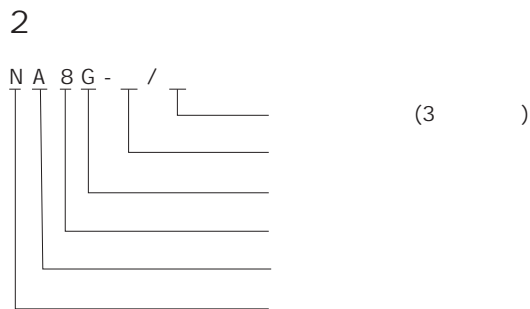


NA8G 系列万能式断路器

1
NA8G () 200A 6300A
415V 690V 50Hz

GB 14048.2 IEC 60947-2



3

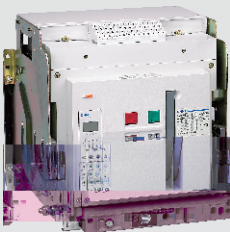
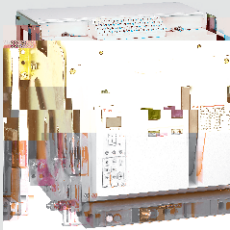
3.1 -5 ~ +40 24h +35
+40 -5

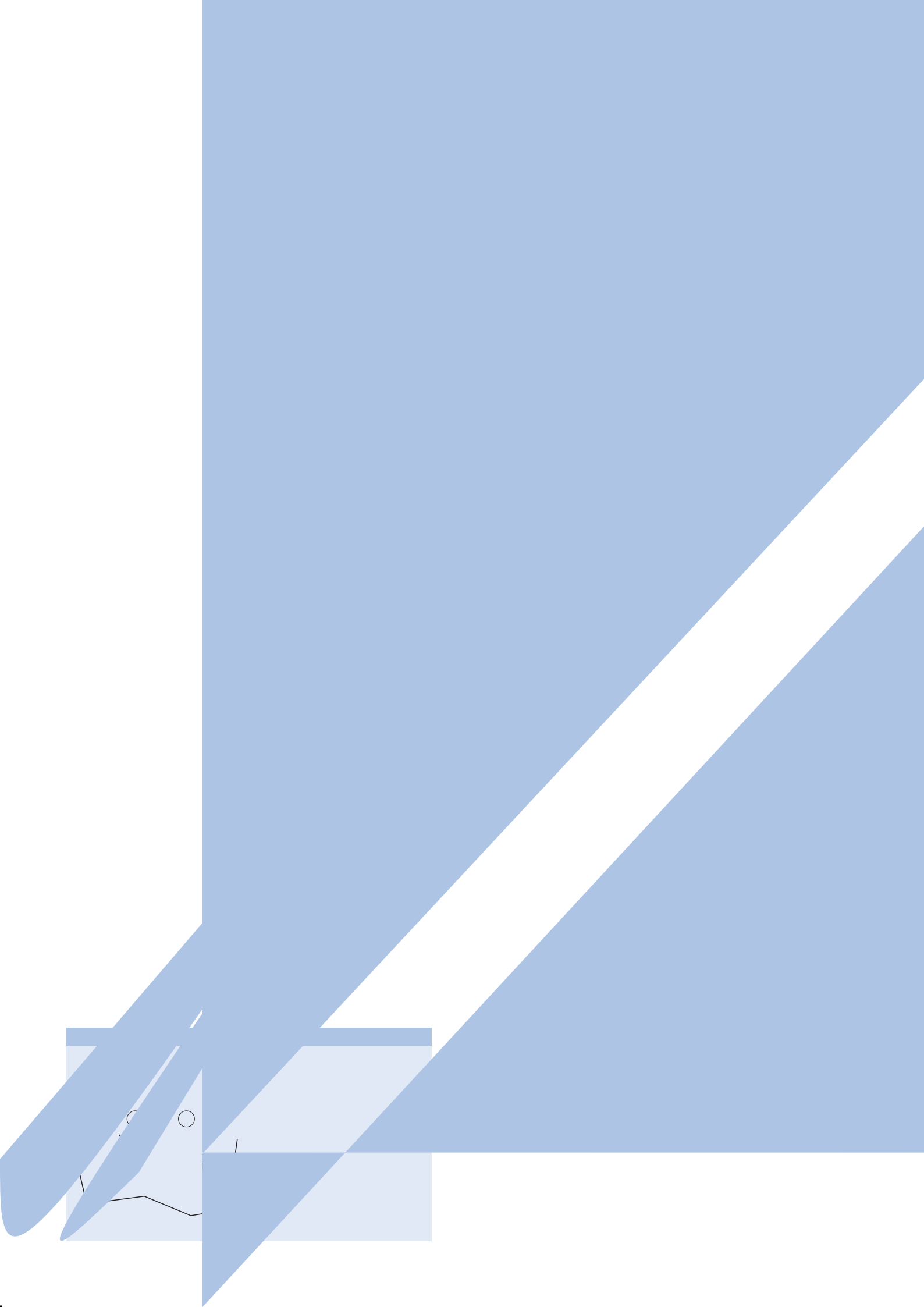
3.2 2000m

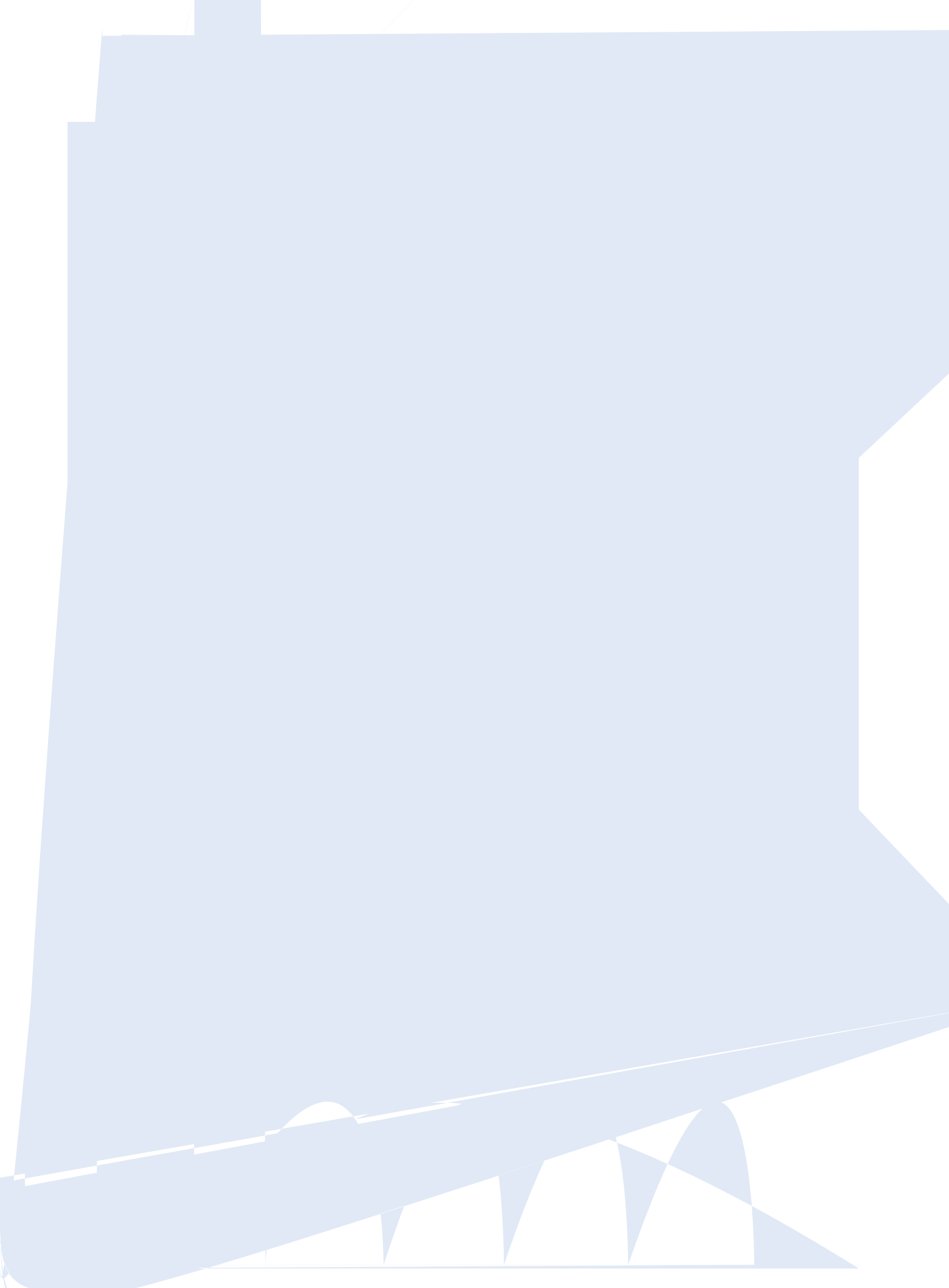
3.3 +40 50%
90% +20

3.4 3

3.5 AC400V
AC400V
AC690V AC400V







5.2

5.2.1

5.2.2

2000

4000 NA8G

4000

5.3

| 功率损耗 | | | |
|-----------|------|------|-----|
| 断路器型式 | 额定电流 | 抽屉式 | 固定式 |
| NA8G-2500 | 630 | 122 | 45 |
| | 800 | 156 | 62 |
| | 1000 | 172 | 78 |
| | 1250 | 268 | 122 |
| | 1600 | 440 | 200 |
| | 2000 | 530 | 262 |
| | 2500 | 600 | 312 |
| NA8G-3200 | 1600 | 390 | 170 |
| | 2000 | 470 | 250 |
| | 2500 | 600 | 260 |
| | 2900 | 600 | 260 |
| | 3200 | 670 | 420 |
| NA8G-4000 | 2000 | 470 | 250 |
| | 2500 | 600 | 260 |
| | 2900 | 600 | 260 |
| | 3200 | 670 | 420 |
| | 3600 | 848 | 532 |
| | 4000 | 1047 | 656 |
| NA8G-6300 | 4000 | 550 | - |
| | 5000 | 590 | - |
| | 6300 | 950 | - |

