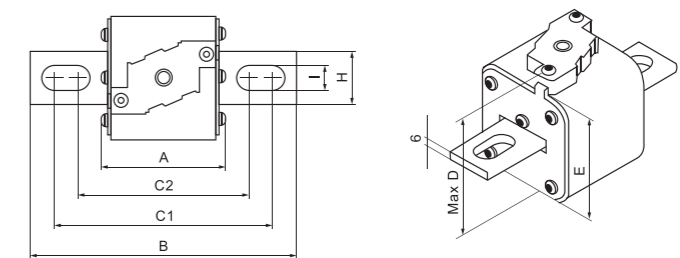
FRM MN型系列母线连接式快速熔断器(Class:aR)
FRM Series MN-type Bus-connection Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A(max)	B	C	D	E	H	I	J
FRM30MN78TT	IEC/UL AC690/700V DC500V	40~500	50	102	76	59	43	20	9	13
FRM30MN78K		40~500	50	102	76	59	43	28	9	13
FRM31MN86TT		200~800	50	111	86	69	50	25	11	11
FRM31MN86K		200~800	50	111	86	69	50	25	11	11
FRM32MN90TT		400~1000	50	126	91	77	60	25	13	12
FRM32MN90K		400~1000	50	126	91	77	60	25	13	12
FRM33MN90TT		500~1500	51	126	91	92	75	36	13	13
FRM33MN90K		500~1500	51	126	91	92	75	36	13	13

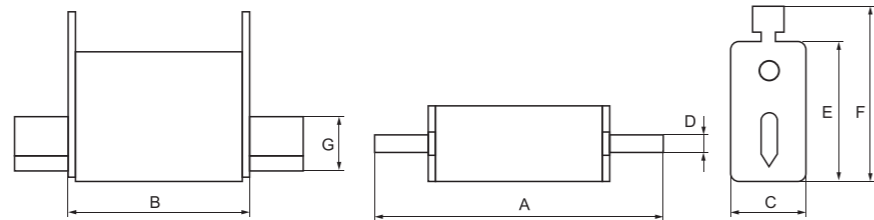


产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A(max)	B	C1	C2	D	E	H	I
FRM60MB115K	IEC/UL AC1000V AC1250/1300V DC1000	50~400	73	156	130	101	59	43	20	10
FRM61MB115K		160~630	73	160	127	102	69	50	25	14
FRM62MB115K		250~800	73	160	127	102	77	60	25	14
FRM63MB115K		500~1400	73	160	128	102	92	75	36	16

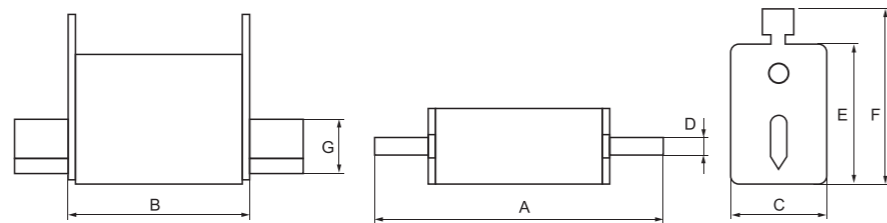


FRM系列Z型刀插双指示快速熔断器(Class:aR)
FRM Serise Z-type Knife-inserted Double-indication Fast Fuse

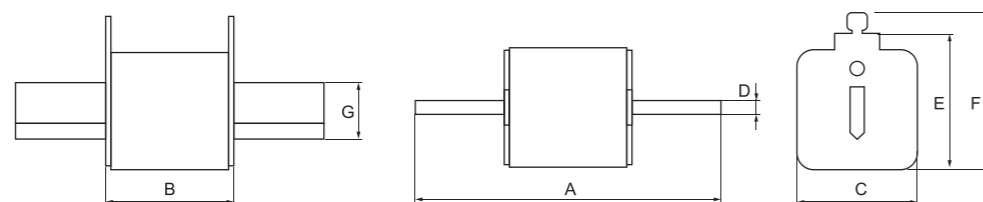
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A	B	C	D	E	F	G
FRM00ZS78	IEC/UL AC690/700V	10~250	78	54	21	6	40	53	15



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A	B	C	D	E	F	G
FRM00ZS78	IEC/UL AC690/700V	25~315	78	54	30	6	48	61	15
FRM00ZS78	IEC/UL AC1000V IEC 900V	25~225							

