

Main Characteristics 主要技术参数: 电压等级:690VAC~750VDC IEC; 700VAC~800VDC UL
 电流:from 25A to 350A 分断能力High interrupting rating 200kA. 执行标准Standard IEC 60269-4 、UL 248-1.

Size 瓷管 代号	Catalog Numbers 订货号	Voltage电压等级(V)		Ampere 电流 (A)	Watts Loss(W) 功耗		I ² t @690VAC 熔断I ² t(A ² S)	
		Un(ac)	Un(dc)		0.8In	In	Pre-arctingI ² t @1ms A ² S 弧前 I ² t	Total cleaingI ² t @Un A ² S 熔断 I ² t
000FU/75	109M1750	690VAC	750VDC	25A	5.0	12	25	135
	109M1751	690VAC	750VDC	32A	5.5	13	45	240
	109M1752	690VAC	750VDC	40A	6.6	14	75	395
	109M1753	690VAC	750VDC	50A	7.7	16	135	695
	109M1754	690VAC	750VDC	63A	8.8	17	260	1350
	109M1755	690VAC	750VDC	80A	8.9	20	460	2350
	109M1756	690VAC	750VDC	100A	11	25	795	4000
	109M1757	690VAC	750VDC	125A	12	29	1300	6800
	109M1758	690VAC	750VDC	160A	17	34	2550	13500
	109M1759	690VAC	750VDC	200A	20	40	4350	22000
	109M1760	690VAC	750VDC	250A	25	48	7400	37500
	109M1761	690VAC	750VDC	315A	32	60	12500	65000
	109M1762	690VAC	750VDC	350A	33	65	17000	88000

Interrupting rating 200kA RMS Symmetrical (Estimated), 预期最大分断能力200KA。Class类别: gR.全范围保护类型。

Optimized for use in IGBT inverter circuits with DC-link voltages up to 800Vdc, 用于DC800VIGBT组成的逆变器电路。

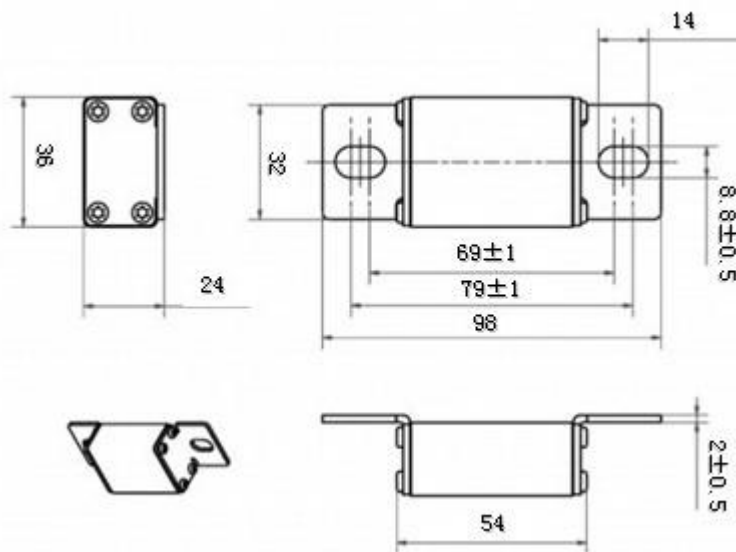
Low inductance < 15 nH 电路电感≤15nH。

Watt Loss provided at rated current 功耗是在额定电流下提供。

Tested at 863V acc. to IEC 60269-4 执行IEC269-4标准在863VAC电压下测试。

Tested at 800V acc. to UL 248-1 (Pending) 执行UL248-1标准在800VAC电压下测试。

Dimensions (mm) (000/75) 安装尺寸示意图



Main Characteristics 主要技术参数: 电压等级:690VAC~750VDC IEC; 700VAC~800VDC UL
 电流:from 25A to 350A 分断能力High interrupting rating 200kA. 执行标准Standard IEC 60269-4 、UL 248-1.

Electrical characteristics 电气特性:

Total clearing I²t 熔断I²t:

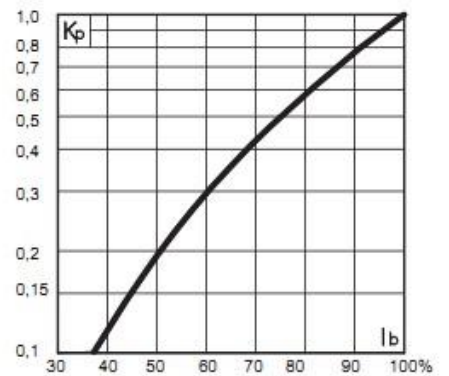
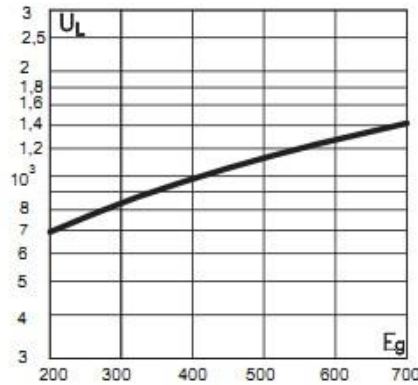
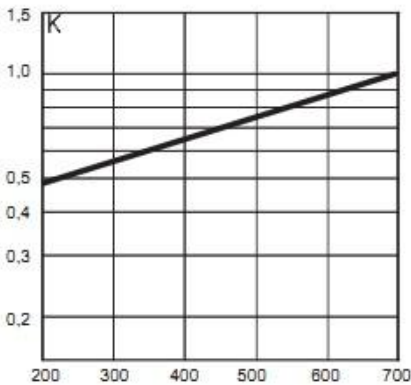
The total clearing I²t at rated voltage and at power factor of 15% are given in the electrical characteristics. For other voltages, the clearing I t is found by multiplying by correction factor, K, given as a function of applied working voltage, E,(RMS) 熔断I²t是在额定电压功率因数15%条件下给出,其他电压参考下图K曲线。

Arc Voltage 电弧电压

This curve gives the peak arc voltage, U , which may appear across the fuse L during its operation as a function of the applied working voltage E, (RMS) at a power factor of 15%在功率因数15%条件下熔断器两端的过电压和工作电压的关系见下图曲线。

Power Losses 功耗:

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the power losses at load currents lower than the rated current. The correction factor, K , p is given as a function of the RMS load current, I , in % of the rated current.在额定电流下的功耗已给出,低于额定电流下的功耗参考下表中的Kp修正系数。



Main Characteristics 主要技术参数: 电压等级:690VAC~750VDC IEC; 700VAC~800VDC UL
 电流:from 100A to 630A分断能力High interrupting rating 200kA. 执行标准Standard IEC 60269-4 、UL 248-1.