5.4

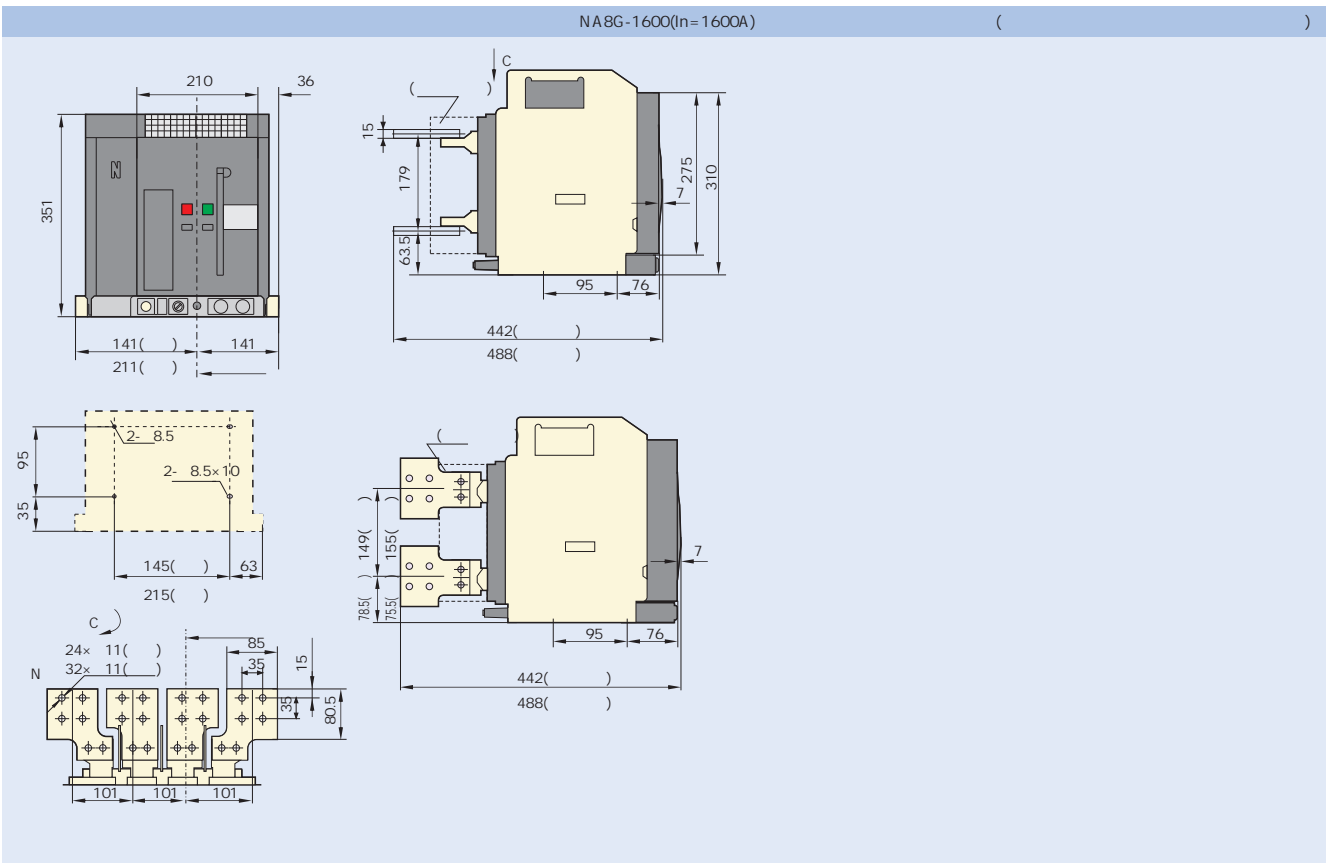
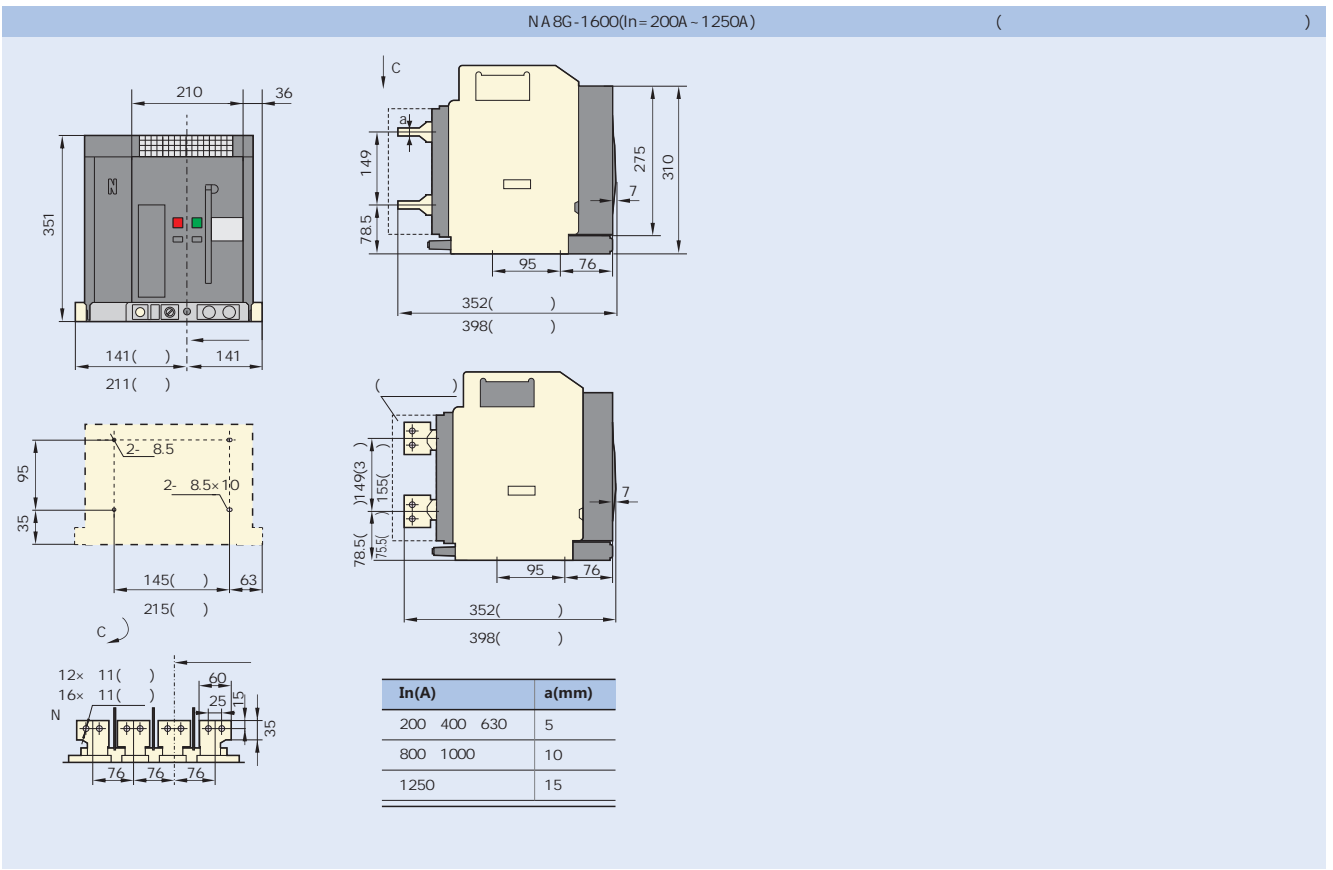
| Inm(A) | NA8G-1600 | | | | | | | NA8G-2500 | | | | | | |
|--------|-----------|-----|-----|-----|------|------|------|-----------|-----|------|------|------|------|------|
| In(A) | 200 | 400 | 630 | 800 | 1000 | 1250 | 1600 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 |
| (mm) | 5 | 5 | 5 | 5 | 5 | 8 | 10 | 5 | 5 | 5 | 8 | 6 | 6 | 5 |
| (mm) | 20 | 50 | 40 | 50 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 100 | 100 | 100 |
| | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 4 |