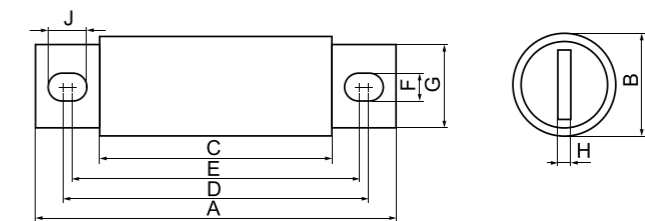


产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A	B	C	D	E	F	G
FRM61ZS135	IEC/UL AC690/700V	40~700	135	75	48	6	48	65	20
FRM62ZS150		400~1000	150	75	58	6	58	73	25
FRM63ZS150		500~1400	150	75	71	6	74	86	32

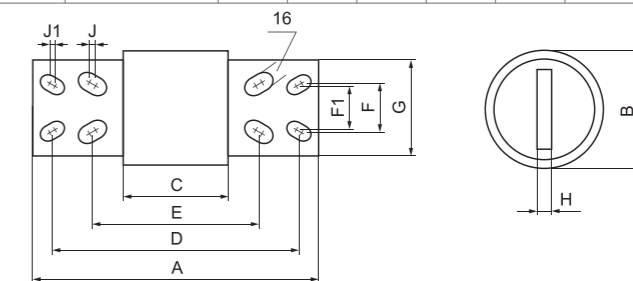


FRB系列MB型圆管螺栓式快速熔断器(Class:aR)
FRB Series MB-type Round Tube Bolted Fast Fuse

产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	D	E	F	G	H	J
FRB25MB52	UL 130/150V	70~400	73	25	29	57	48	9	18	3.2	13.5
FRB38MB60		500~1000	89	38	32	65	55	10.5	26	6	19
FRB21MB61	UL 250V	35~160	81	21	40	66	56	9	15	3.2	14
FRB31MB67		125~315	88	31	40	72	63	9	22	5	12.5
FRB38MB66		225~600	98	38	40	75	57	10.5	26	6	19
FRB51MB70		450~800	99	51	40	80	60	10.5	38	6	20
FRB21MB61	UL 500V	35~160	81	21	40	66	56	9	15	3.2	14
FRB25MB68		70~225	88	25	44	72	63	9	18	3.2	13.5
FRB31MB70		125~300	91	31	47	75	66	9	22	5	12.5
FRB38MB79		225~500	111	38	53	88	70	10.5	26	6	19
FRB51MB83		450~700	112	51	53	93	73	10.5	38	6	20
FRB63MB107		700~1000	161	63	53	126	90	13.5	50	10	31
FRB75MB126	1000~1400	177	75	82	140	114	16	60	12	29	
FRB21MB90	UL 600V	35~100	111	21	70	95	85	9	15	3.2	14
FRB25MB93		70~160	114	25	70	98	89	9	18	3.2	13.5
FRB31MB98		110~250	118	31	74	101	94	9	18	5	12.5
FRB38MB99		125~400	132	38	74	108	91	10.5	26	6	19
FRB51MB106		225~600	135	51	76	116	96	10.5	38	6	20
FRB63MB120		450~900	158	63	78	141	99	13.5	50	10	21
FRB89MB120	1000~1100	184	89	78	141	99	13.5	70	12	21	
FRB21MB89	UL 700V	35~100	109	21	68	94	84	9	15	3.2	14
FRB25MB90		70~160	110	25	66	94	85	9	18	3.2	13.5
FRB38MB98		125~300	130	38	72	106	89	10.5	26	6	19
FRB51MB102		225~500	131	51	72	112	93	10.5	38	6	20
FRB63MB126		450~700	180	63	72	145	110	13.5	50	10	31
FRB75MB126	700~900	177	75	82	140	114	16	60	12	29	
FRB25MB102	UL 1000V	35~125	123	25	79	107	98	9	18	3.2	13.5
FRB38MB108		125~300	141	38	83	117	100	10.5	26	6	19
FRB51MB119		250~500	148	51	89	128	117	10.5	38	6	20
FRB63MB136		500~700	182	63	88	152	128	13.5	50	10	31
FRB89MB136		800~2000	172	89	84	148	118	16	70	12	22

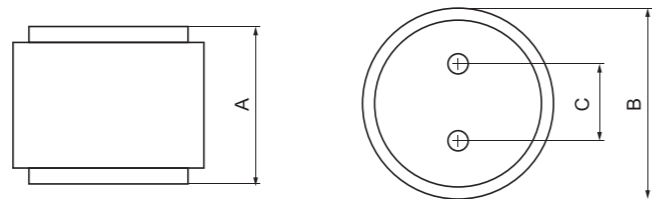


产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)									
			A	B	C	D	E	F	G	H	J	J1
FRB108MB193	AC500V;DC250V	1400~1600	260	108	82	228	158	44	68	19	13	3
FRB108MB209	AC700V;DC500V	900~1200	275	108	98	244	174	44	89	19	41	3