Size 瓷管代号	Catalog Numbers 订货号	Voltage电压等级(V)		Ampere 电流 (A)	Watts Loss(W) 功耗		I ² t @690VAC 熔断I ² t(A ² S)	
		Un(ac)	Un(dc)		0.8In	In	Pre-arcingI ² t @1ms A ² S 弧前 I ² t	Total cleaingI ² t @Un A ² S 熔断 I ² t
230FU/75	109M1770	690VAC	750VDC	100A	18	35	380	1950
	109M1771	690VAC	750VDC	125A	20	42	645	3300
	109M1772	690VAC	750VDC	160A	22	47	1350	7000
	109M1773	690VAC	750VDC	200A	26	54	2550	13500
	109M1774	690VAC	750VDC	250A	30	63	4950	25000
	109M1775	690VAC	750VDC	315A	33	72	9350	47500
	109M1776	690VAC	750VDC	350A	37	78	12000	61000
	109M1777	690VAC	750VDC	400A	39	80	18500	94500
	109M1778	690VAC	750VDC	450A	42	85	27000	140000
	109M1779	690VAC	750VDC	500A	44	90	37500	190000
	109M1780	690VAC	750VDC	550A	46	95	48500	245000
	109M1781	690VAC	750VDC	630A	53	105	69500	355000

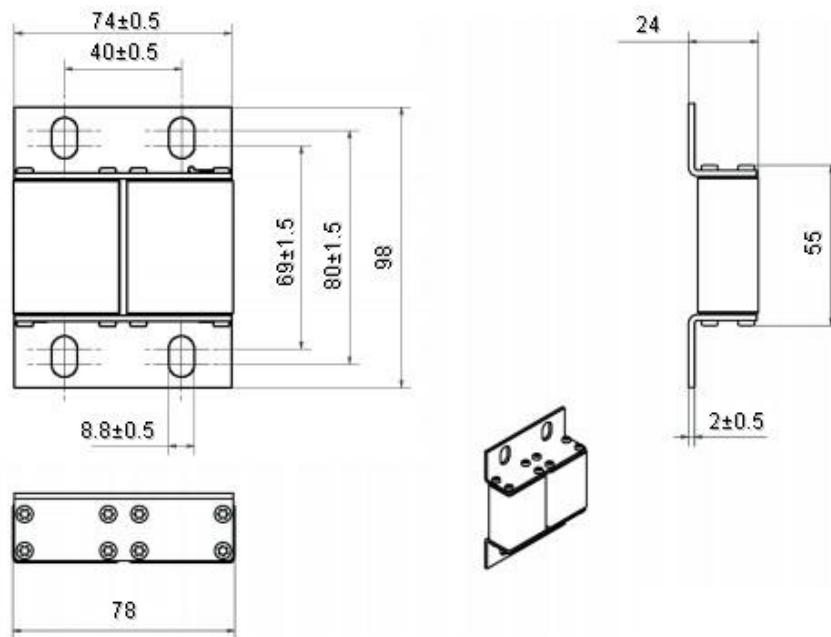
Interrupting rating 200kA RMS Symmetrical (Estimated), 预期最大分断能力200KA。Class类别: gR.全范围保护类型。

Optimized for use in IGBT inverter circuits with DC-link voltages up to 800Vdc, 用于DC800VIGBT组成的逆变器电路。

Low inductance < 15 nH 电路电感≤15nH。 Watt Loss provided at rated current 功耗是在额定电流下提供。

Tested at 863V acc. to IEC 60269-4 执行IEC269-4标准在863VAC电压下测试。 Tested at 800V acc. to UL 248-1 (Pending) 执行UL248-1标准在800VAC电压下测试。

Dimensions (mm) (230/75) 安装尺寸示意图



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		Un(ac)	Un(dc)		0.8In	In	Pre-arcingI ² t @1ms A ² S 弧前 I ² t	Total cleaingI ² t @Un A ² S 熔断 I ² t
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	109M2771	690VAC	750VDC	125A	20	42	645	3300
	109M2772	690VAC	750VDC	160A	22	47	1350	7000
	109M2773	690VAC	750VDC	200A	26	54	2550	13500
	109M2774	690VAC	750VDC	250A	30	63	4950	25000
	109M2775	690VAC	750VDC	315A	33	72	9350	47500
	109M2776	690VAC	750VDC	350A	37	78	12000	61000
	109M2777	690VAC	750VDC	400A	39	80	18500	94500
	109M2778	690VAC	750VDC	450A	42	85	27000	140000
	109M2779	690VAC	750VDC	500A	44	90	37500	190000
	109M2780	690VAC	750VDC	550A	46	95	48500	245000
	109M2781	690VAC	750VDC	630A	53	105	69500	355000