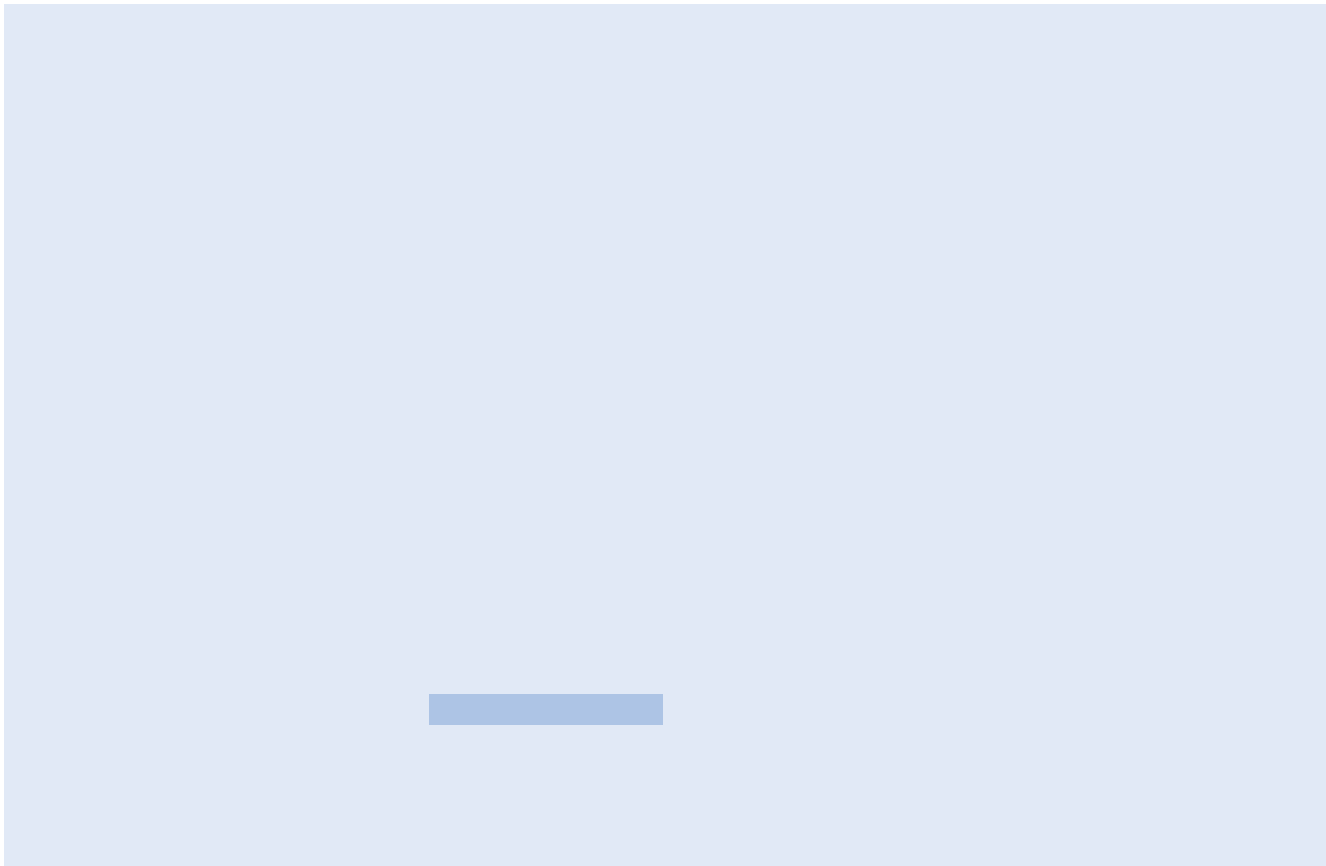
| Inm(A) | NA8G-3200 | | | | | NA8G-4000 | | | | | |
|--------|-----------|------|------|------|------|-----------|------|------|------|------|------|
| In(A) | 1600 | 2000 | 2500 | 2900 | 3200 | 2000 | 2500 | 2900 | 3200 | 3600 | 4000 |
| (mm) | 6 | 6 | 5 | 10 | 10 | 8 | 6 | 10 | 10 | 10 | 10 |
| (mm) | 100 | 100 | 100 | 100 | 100 | 80 | 80 | 100 | 100 | 100 | 100 |
| | 2 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 5 | 5 |

| Inm(A) | NA8G-6300 | | |
|--------|-----------|------|------|
| In(A) | 4000 | 5000 | 6300 |
| (mm) | 10 | 10 | 10 |
| (mm) | 100 | 100 | 100 |
| | 5 | 7 | 8 |

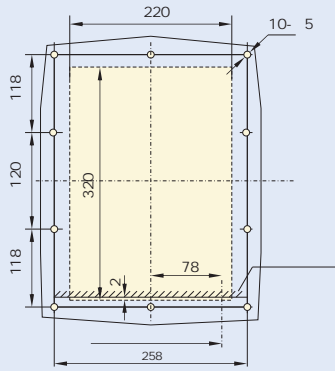
5.5

| 螺栓类型 | 应用场合 | 力矩大小 |
|----------|------|-----------------|
| M3 | | 1.5Nm |
| M8 10() | | 17.7Nm - 22.6Nm |
| M10 | | 45Nm |
| M12 | | 50Nm |

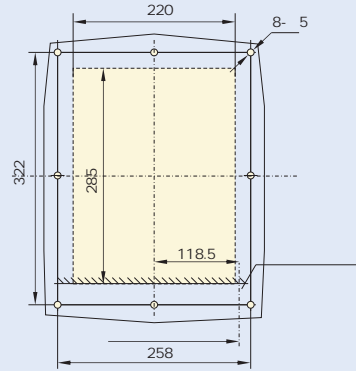




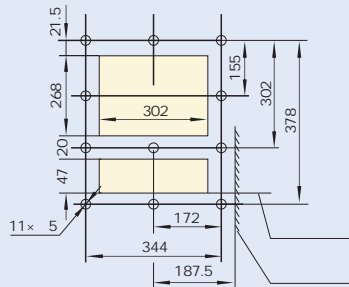
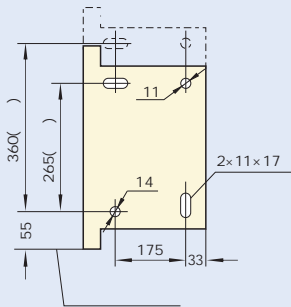
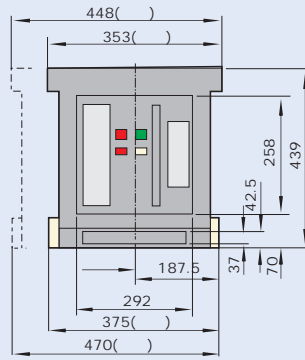
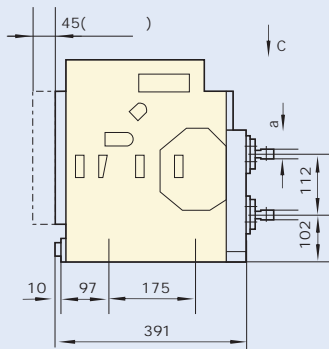
NA8G-1600



