



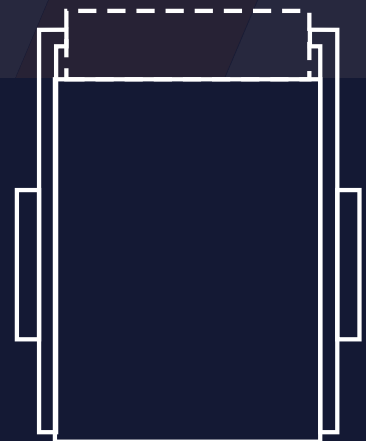
PRODUCTS DATASHEET

FRM系列 SeriesP型 AC 690/700V
母线连接式快速熔断器

Busbar connection type quick fuse

产品规格书

Technical Data Sheet



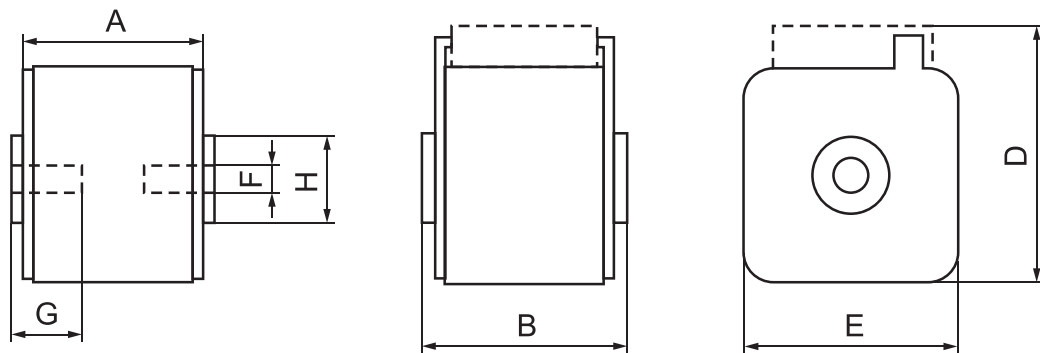
1. 规格型号 Overview

- 1.1 额定电压 Rated voltage : AC690/700V
- 1.2 功能等级 Functional level : aR
- 1.3 分断能力 Rated breaking capacity : AC=100kA

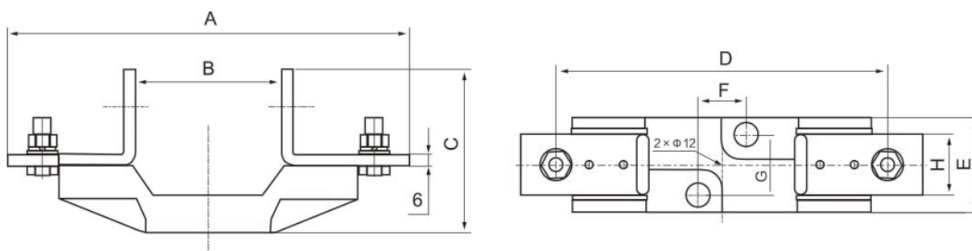
2. 符合标准及规范 Standards: IEC60269-4 GB/T13539.4

3. 产品外形尺寸 Dimension

| 型号 Model | 尺码 Size | 安装方式 Installation | 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 |
| FRM | 30 | P51(K) | IEC/UL AC690/700V | 40~630 | 50 | 51 | 43(59) | 43 | M8 | 5 | 17 |
| | 31 | P51(K) | | 200~800 * 550V 900 | 50 | 51 | 50(69) | 50 | M8 | 8 | 20 |
| | 32 | P51(K) | | 400~1250 * 600V 1100/1250 | 50 | 51 | 60(77) | 60 | M10 | 10 | 24 |
| | 33 | P51(K) | | 500~2000 * 600V 1800 * 550V 2000 | 50 | 51 | 75(92) | 75 | M12 | 12 | 40 |



| 型号 Model | 尺寸 Size | 安装方式 Installation | 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 |
| FH | 33 | P51 | 690/700 | 2000 | 211 | 51 | 99 | 175 | 53 | 25 | 30 | 50 |