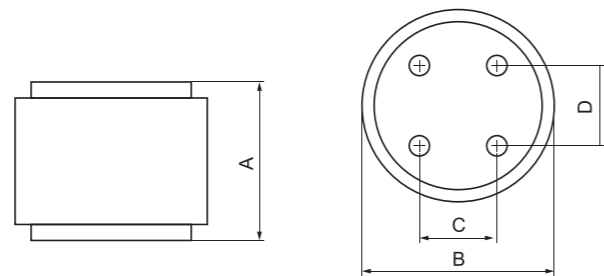


FRB系列P型圆管平板式快速熔断器(Class:aR)
FRB Series P-type Round Tube Flat-plate Fast Fuse

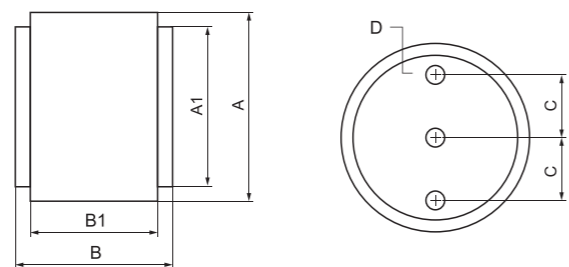
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)			
			A	B	C	D
FRB51P48	AC150;DC150	1000~2000	48	51	25	/
FRB75P48		2500~3000	48	75	38	/
FRB75P66		1000~2000	66	75	38	/



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)			
			A	B	C	D
FRB89P48	UL 150V	4000	48	89	38	38
FRB89P66	UL 250V	2500~3000	66	89	38	38



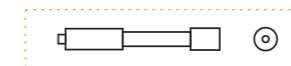
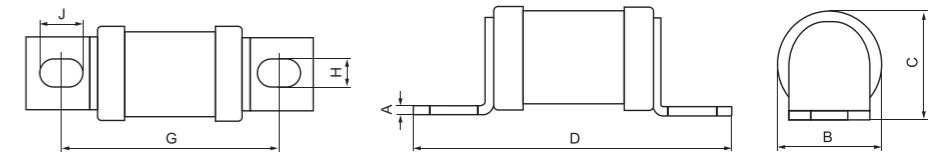
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)					
			A	A1	B	B1	C	D
FRB75P101	UL AC600V DC440	500~800	75	64	102	95	19	10



FRG系列凳子脚快速熔断器(Class:aR)
FRG Series Stool-feet Fast Fuse

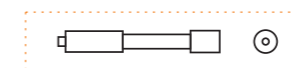
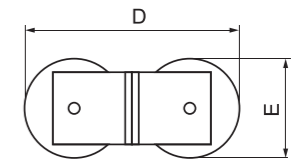
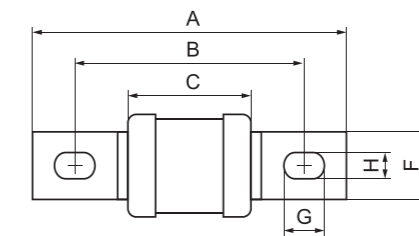


产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A	B	C	D	G	H	J
FRG18LB42	AC230/300	20~180	2	18	19	56	42	6.5	9
FRG21LB42		60~250	2.5	21.3	22	58	42	9	11
FRG27LB58		90~300	3	26.8	28	80	58	9	11
FRG36LB60		150~350	3	33	35	85	58	11	19
FRG48LB65		315~550	3.5	47.5	51	90	65	11	16
FRG18LB64	AC690/700/1000	20~125	2	18.2	19	76	62	6.5	9
FRG21LB70		60~160	2.5	21.3	22	90	70	9	11
FRG24LB77		125~200	3	23	25.5	98	77	9	14
FRG27LB70		90~225	3	26.8	28	90	70	9	11
FRG36LB81		150~355	3	33	36	106	81	11	19
FRG48LB85		315~600	3.5	47.5	51	109	85	11	16
FRG38LB85	AC690/1000	180~350	3	38	44	113	85	11	19



注: 如有要求带信号(远程控制)请注明, 并向销售部或技术部取得联系
Note: If you require signal (remote control), please specify and contact the Sales Department or Technical Department.