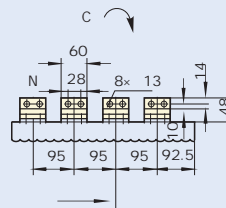
NA8G-1600



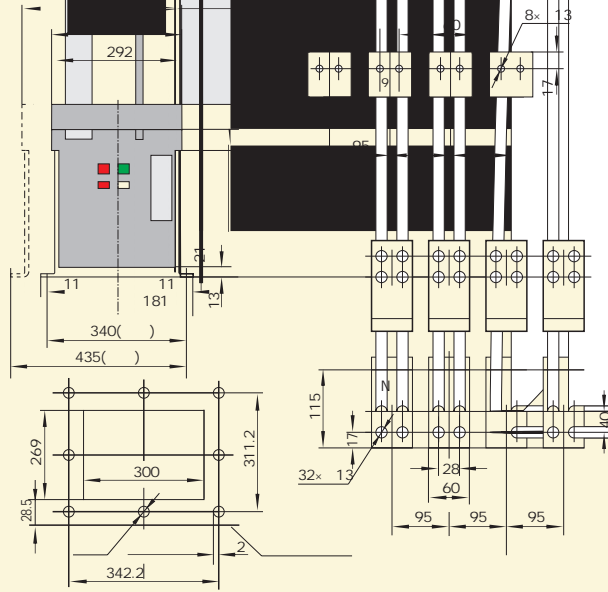
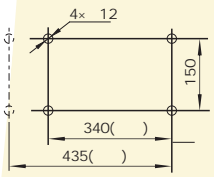
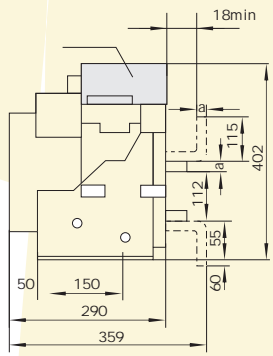
NA8G-2500



| In A | a mm |
|-----------|------|
| 630 | 10 |
| 800-1600 | 15 |
| 2000-2500 | 20 |



90°

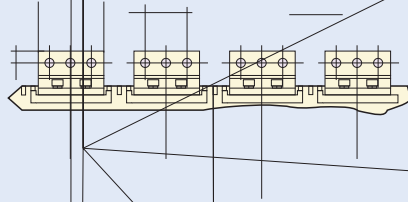
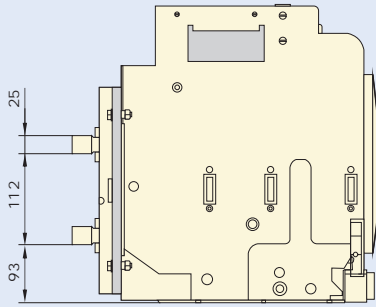


162.5

162.5(3P)277.5(4P)

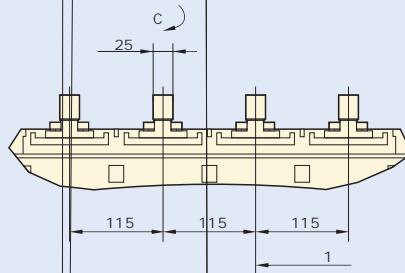
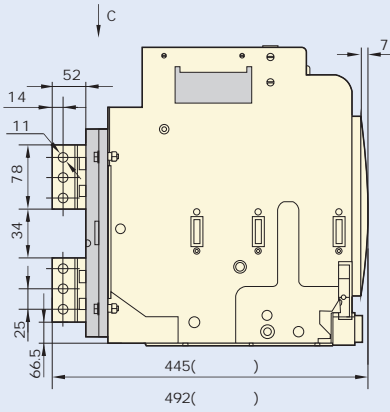
NA8G-3200(In=1600A-2500A)

()



NA8G-3200(In=1600A-2500A)

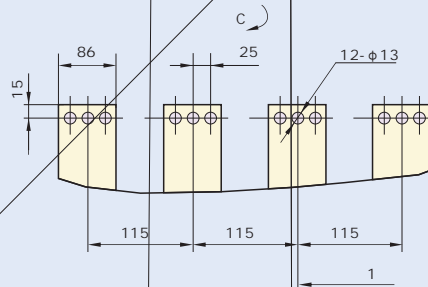
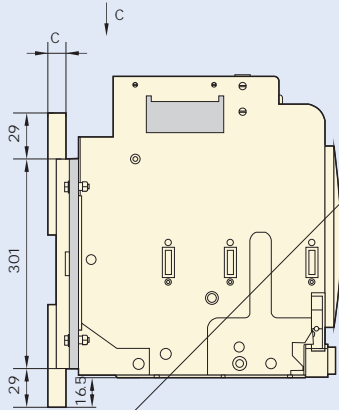
()