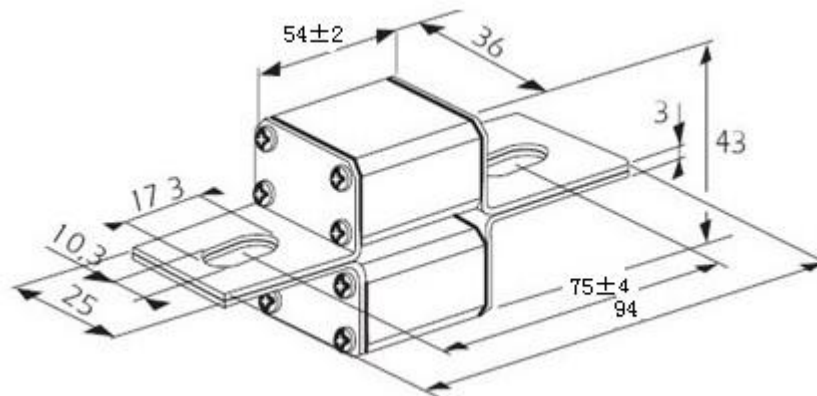
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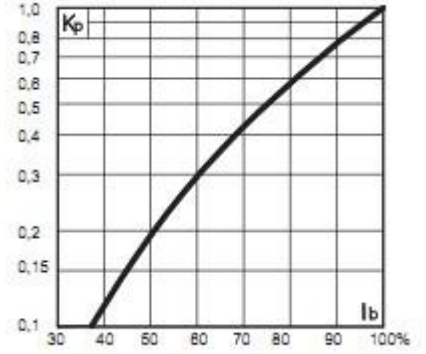
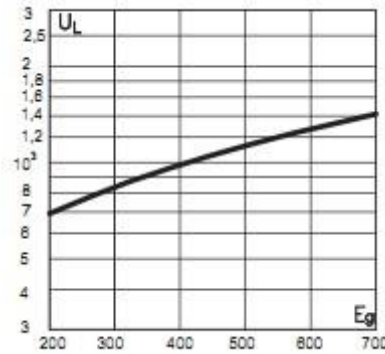
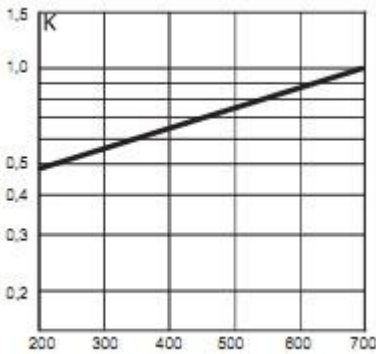
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Power Losses 功耗:

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the power losses at load currents lower than the rated current. The correction factor, K , p is given as a function of the RMS load current, I , in % of the rated current.在额定电流下的功耗已给出, 低于额定电流下的功耗参考下表中的Kp修正系数。



Main Characteristics主要技术参数: 电压等级:1000VAC~1000VDC 电流:from 25A to 250A

Class类别:gR 分断能力High interrupting rating 200kA. 执行标准Standard IEC 60269-4 、 UL 248-1.

Size 瓷管代号	Catalog Numbers 订货号	Voltage电压等级(V)		Ampere 电流 (A)	Watts Loss(W) 功耗		I ² t @690VAC 熔断I ² t(A ² S)	
		Un(ac)	Un(dc)		0.8I _n	I _n	Pre-arctingI ² t @1ms A ² S 弧前 I ² t	Total clearingI ² t @UN A ² S 熔断 I ² t
000FU/90	109M1802	1000VAC	1000VDC	25A	5.0	14	19	95
	109M1803	1000VAC	1000VDC	32A	7.3	17	34	170
	109M1804	1000VAC	1000VDC	40A	10.0	20	61	300
	109M1805	1000VAC	1000VDC	50A	11.5	21	135	675
	109M1806	1000VAC	1000VDC	63A	12	22	245	1200
	109M1807	1000VAC	1000VDC	80A	13	27	505	2500
	109M1808	1000VAC	1000VDC	100A	14	32	1050	5150
	109M1809	1000VAC	1000VDC	125A	16	34	1900	9500
	109M1810	1000VAC	1000VDC	160A	18	37	4050	20000
	109M1811	1000VAC	1000VDC	200A	20	43	8500	42000
	109M1812	1000VAC	1000VDC	225A	23	45	12000	59000
	109M1813	1000VAC	1000VDC	250A	24	48	16000	79500

Interrupting rating 200kA RMS Symmetrical (Estimated), 预期最大分断能力200KA。

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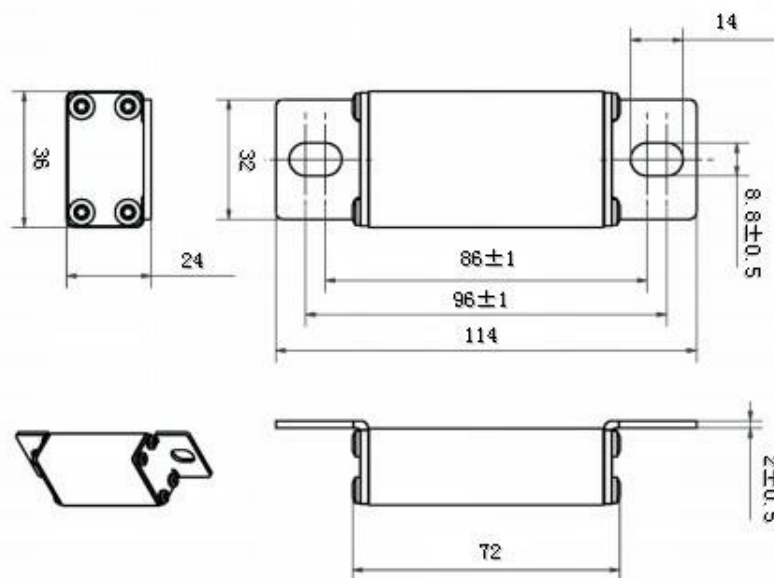
Low inductance < 15 nH 电路电感≤20nH。

Watt Loss provided at rated current 功耗是在额定电流下提供。

Tested at 1150V acc. to IEC 60269-4 执行IEC269-4标准在1150VAC电压下测试。

Tested at 1000V acc. to UL 248-1 (Pending) 执行UL248-1标准在1000VAC电压下测试。

Dimensions (mm) (000/90) 安装尺寸示意图



Main Characteristics主要技术参数: 电压等级:1000VAC~1000VDC 电流:from 25A to 250A

Class类别:gR 分断能力High interrupting rating 200kA. 执行标准Standard IEC 60269-4 、 UL 248-1.