产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A	B	C	D	E	F	G	H
FRG36SL59	AC230/300	400~700	84	59	31	72	33	25	16	10.3
FRG36SL81	AC690/1000	400~710	106	81	60	72	33	25	16	10.3
FRG38SL85	AC690/1000	400~710	113	85	60	80	38	25	16	10.3



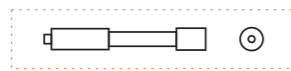
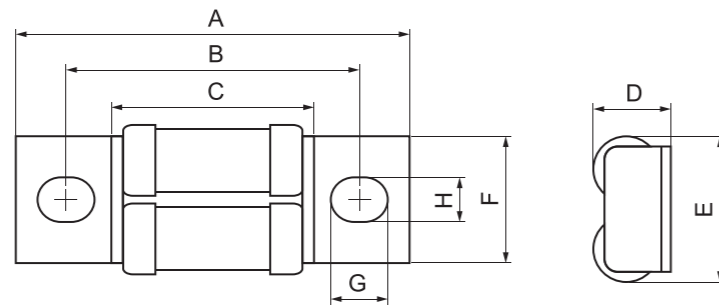
注: 如有要求带信号(远程控制)请注明, 并向销售部或技术部取得联系
Note: If you require signal (remote control), please specify and contact the Sales Department or Technical Department.

FRG系列凳子脚快速熔断器(Class:aR)

FRG Series Stool-feet Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A	B	C	D	E	F	G	H
FRG18SL70	AC1000	100~225	94	71	46	20.5	36	32	12	8.7



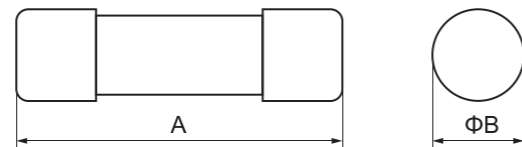
注: 如有要求带信号(远程控制)请注明, 并向销售部或技术部取得联系
 Note: If you require signal (remote control), please specify and contact the Sales Department or Technical Department.

FRC系列圆筒帽形快速熔断器(Class:aR)

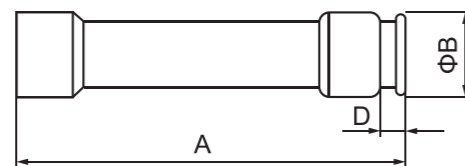
FRC Series Cylinder Cap Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)	
			A	ΦB
FRC08	AC500/700	0.5~20	31.5	8.5
FRC10		1~50	38	10.3
FRC14		6~80	51	14.3
FRC21		10~63	58	21.0
FRC22		10~160	58	22.2
FRC27		32~125	60	27



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)		
			A	ΦB	D
FRC14H	AC500/700	6~80	51	14.3	5
FRC21H		10~63	76	20.5	5
FRC22H		10~160	58	22.2	5

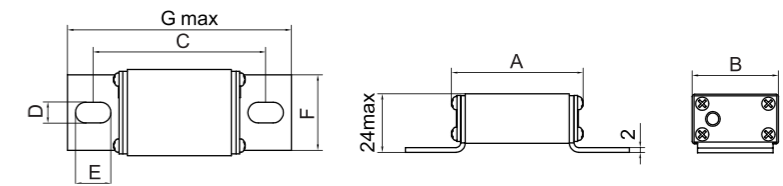


IGBT晶体管保护用快速熔断器/FRM系列LB型母线螺栓式(Class:aR)

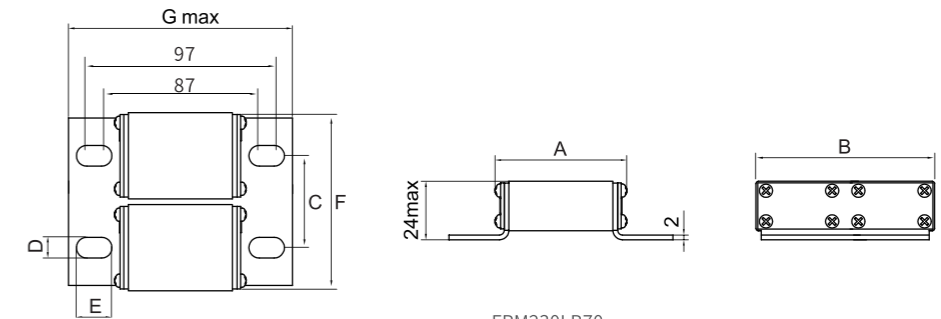
IGBT Series For Transistor Protection/FRM Series LB-type Bus-bolted Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A	B	C	D	E	F	G(max)
FRM000LB70	IEC/UL 750/800V	25~315	57	36.5	73	8.5	14	32	96
FRM230LB70		250~630	73	78	40	8.8	14	74.1	115