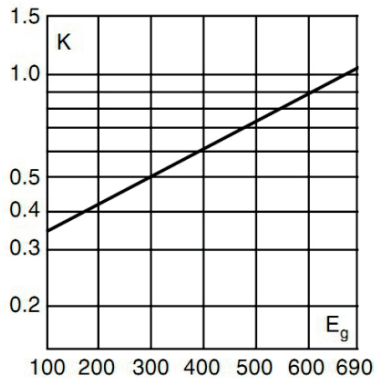


4. 产品技术参数 Technical parameters

4.1 弧前I²t Pre-arc/熔断I²t Cleaing/额定功率 Watts Loss

| 型号 Model | 尺码 Size | 安装方式 Installation | 额定电压(V) Rated voltage | 额定电流(A) Rated current | I ² t(A ² S) | | 功耗(W) Watts Loss | 曲线图 Curve | |
|-------------|------------|----------------------|--------------------------|--------------------------|------------------------------------|------------|---------------------|--------------|-----------|
| | | | | | 弧前Pre-Arcing | 熔断Clearing | | | |
| FRM | 30 | P51 P51K | | | 40 | 40 | 270 | 9 | 图Figure 1 |
| | | | | | 50 | 77 | 515 | 11 | |
| | | | | | 63 | 115 | 770 | 14 | |
| | | | | | 80 | 185 | 1250 | 18 | |
| | | | | | 100 | 360 | 2450 | 21 | |
| | | | | | 125 | 550 | 3700 | 26 | |
| | | | | | 160 | 1100 | 7500 | 30 | |
| | | | | | 200 | 2200 | 15000 | 35 | |
| | | | | | 250 | 4200 | 28500 | 40 | |
| | | | | | 315 | 7000 | 46500 | 50 | |
| | | | | | 355 | 10000 | 68500 | 55 | |
| | | | | | 400 | 15000 | 105000 | 60 | |
| | | | | | 450 | 21000 | 140000 | 65 | |
| | | | | | 500 | 27000 | 180000 | 70 | |
| FRM | 31 | P51 P51K | IEC 690V | | 550 | 34000 | 230000 | 75 | 图Figure 2 |
| | | | | | 630 | 48500 | 325000 | 80 | |
| | | | | | 200 | 1650 | 11500 | 45 | |
| | | | | | 250 | 3100 | 21000 | 55 | |
| | | | | | 315 | 6200 | 42000 | 58 | |
| | | | | | 355 | 8500 | 59000 | 60 | |
| | | | | | 400 | 13500 | 91500 | 65 | |
| | | | | | 450 | 17000 | 120000 | 70 | |
| | | | | | 500 | 25000 | 170000 | 72 | |
| | | | | | 550 | 34000 | 230000 | 75 | |
| FRM | 32 | P51 P51K | UL 700V | | 630 | 52000 | 350000 | 80 | 图Figure 3 |
| | | | | | 700 | 69500 | 465000 | 85 | |
| | | | | | 800 | 105000 | 725000 | 95 | |
| | | | | | 400 | 11000 | 74000 | 65 | |
| | | | | | 450 | 15500 | 105000 | 70 | |
| | | | | | 500 | 21500 | 145000 | 75 | |
| | | | | | 550 | 28000 | 190000 | 80 | |
| | | | | | 630 | 41000 | 275000 | 90 | |
| | | | | | 700 | 60500 | 405000 | 95 | |
| | | | | | 800 | 86000 | 575000 | 105 | |
| FRM | 33 | P51 P51K | | | 900 | 125000 | 840000 | 110 | 图Figure 4 |
| | | | | | 1000 | 180000 | 1250000 | 115 | |
| | | | | | 1100 | 245000 | 1600000 | 120 | |
| | | | | | 1250 | 365000 | 2400000 | 130 | |
| | | | | | 500 | 14000 | 95000 | 95 | |
| | | | | | 550 | 19500 | 135000 | 100 | |
| | | | | | 630 | 31000 | 210000 | 105 | |
| | | | | | 700 | 44500 | 300000 | 110 | |
| | | | | | 800 | 69500 | 465000 | 115 | |
| | | | | | 900 | 100000 | 670000 | 120 | |
| | | | | | 1000 | 140000 | 945000 | 125 | |
| | | | | | 1100 | 190000 | 1300000 | 130 | |
| | | | | | 1250 | 290000 | 1950000 | 140 | |
| | | | | | 1400 | 370000 | 3100000 | 155 | |
| 1600 | 580000 | 3900000 | 160 | | | | | | |
| 1800 | 880000 | 5250000 | 165 | | | | | | |
| 2000 | 1150000 | 6350000 | 175 | | | | | | |