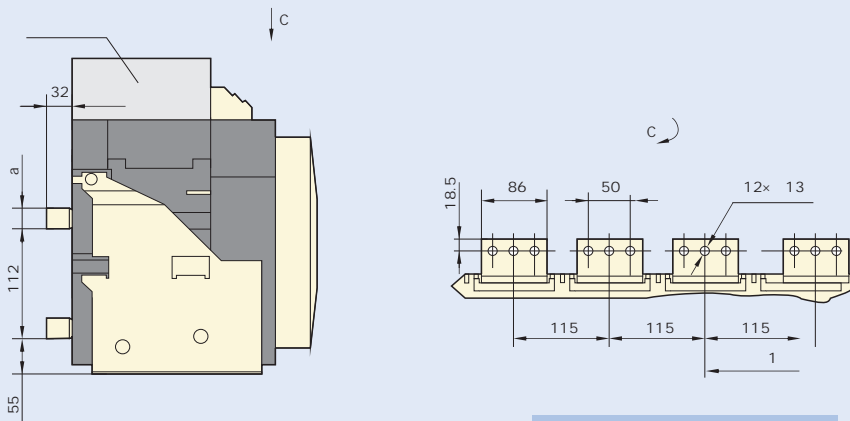
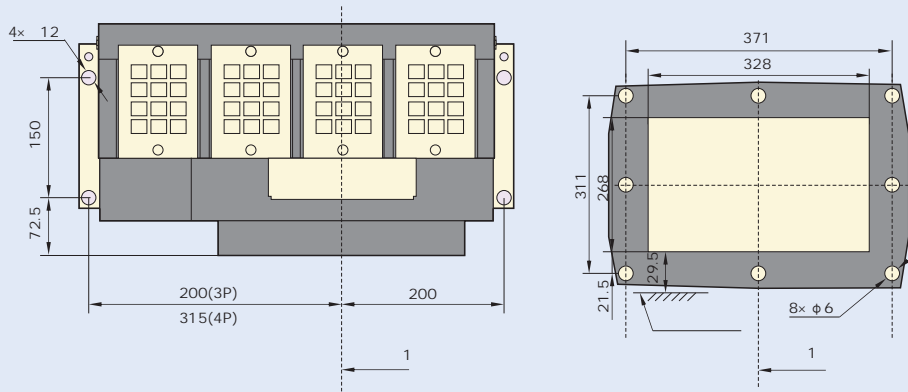
90°

NA8G-3200

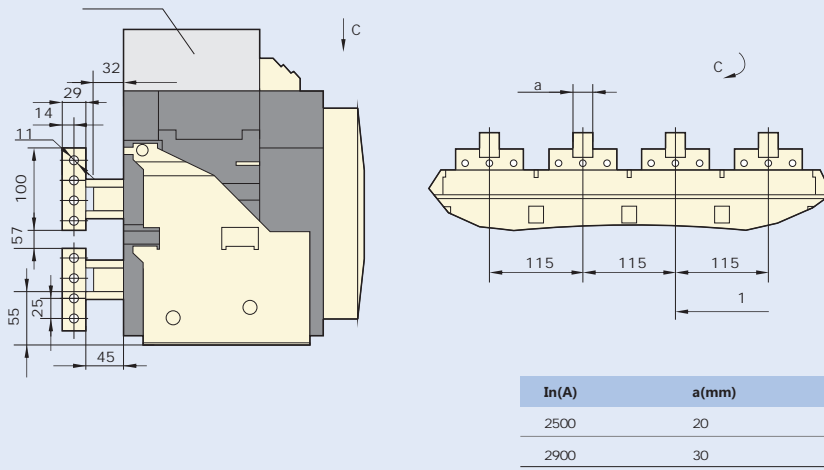
()



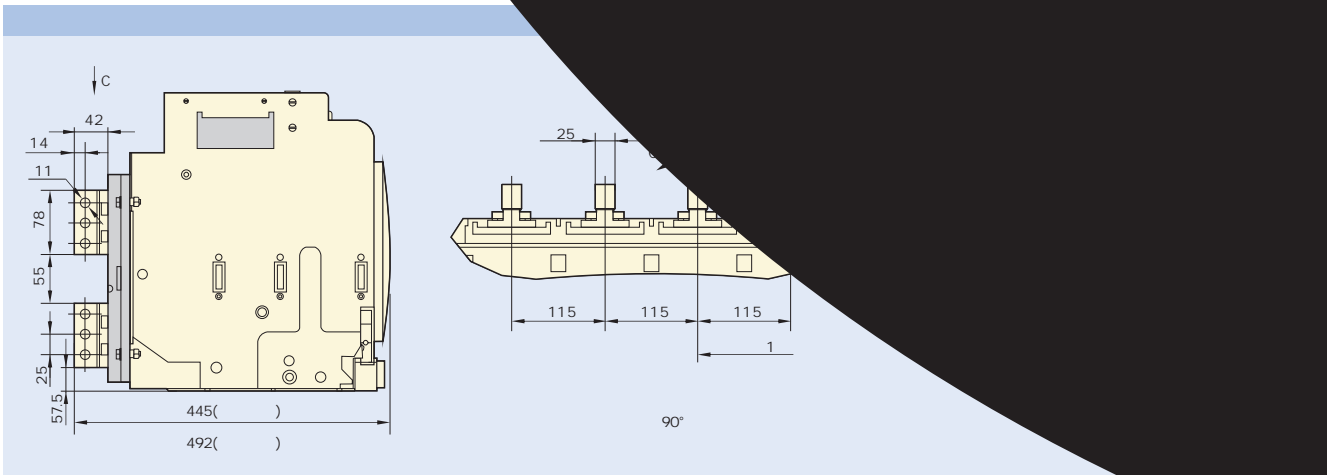
| In(A) | C |
|-------|----|
| 2500 | 20 |
| 2900 | 30 |