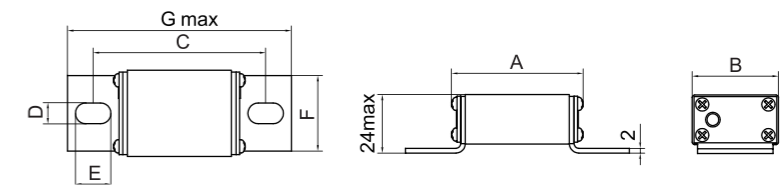
FRM000LB70



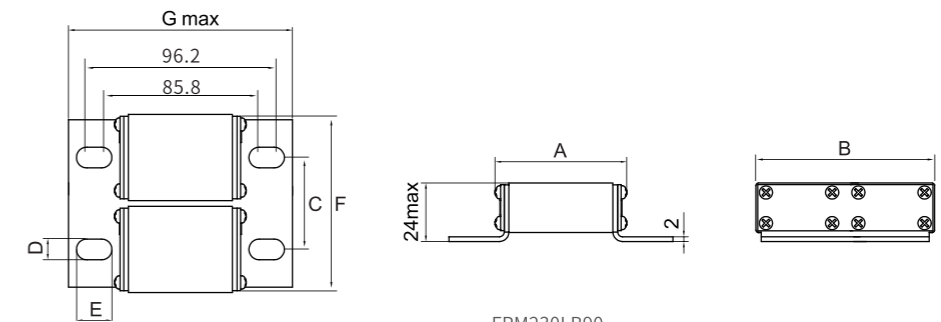
FRM230LB70



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)						
			A	B	C	D	E	F	G(max)
FRM000LB90	IEC/UL 1000V	25~250	75	36.5	91	8.5	14	32	113.5
FRM230LB90		200~500	73	78	40	8.8	14	74.1	115



FRM000LB90



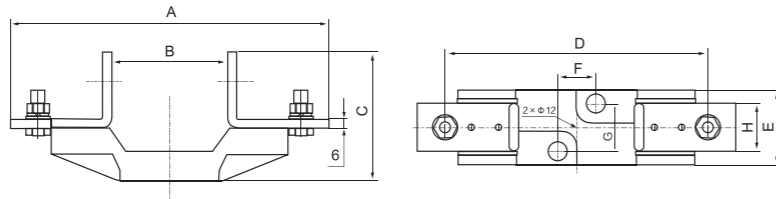
FRM230LB90

半导体器件保护用熔断器专用底座

Specialized Fuse Base For Semiconductor Protection

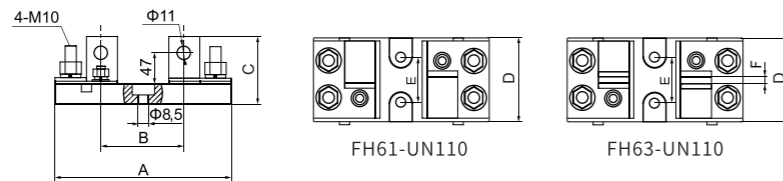
FH系列P型熔断器专用底座
FH Series P-type Specialized Fuse Base

产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A	B	C	D	E	F	G	H
FH31-P51	690/700V	630	211	51	99	175	49	25	30	32
FH33-P51	690/700V	2000	211	51	99	175	53	25	30	50
FH61-P75	1250/1300V	630	208	75	84	180	49	25	30	32
FH63-P75	1250/1300V	1400	208	75	84	180	53	25	30	50



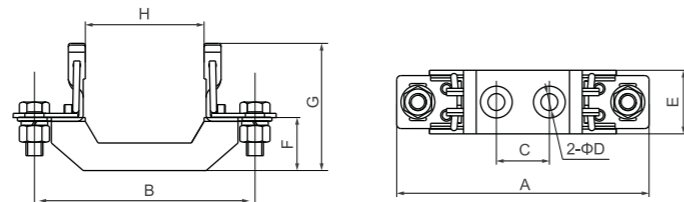
FH系列UN型熔断器专用底座
FH Series UN-type Specialized Fuse Base

产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)					
			A	B	C	D	E	F
FH61-UN110 (FH31-UN80)	1400V	630	205	110	80	85	60	-
FH63-UN110 (FH33-UN80)	1400V	2000	205	110	80	85	60	6



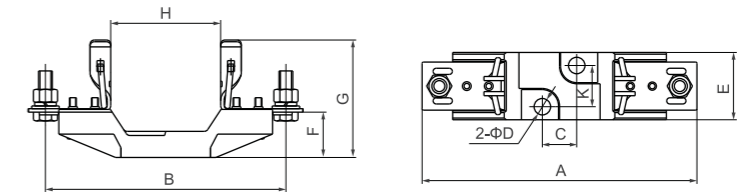
FH系列Z型熔断器专用底座
FH Series Z-type Specialized Fuse Base

产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A	B	C	ΦD	E	F	G	H
FH00Z-160	690V	160	120	100	25	7.5	30	25	60	56
FH0Z-160	1000V	160	170	75	71	7.5	68	30	64	74