Electrical characteristics 电气特性:

Total clearing I²t 熔断I²t:

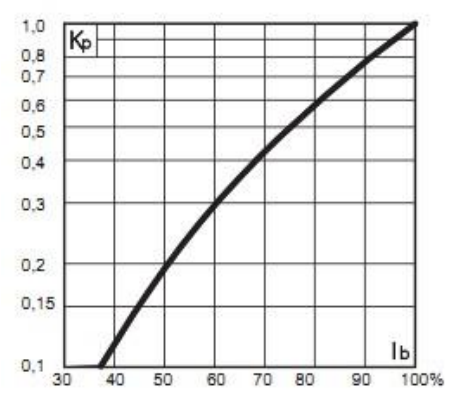
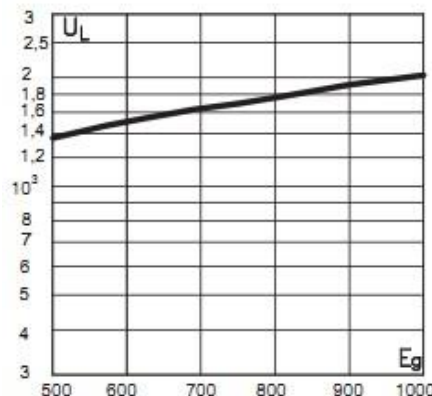
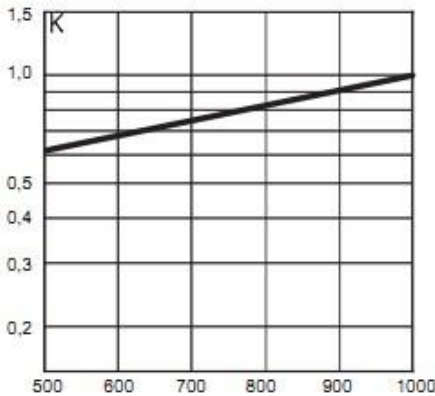
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Power Losses功耗:

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the power losses at load currents lower than the rated current. The correction factor, K , p is given as a function of the RMS load current, I , in % of the rated current.在额定电流下的功耗已给出,低于额定电流下的功耗参考下表中的Kp修正系数。



Main Characteristics主要技术参数: 电压等级:1000VAC~1000VDC 电流:from 100A to 500A

Class类别:gR 分断能力High interrupting rating 200kA. 执行标准Standard IEC 60269-4 、 UL 248-1.

Size 瓷管 代号	Catalog Numbers 订货号	Voltage电压等级(V)		Ampere 电流 (A)	Watts Loss(W)功耗		I ² t @1000VAC熔断I ² t(A ² S)	
		Un(ac)	Un(dc)		0.8In	In	Pre-arcingI ² t @1ms A ² S 弧前 I ² t	Total cleaingI ² t @UN A ² S 熔断 I ² t
230FU/90	109M1824	1000VAC	1000VDC	100A	16	38	600	3050
	109M1825	1000VAC	1000VDC	125A	17	42	1200	6050
	109M1826	1000VAC	1000VDC	160A	19	48	2550	13000
	109M1827	1000VAC	1000VDC	200A	21	55	4650	23000
	109M1828	1000VAC	1000VDC	250A	23	62	9300	45500
	109M1829	1000VAC	1000VDC	315A	26	68	18500	91500
	109M1830	1000VAC	1000VDC	350A	31	75	24500	125000
	109M1831	1000VAC	1000VDC	400A	38	80	37500	185000
	109M1832	1000VAC	1000VDC	450A	40	85	52000	260000
	109M1833	1000VAC	1000VDC	500A	43	90	69500	340000

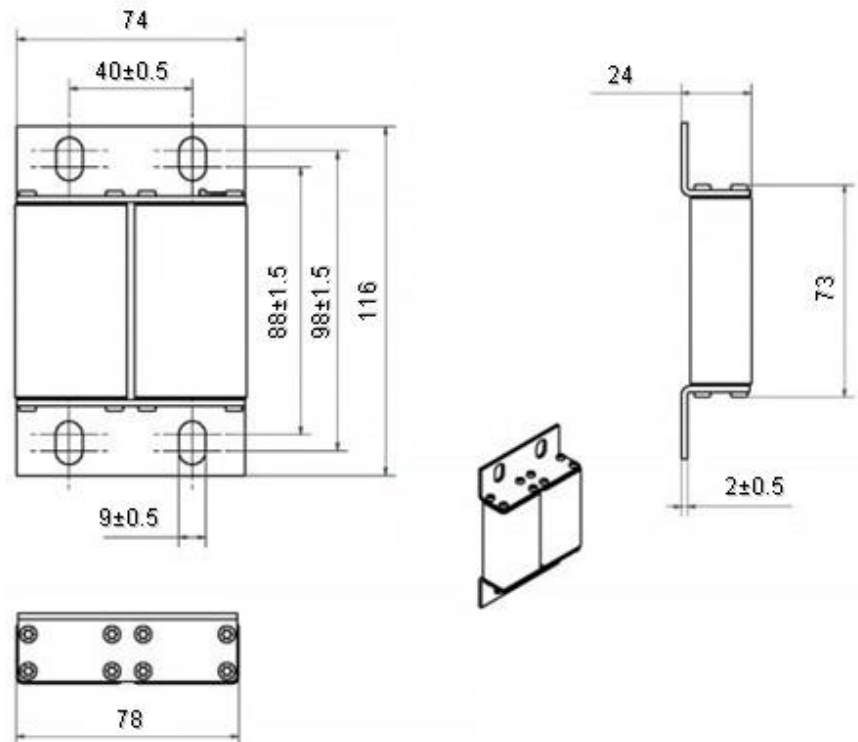
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Low inductance < 20 nH 电路电感≤20nH. Watt Loss provided at rated current 功耗是在额定电流下提供。

Tested at 1150V acc. to IEC 60269-4 执行IEC269-4标准在1150VAC电压下测试。 Tested at 1000V acc. to UL 248-1 (Pending) 执行UL248-1标准在1000VAC电压下测试。

Dimensions (mm) (230/90) 安装尺寸示意图



Main Characteristics主要技术参数: 电压等级:1000VAC~1000VDC 电流:from 100A to 500A

Class类别:gR 分断能力High interrupting rating 200kA. 执行标准Standard IEC 60269-4 、 UL 248-1.