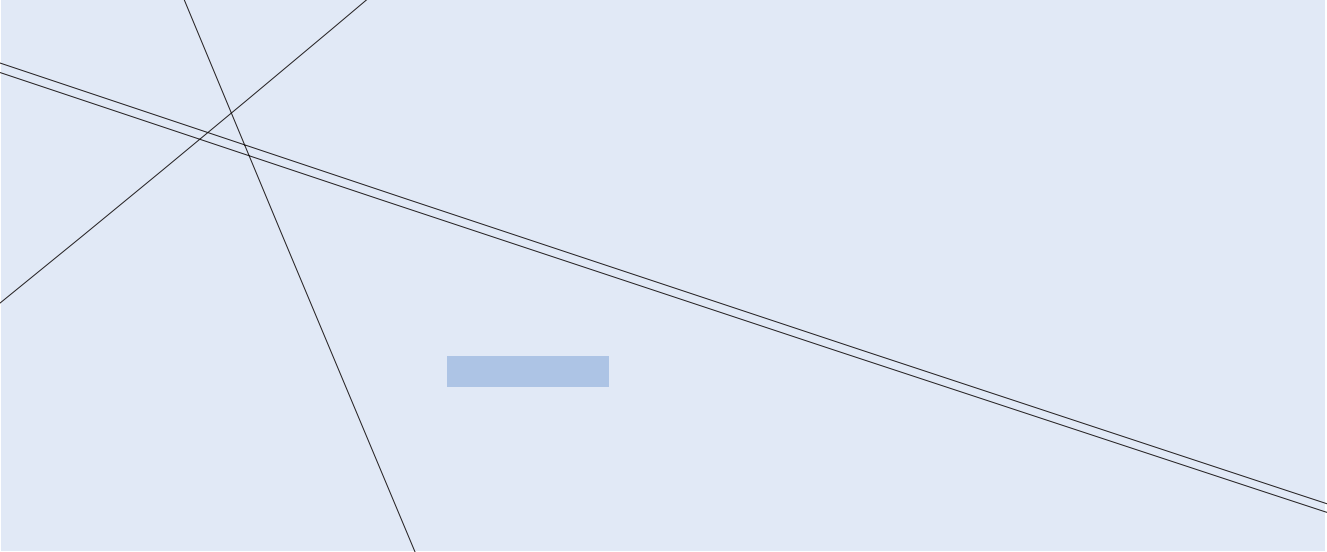


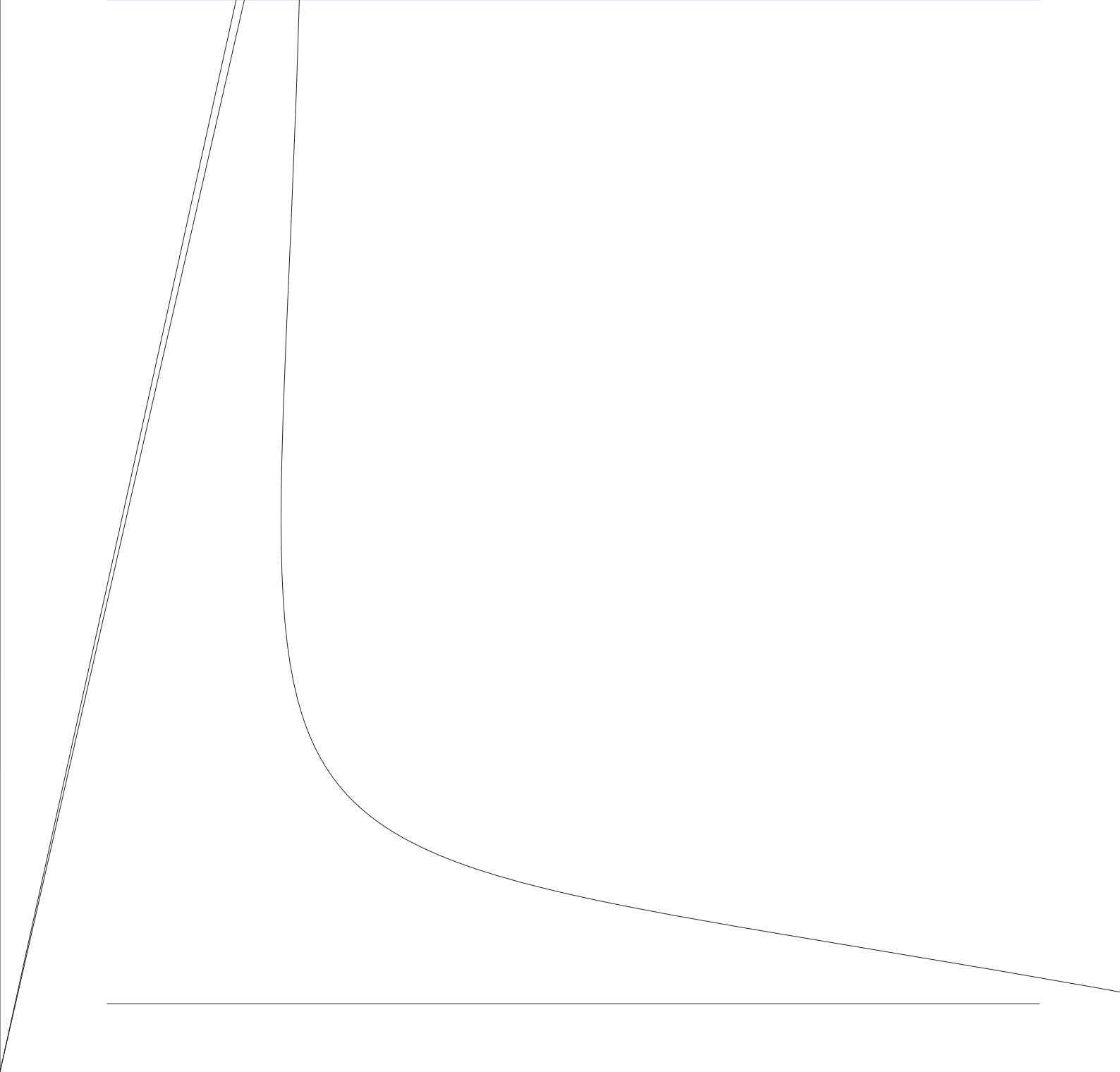
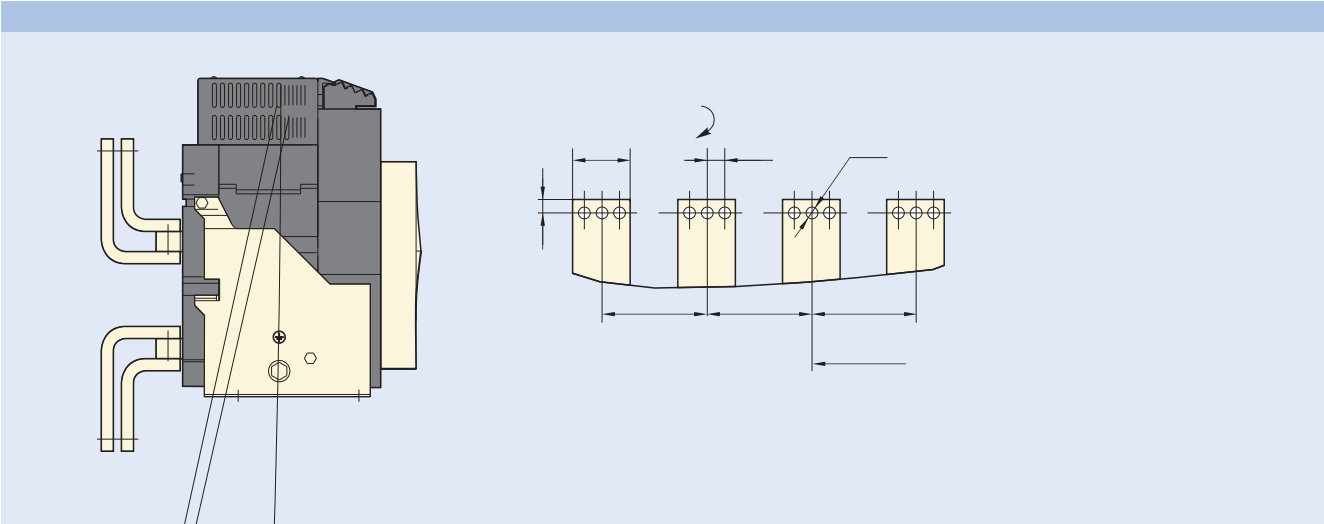
| In(A) | a(mm) |
|-------|-------|
| 2500 | 20 |
| 2900 | 30 |