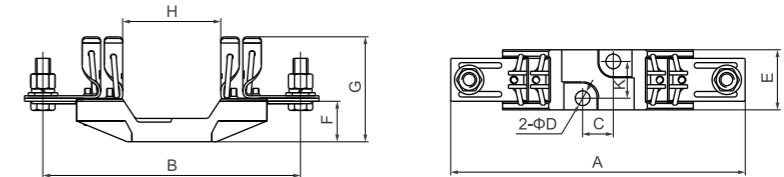


FH系列Z型熔断器专用底座
FH Series Z-type Specialized Fuse Base

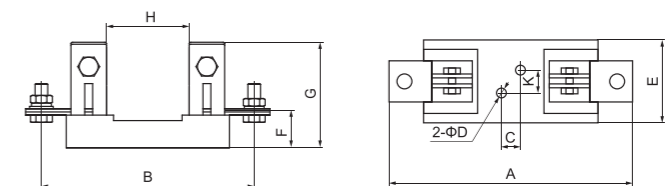
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	ΦD	E	F	G	H	K
FH1Z-250	690~1000V	250	200	175	25	12	50	35	83	80	30
FH2Z-400		400	225	200	25	12	50	35	85	80	30



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	ΦD	E	F	G	H	K
FH3Z-630	690~1000V	630	240	210	25	12	50	35	88	80	30

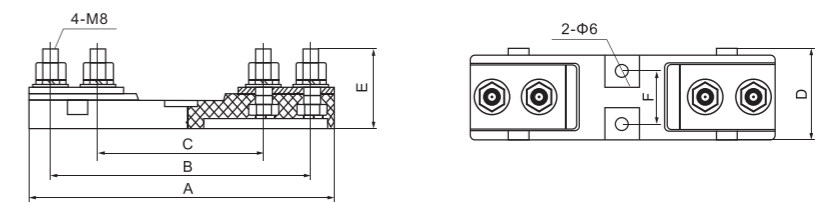


产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	ΦD	E	F	G	H	K
FH4MN-1250	690~1000V	1250	310	270	45	10.5	88	50	134	105	30



FH系列LUN型熔断器专用底座
FH Series LUN-type Specialized Fuse Base

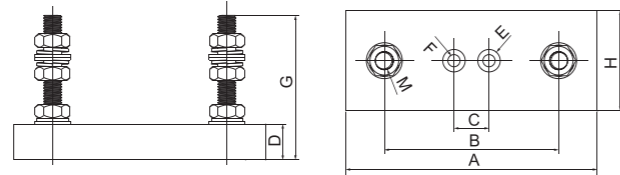
产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)					
			A	B	C	D	E	F
FH20-LUN80	1000V	400	147	126	80	43	37.5	25



FH系列MB型快速熔断器专用底座 FH Series MB-type Specialized Fuse Base



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	ΦD	E	F	G	H	M
FH18-MB64	1000V	100	80	64	20	15	9	5.5	40	18	6
FH25-MB52	500V	400	75	52	20	15	9	5.5	40	25	8
FH38-MB60	500V	1000	90	62	30	20	20	10.5	45	38	10
FH21-MB62	500V	160	82	62	20	15	9	5.5	40	21	8
FH25-MB72	500V	300	92	72	20	15	9	5.5	40	25	8
FH31-MB72	500V	400	90	72	30	20	9	10.5	45	31	8
FH38-MB80	500V	600	112	80	30	20	20	10.5	45	38	10
FH51-MB80	500V	800	112	80	30	20	20	10.5	45	51	10
FH21-MB91	750V	100	112	91	20	15	9	5.5	40	21	8
FH25-MB89	750V	160	115	89	20	15	9	5.5	40	25	8
FH38-MB99	750V	400	120	99	30	20	20	10.5	45	38	10
FH51-MB100	750V	600	135	100	30	20	20	10.5	45	51	10
FH25-MB107	1000V	100	125	107	20	15	9	5.5	40	25	8
FH38-MB108	1000V	300	142	102	30	20	20	10.5	45	38	10
FH51-MB119	1000V	400	150	119	30	20	20	10.5	45	51	10



机车保护用直流快速熔断器 DC Fast Fuse For Locomotive Protection

概述 Overview

- 符合GB/T 13539.4、GB/T 21413.5、IEC60269-4和UL248-13标准；
- 额定电压：DC440V,660V,700V,750V,900V,1200V,1500V,2000V,2400
- 更高直流电压请与公司技术部门联系；
- 功能等级：aR, gR；
- aR用于半导体器件短路故障系统保护, gR用于半导体器件短路系统保护以及提高线路上的电缆和导线系统保护；
- 额定分断能力：最大至DC100kA；
- 功耗及I²t数据可向技术部门索取；
- 重量及装箱数可向公司市场部索取。
- It conforms to GB/T 13539.4, GB/T 21413.5, IEC 60269-4 and UL248-13 standards.
- Rated voltage: DC440V,660V,700V,750V,900V,1200V,1500V,2000V,2400
- For higher DC voltage, please contact the company's technical department.
- Functional Level: aR, gR;
- aR is used for short-circuit fault system protection of semiconductor devices, gR is used for short-circuit system protection of semiconductor devices and for improving cable and wire system protection on lines.
- Rated breaking capacity: up to DC100kA;
- Power consumption and I²t data can be obtained from Technical Departments.
- The weight and packing number can be obtained from the Marketing Department of the company.