Size 瓷管 代号	Catalog Numbers 订货号	Voltage电压等级(V)		Ampere 电流 (A)	Watts Loss(W)功耗		I ² t @1000VAC熔断I ² t(A ² S)	
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230FU/90	109M2824	1000VAC	1000VDC	100A	16	38	600	3050
	109M2825	1000VAC	1000VDC	125A	17	42	1200	6050
	109M2826	1000VAC	1000VDC	160A	19	48	2550	13000
	109M2827	1000VAC	1000VDC	200A	21	55	4650	23000
	109M2828	1000VAC	1000VDC	250A	23	62	9300	45500
	109M2829	1000VAC	1000VDC	315A	26	68	18500	91500
	109M2830	1000VAC	1000VDC	350A	31	75	24500	125000
	109M2831	1000VAC	1000VDC	400A	38	80	37500	185000
	109M2832	1000VAC	1000VDC	450A	40	85	52000	260000
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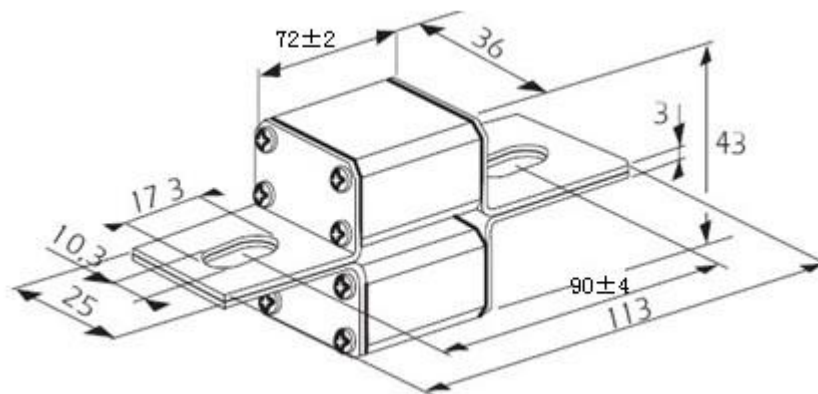
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Dimensions (mm) (230/90) 安装尺寸示意图



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Electrical characteristics 电气特性:

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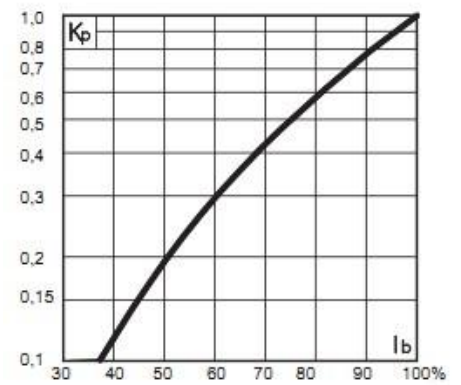
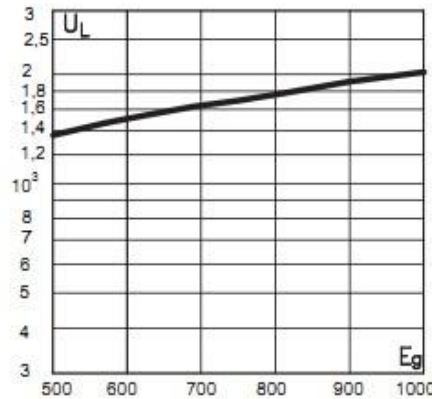
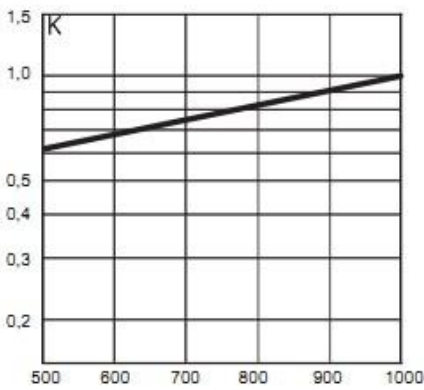
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Power Losses功耗:

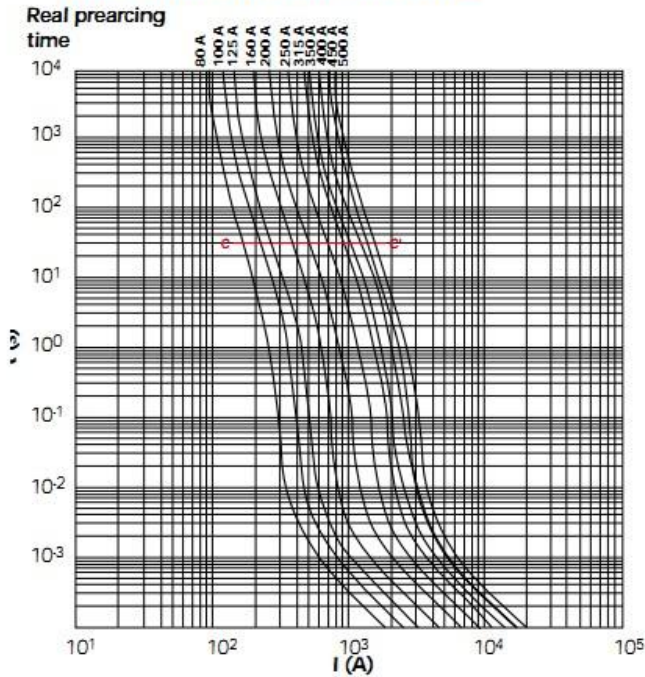
Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the power losses at load currents lower than the rated current. The correction factor, K , p is given as a function of the RMS load current, I , in % of the rated current.在额定电流下的功耗已给出,低于额定电流下的功耗参考下表中的Kp修正系数。



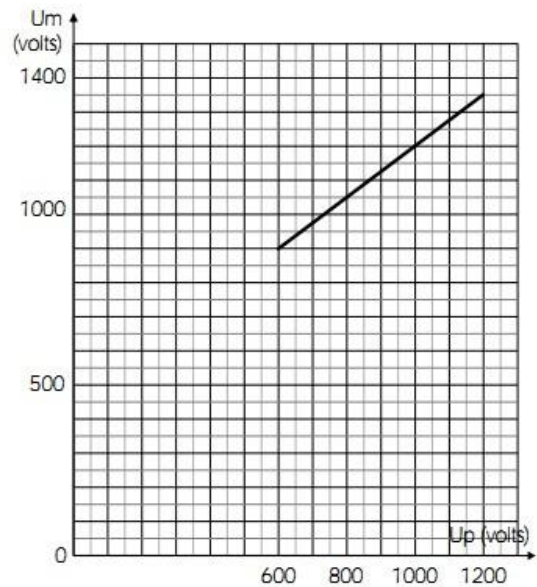
Main Characteristics主要技术参数: 电压等级:1000VAC~1000VDC 电流:from 100A to 500A

Class类别:gR 分断能力High interrupting rating 200kA. 执行标准Standard IEC 60269-4 、 UL 248-1.