4.2 熔断 I²t 修正系数K Melting I²t Correction Factor K



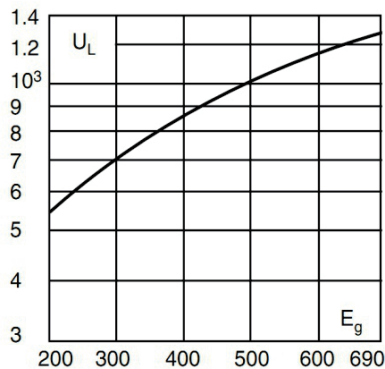
注: Eg为工作电压
Note: Eg is the working voltage

计算方法: $I^2t(\text{修正}) = I^2t(\text{额定}) \times K$

Calculation Method:

$I^2t(\text{correction}) = I^2t(\text{rated}) \times K$

4.3 电弧电压峰值 Peak Value of Arc Voltage



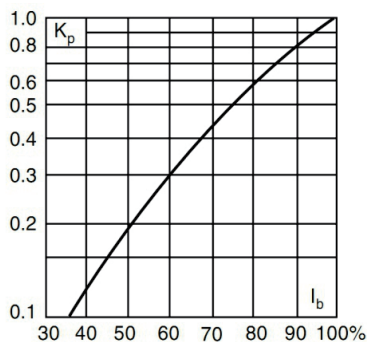
注: UL为电弧电压峰值; Eg为工作电压; 此图为功率因数为15%的情况。

Note: UL is the peak value of arc voltage; Eg is the working voltage; This figure shows the case when the power factor is 15%.

4.4 功耗修正系数 Power consumption correction factor Kp

额定功耗已在4.1给出, 低于额定电流的功耗可按下图计算。

The rated power consumption is given in 4.1, and the power consumption below the rated current can be calculated as shown below.

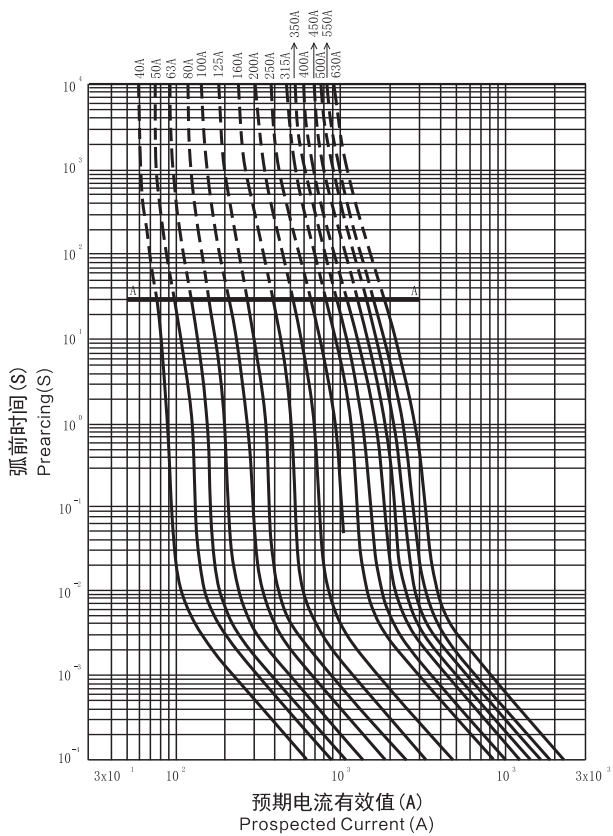


计算方法: $W(\text{修正}) = W(\text{额定}) \times Kp$

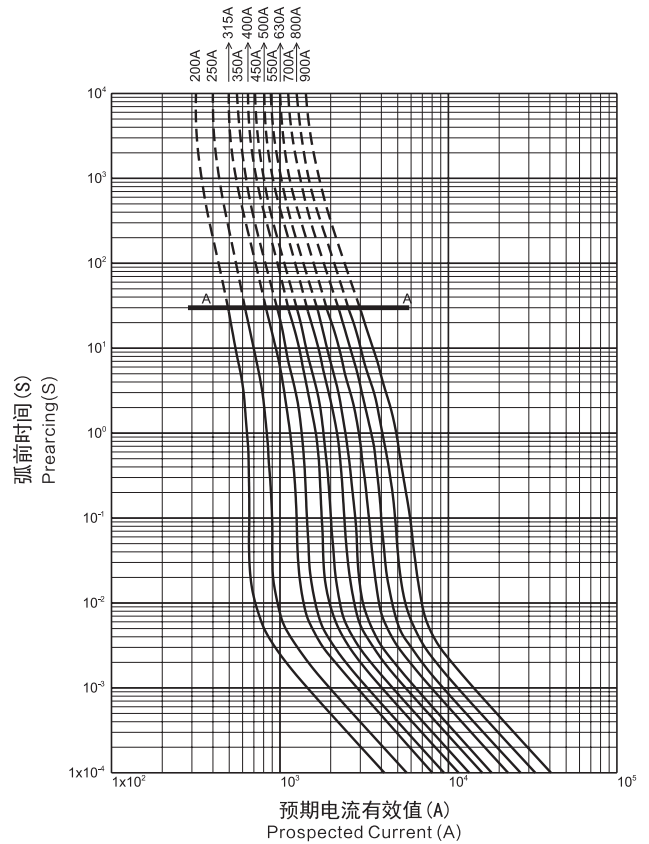
Calculation Method:

$W(\text{correction}) = W(\text{rated}) \times Kp$

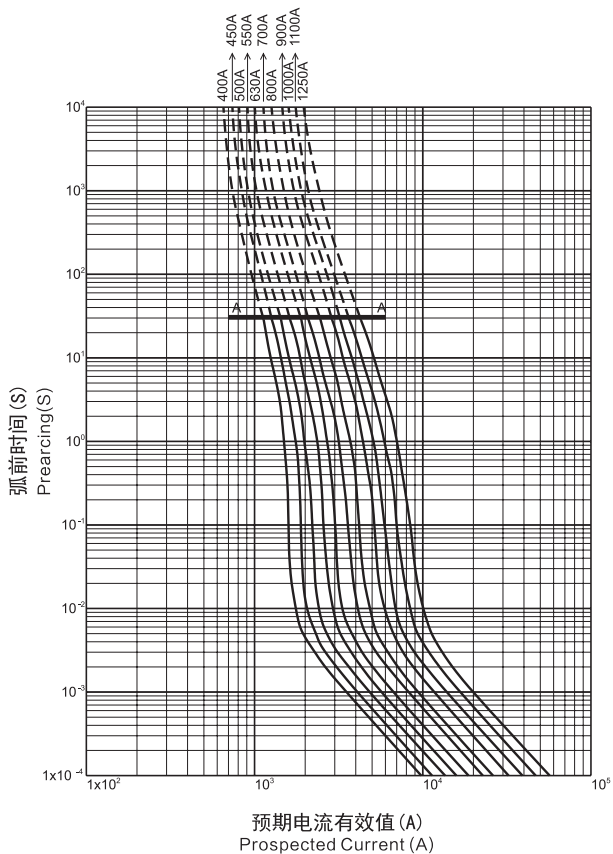
4.5 时间-电流曲线 Time-current characteristics curves