工作环境 Working Environment

- 环境温度：环境温度不超过40°C, 24h测得的平均值不超过35°C, 一年内测得的平均低于该值；周围空气温度最低值为-5°C。
- 大气条件：空气是干净的, 其相对湿度在最高温度为40°C时不超过50%。在较低温度下可以有较高的相对湿度。例如, 在20°C时, 相对湿度可达90%。由于温度变化发生在产品本体上的凝露情况必须采取措施。
- 污染等级：3级
- 安装条件：熔断器应安装在无显著摇动和冲击, 无足以腐蚀金属和破坏绝缘得气体及导电尘埃的场所中。

注：当熔断器使用条件和规定不相符时, 用户应与我公司协商。

- Ambient temperature: ambient temperature does not exceed 40°C and the average value measured in 24 hours does not exceed 35°C and the average value measured in one year is lower than that; the minimum ambient air temperature is -5°C.
- Atmospheric Conditions: The air is clean, and its relative humidity does not exceed 50% at the highest temperature of 40°C. The relative humidity can be higher at lower temperatures. For example, the relative humidity can reach 90% at 20°C. Because the temperature change occurs in the condensation of the product body, measures must be taken.
- Pollution Level: Level 3
- Installation Conditions: Fuses shall be installed in places where there is no significant shaking and impact, and where there is no enough corrosion of metals and destruction of insulated gases and conductive dust.

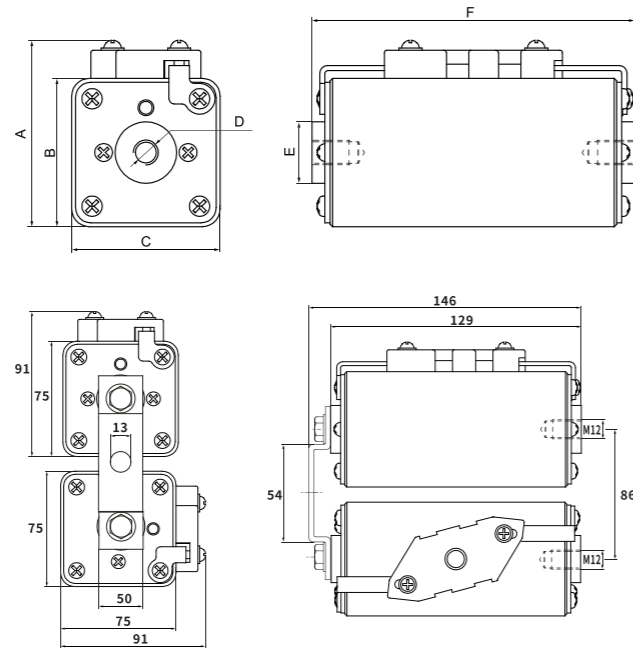
Note: Users should consult with our company when the fuse operating conditions and regulations do not meet requirements.

FDM系列 P型直流快速熔断器(Class:gR)

FDM Series P-type DC Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)					
			A	B	C	D	ΦE	F
FDM-JC-P110	DC750/900	50~160	59	43	43	2-M8	17	128±2
FDM-JC-P113	DC750/900	250~800	91	75	75	2-M12	40	130±1.5
FDM-JC-2P113	DC750/900	1000~1600	见图 as figure shown below					

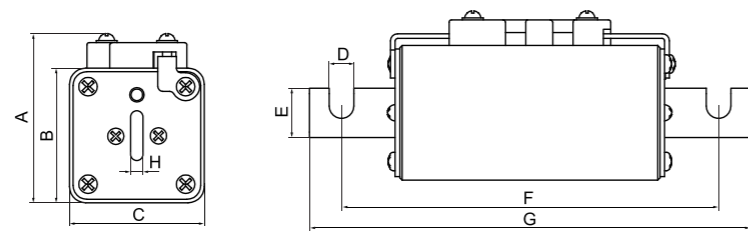


FDM系列 MN型直流快速熔断器(Class:gR)