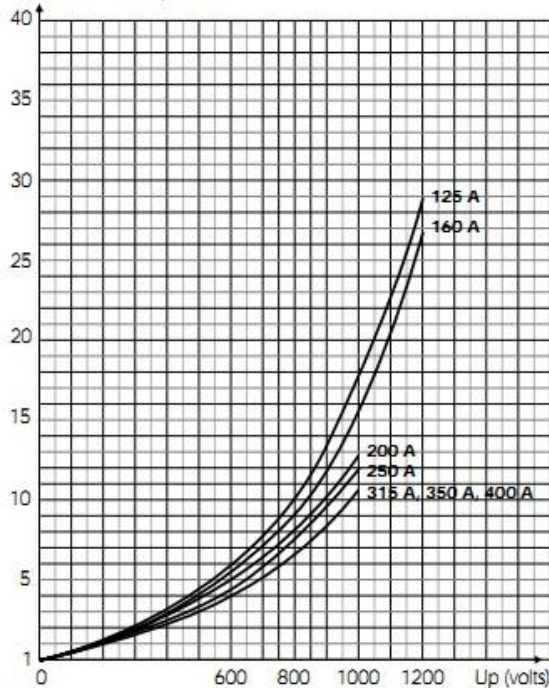
Time current characteristics 时间-电流特性曲线



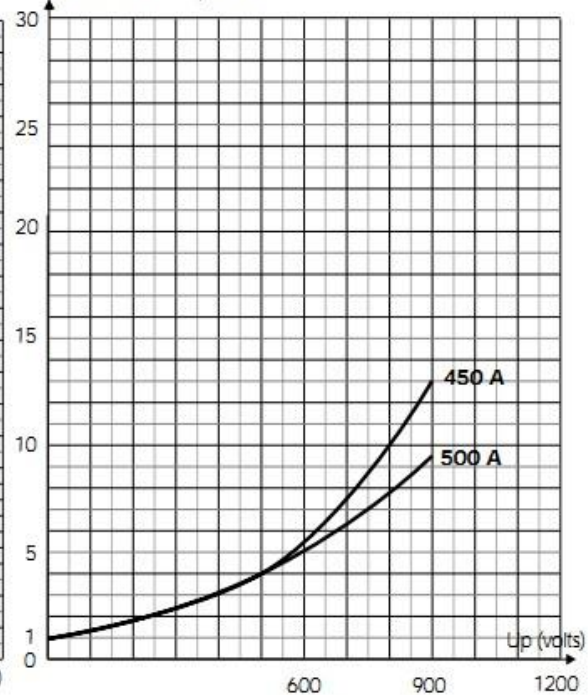
Um = f (Up) 过电压-工作电压特性曲线



k = I²t total / I²t prearc

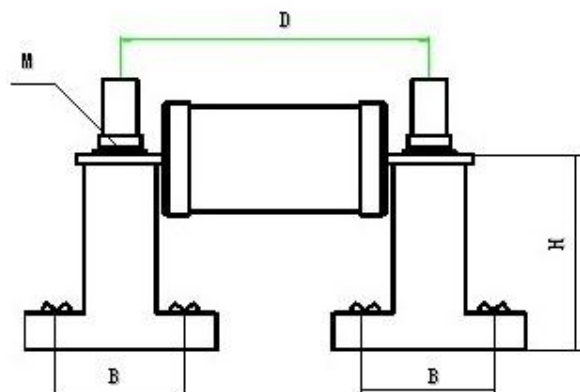


k = I²t total / I²t prearc



Main Characteristics主要技术参数: 电压等级:690VAC/DC~1000VAC/DC基座—白色绝缘子

Fuse holder Dimensions安装尺寸 (mm):



Catalog Numbers 订货号	Rating Voltage 电压 U_e (V)	D	H	M	基座安装 中心距 B
MBZ30-690V基座	690V/750V AC/DC	75±2	35	M8	30
MBZ30-1000V基座	1000V/1000V AC/DC	91±2	55	M8	30

Main Characteristics主要技术参数: 电压等级:1700VAC~3200VDC 电流:from 160A to 260A

Class类别:gR 分断能力High interrupting rating 100kA. 执行标准Standard IEC 60269-4 、 UL 248-1.

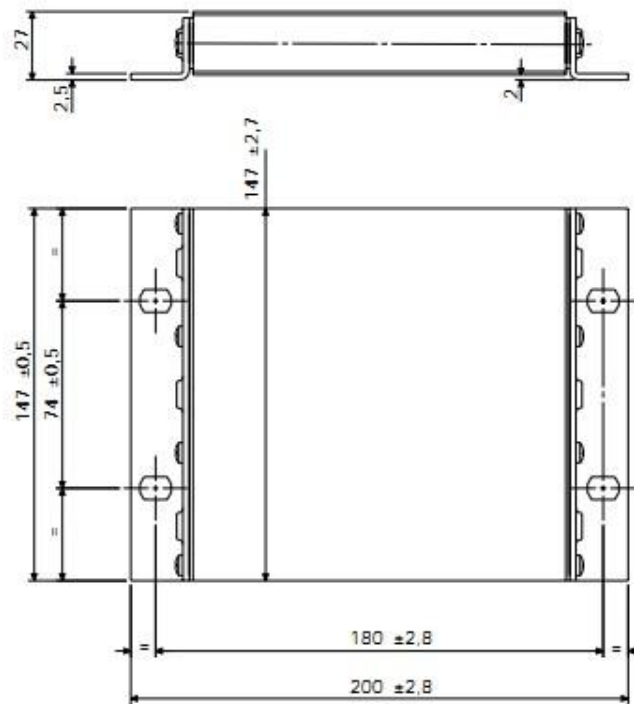
Size 瓷管 代号	Catalog Numbers 订货号	Voltage电压 等级(V) Un(dc)	Ampere 电流 (A)	Watts Loss(W) 功耗		I ² t @Un 熔断 I ² t(A ² S)	
				0.8I _n	I _n	Pre-arcing I ² t @1ms A ² S 弧 前 I ² t	Total clearing I ² t @UN A ² S 熔断 I ² t
330FU/180	109M229133	3200VDC	160A	56	120	5590	32800
	109M229134	2800VDC	200A	58	132	10370	57500
	109M229135	1900VDC	230A	61	133	30400	53300
	109M229136	1700VDC	260A	68	135	36250	73800

Optimized for use in IGBT inverter circuits with DC-link voltages up to 1700Vdc~3200Vdc,