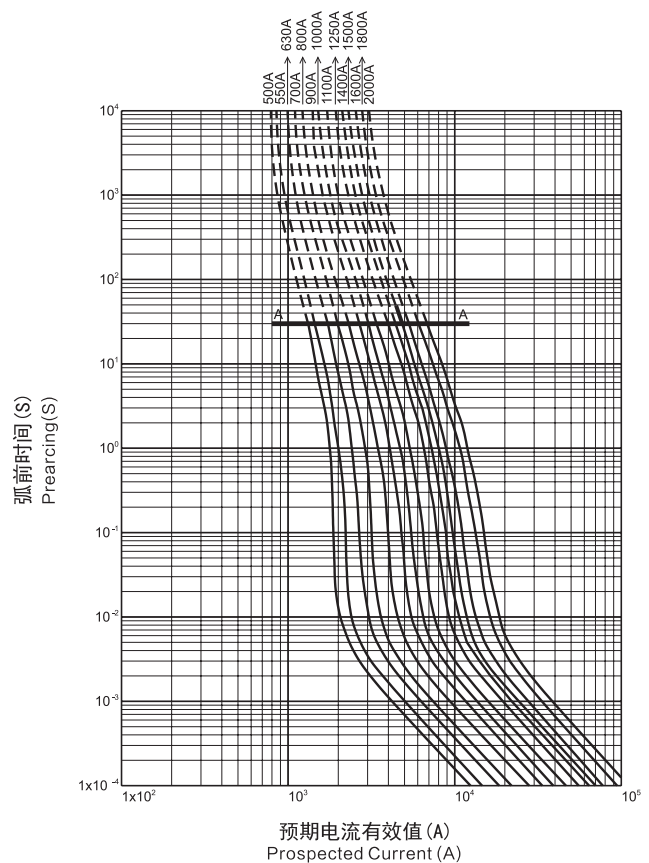
图Figure 1



图Figure 2

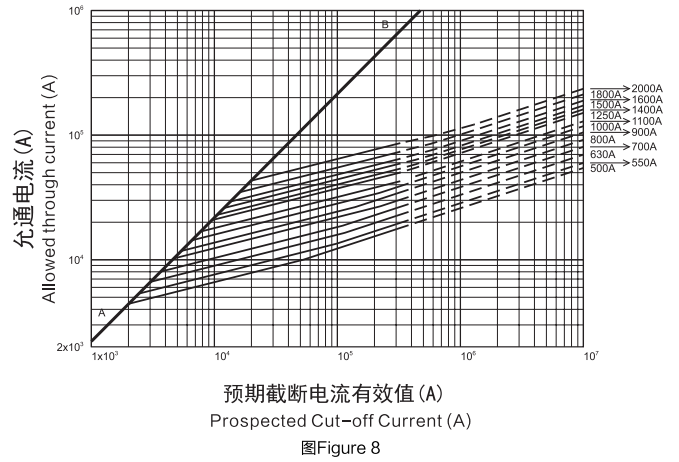
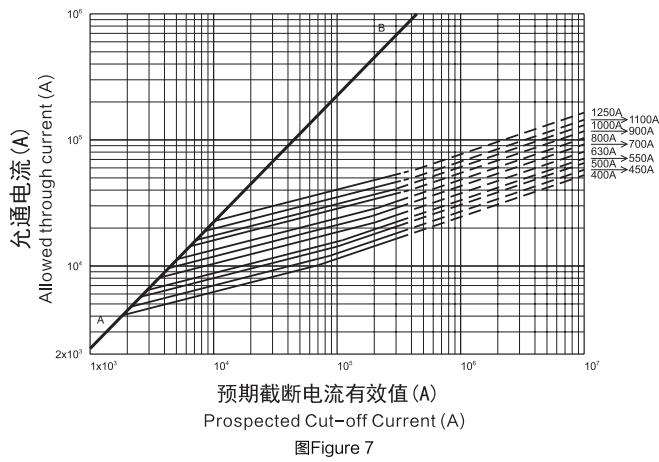
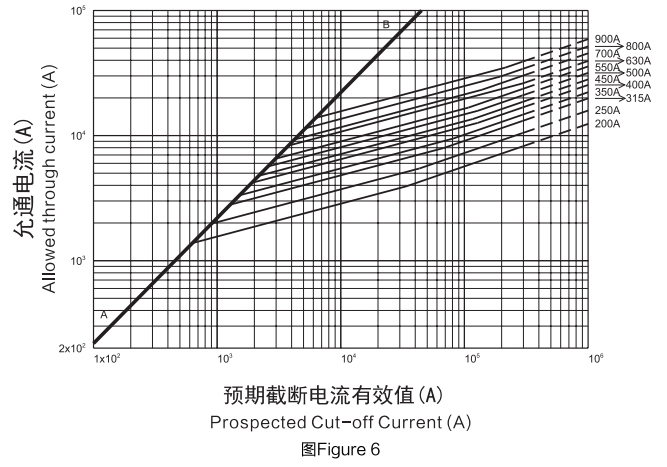
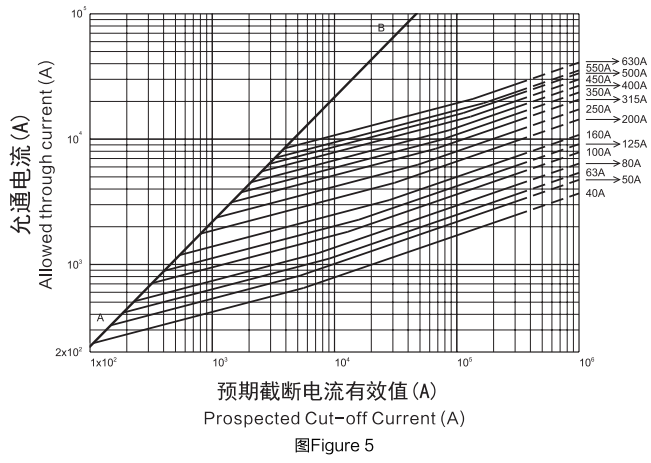


图Figure 3



图Figure 4

4.6 截断电流特性 Cut-off current characteristics



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 stated in the sample shall be subject to the material object.
If there is any change without prior notice, please call us for consultation.

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