FDM Series MN-type DC Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A	B	C	D	E	F	G	H
FDM-JC-MN110	DC750V	50~160	59	43	43	9	20	156	180	6
FDM-JC-MN111		200~250	64	48	43	11	25	167	180	6
FDM-JC-MN112		250~400	74	58	48	13	25	171	190	6
		500								
FDM-JC-MN113		500	91	75	75	13	36	171	206	6
	630~750 800									

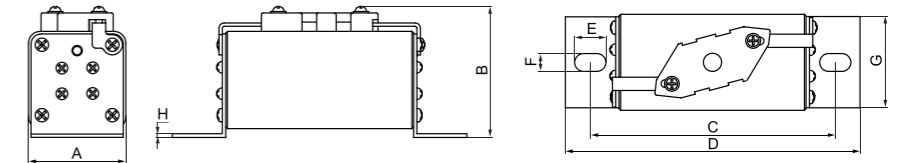


FDM系列 LB型直流快速熔断器(Class:aR)

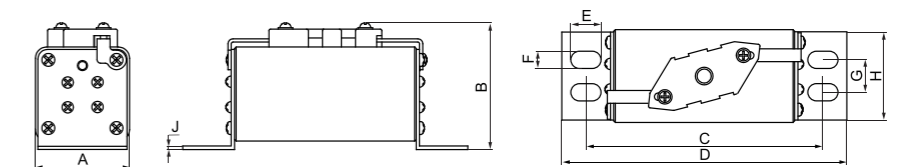
FDM Series LB-type DC Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A	B	C	D	E	F	G	H
FDM-JC-LB110	DC1200	20~215	39	66	137±2	164±2	14	9	38	3
FDM-JC-LB150	DC2000	50~215	39	66	195	217	14	9	38	3

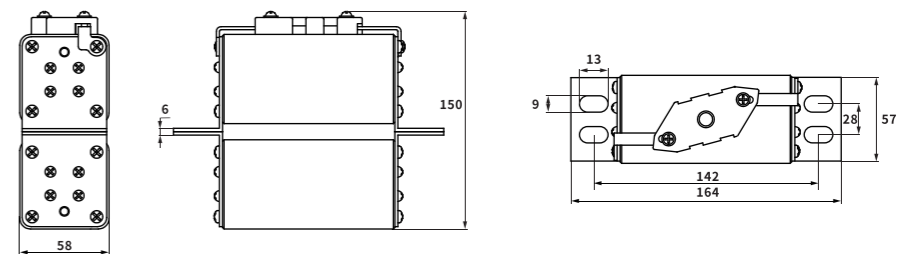


产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)								
			A	B	C	D	E	F	G	H	J
FDM-JC-LB92	DC1200	160~420	58	83	142	164	13	9	28	57	3
FDM-JC-LB152	DC2000	160~400	58	83	195	213	13	9	28	57	3



FDM-JC-LB92电流大于420A;FDM-JC-LB152电流大于400A;请使用双拼,如下图所示

The current of FDM-JC-LB92 is greater than 420 A; the current of FDM-JC-LB152 is greater than 400 A; please use double-piecing, as shown in the figure below.

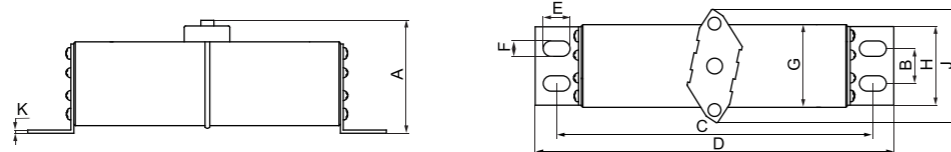


FDM系列 LB型直流快速熔断器(Class:aR)

FDM Series LB-type DC Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)							
			A	B	Cmax	Dmax	G	H	J	K
FDM-JC-LB203	DC2400	100~400	98	28±0.4	246	268	75	60±0.2	80	3



FDC圆筒帽型直流快速熔断器(Class:gR)

FDC Series Cylinder Cap DC Fast Fuse



产品型号 Type	额定电压(V) Rated voltage	额定电流(A) Rated current	尺寸Dimension(mm)			
			A	B	ΦC	ΦD
FDC-JC-10	DC440	2~25	38	7	5	10.3
FDC-JC-14Z	DC440	2~50	51	7	5	14
FDC-JC-22Z	DC440	50~100	22	7	5	58
FDC-JC-27Z	DC440	125~160	27	7	5	60
FDC-JC-27	DC660/700	16~80	27	7	5	60
FDC-JC-20	DC660/700	1~30	127	7	5	20.6
FDC-JC-36	DC660/700	25~100	127	7	5	36
FDC-JC-20	DC1500	1~30	127	7	5	20.6
FDC-JC-36L	DC1500	30~100	190	7	5	36