用于1700Vdc~3200Vdc IGBT组成的逆变器电路。 Low inductance < 30 nH 电路电感≤30nH。

Watt Loss provided at rated current 功耗是在额定电流下提供

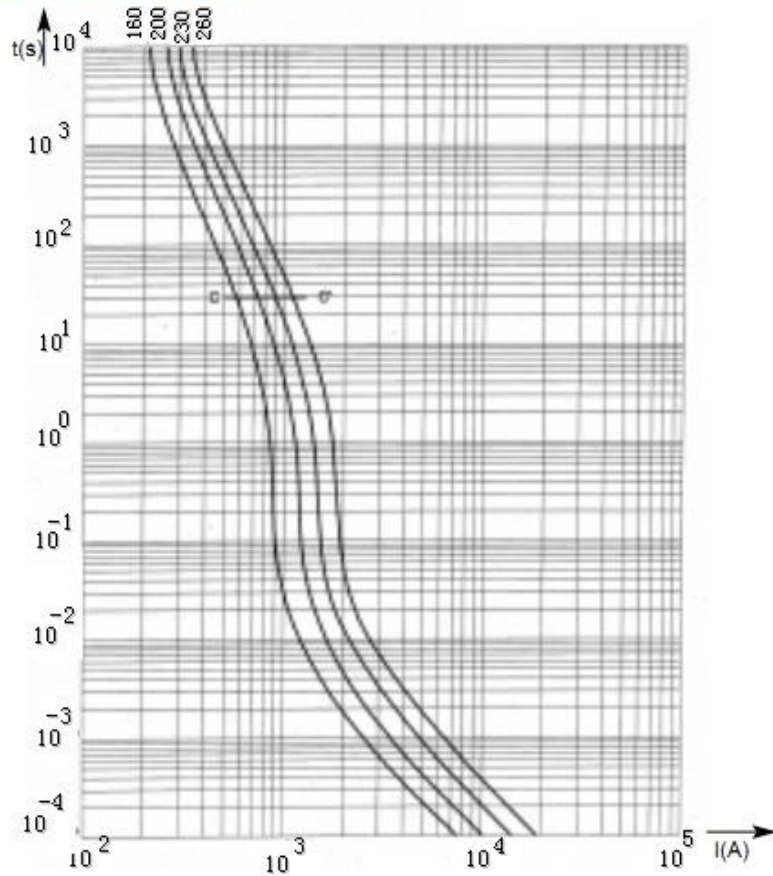
Dimensions (mm) (330FU/180) 安装尺寸示意图



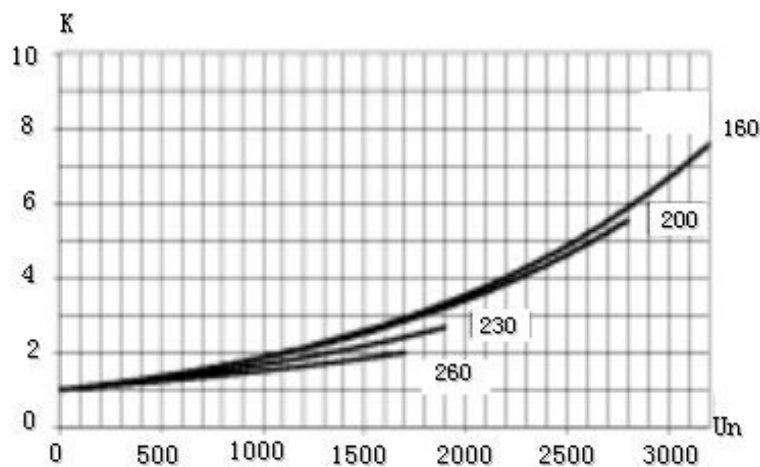
Main Characteristics主要技术参数: 电压等级:1700VAC~3200VDC 电流:from 160A to 260A

Class类别:gR 分断能力High interrupting rating 100kA. 执行标准Standard IEC 60269-4 、 UL 248-1.

Time current characteristics 时间-电流特性曲线



$U_m = K U_n$ 过电压和工作电压曲线



Main Characteristics 主要技术参数: 电压等级:7200VDC 电流:from 50A to 950A

Class类别:gR 分断能力High interrupting rating 100kA. 执行标准Standard IEC 60269-4 、 UL 248-1.

Size 瓷管代号	Catalog Numbers 订货号	Voltage电压等级 (V) Un(dc)	Ampere 电流 (A)	Pre-arcting I^2t @1ms A ² S 弧前 I^2t	Bodies 并联数量
331FU/305	109M220654	7200VDC	50A	616	1
	109M220655	7200VDC	63A	932	
	109M220656	7200VDC	80A	1778	
	109M220657	7200VDC	100A	2459	
	109M220658	7200VDC	120A	3725	
	109M220659	7200VDC	160A	7115	
	109M220660	7200VDC	180A	7826	
	109M220661	7200VDC	200A	9005	
	109M220662	7200VDC	225A	10800	
	109M227845	7200VDC	250A	14900	
332FU/305	109M097954	7200VDC	280A	17880	2
	109M097955	7200VDC	315A	26550	
	109M097956	7200VDC	350A	33525	
	109M097957	7200VDC	400A	39334	
	109M097958	7200VDC	440A	47200	
	109M097959	7200VDC	480A	59600	
333FU/305	109M097961	7200VDC	500A	70328	3
	109M097962	7200VDC	560A	77361	
	109M097963	7200VDC	640A	106200	
	109M097964	7200VDC	715A	134100	
334FU/305	109M220805	7200VDC	800A	157334	4
	109M220806	7200VDC	850A	188800	
	109M220579	7200VDC	950A	238400	

Optimized for use in IGBT inverter circuits with DC-link voltages up to 5000Vdc~1000Vdc, 用于5000Vdc~1000Vdc IGBT组成的逆变器电路。

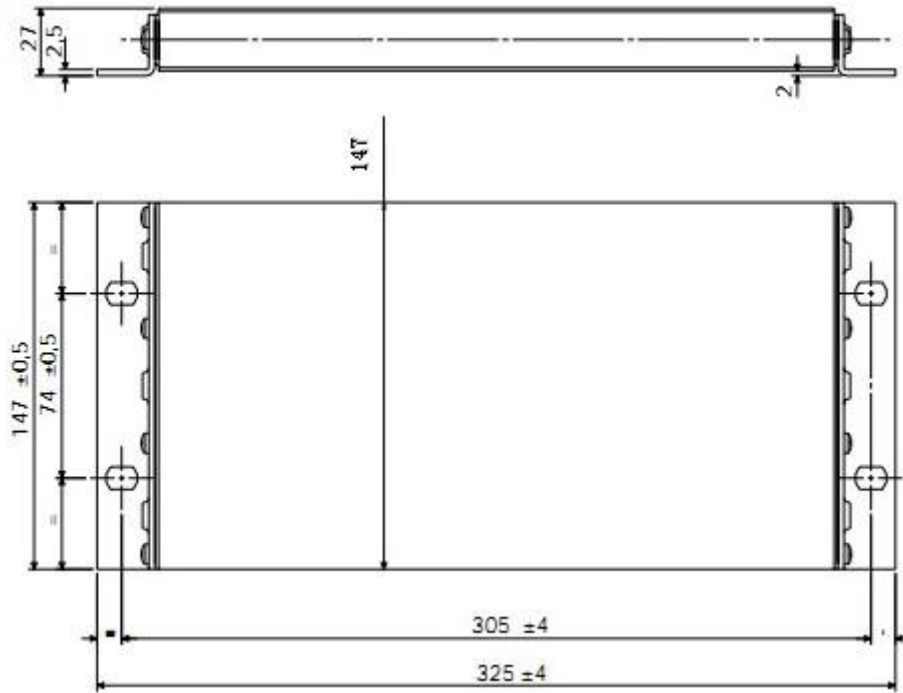
Low inductance < 50 nH 电路电感≤50nH。

Quick disconnection of damage module快速隔离损坏的模块 (IGBT)。



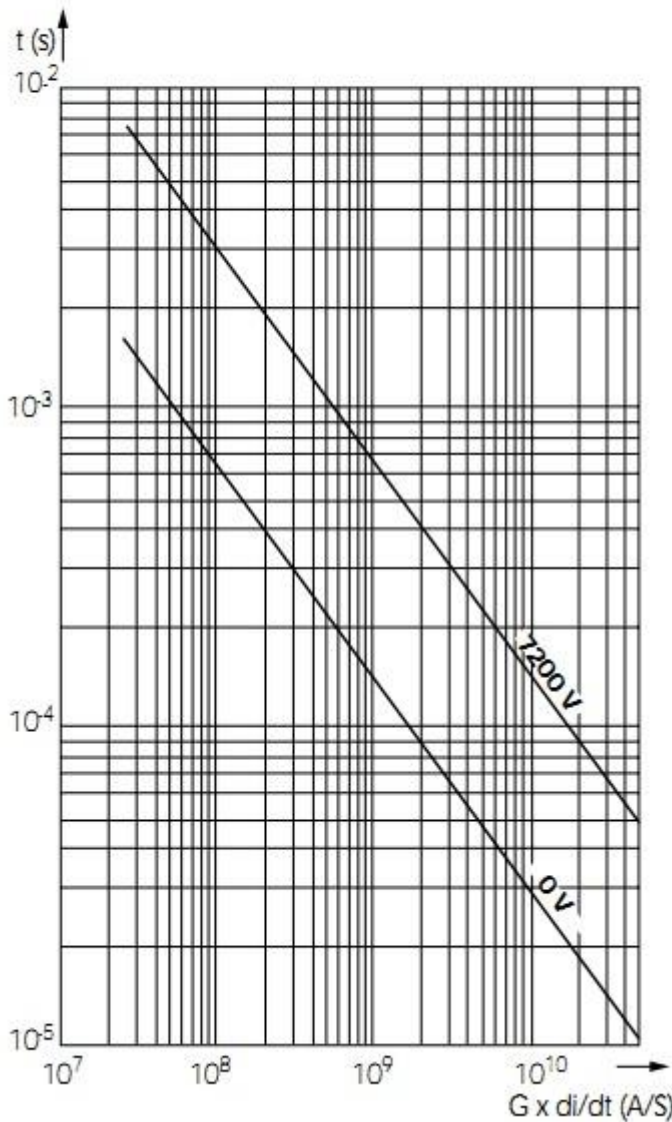
Main Characteristics 主要技术参数: 电压等级:7200VDC 电流:from 50A to 950A
Class类别:gR 分断能力High interrupting rating 100kA. 执行标准Standard IEC 60269-4 、 UL 248-1.

Dimensions (mm) (330FU/305) 安装尺寸示意图

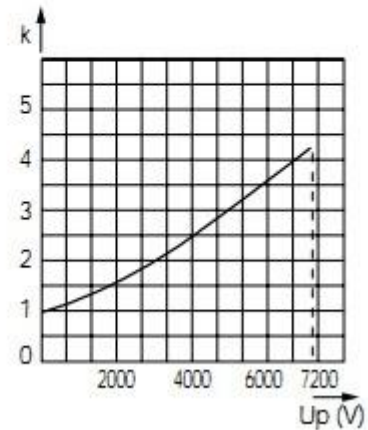


Main Characteristics 主要技术参数: 电压等级:7200VDC 电流:from 50A to 950A
 Class类别:gR 分断能力High interrupting rating 100kA. 执行标准Standard IEC 60269-4 、 UL 248-1.

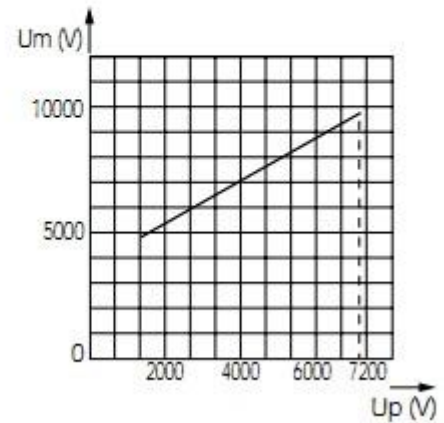
$Tt = f(G \times di/dt)$



$k = f(U_p)$



$U_m = f(U_p)$



U_p : DC working voltage 直流工作电压

U_m : Arc voltage 电弧电压

K : I^2t corrective coefficient I^2t 修正系数

total $I^2t = K \times I^2t$ pre-arcing 熔断 I^2t 和弧前 I^2t 的关系。