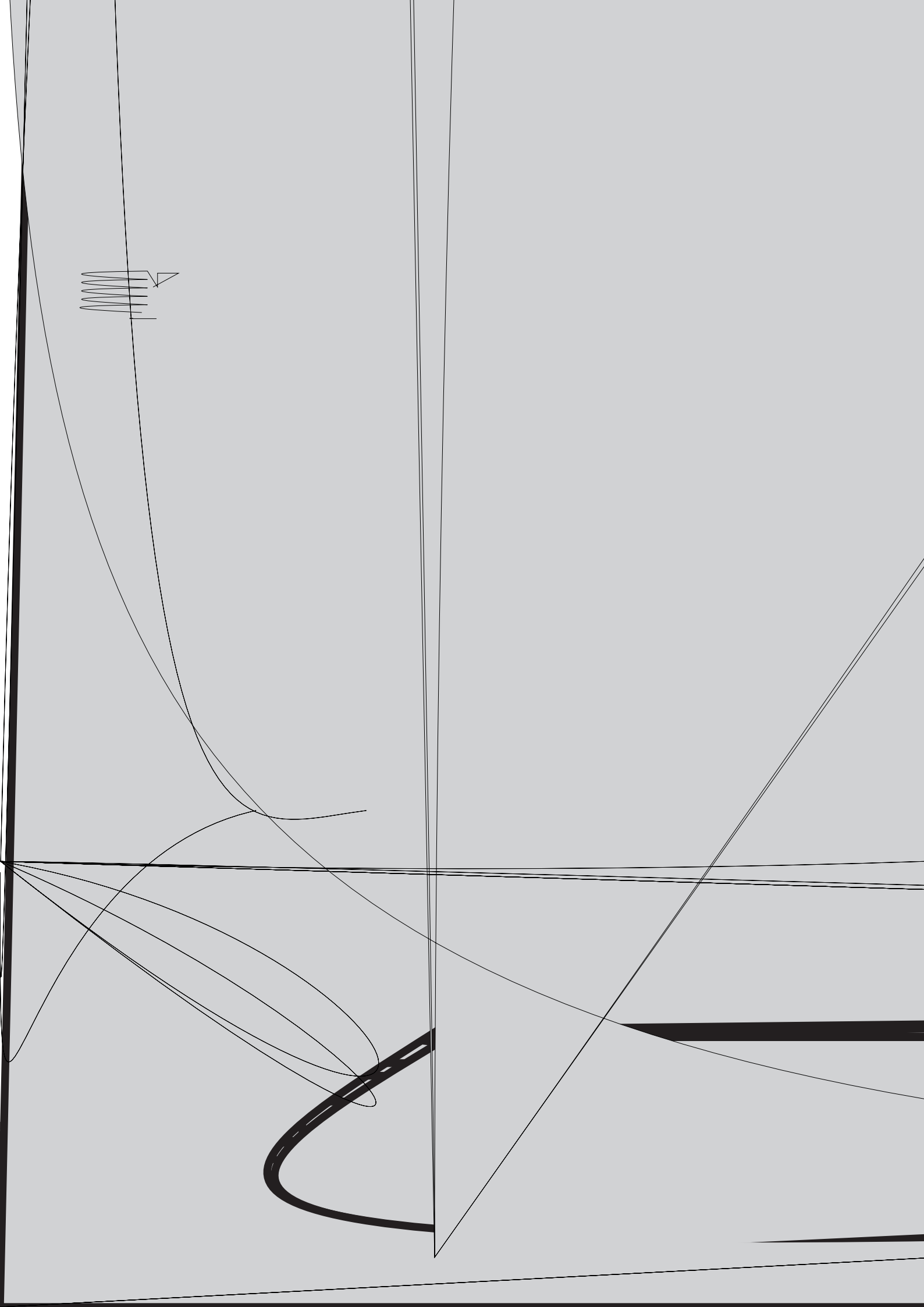


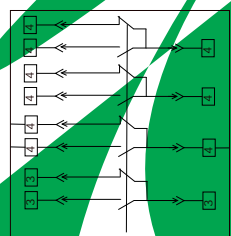
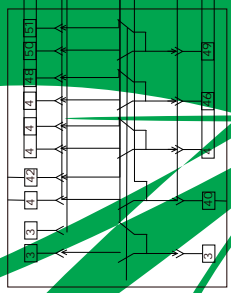
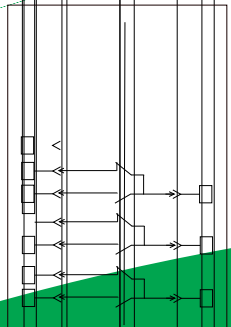
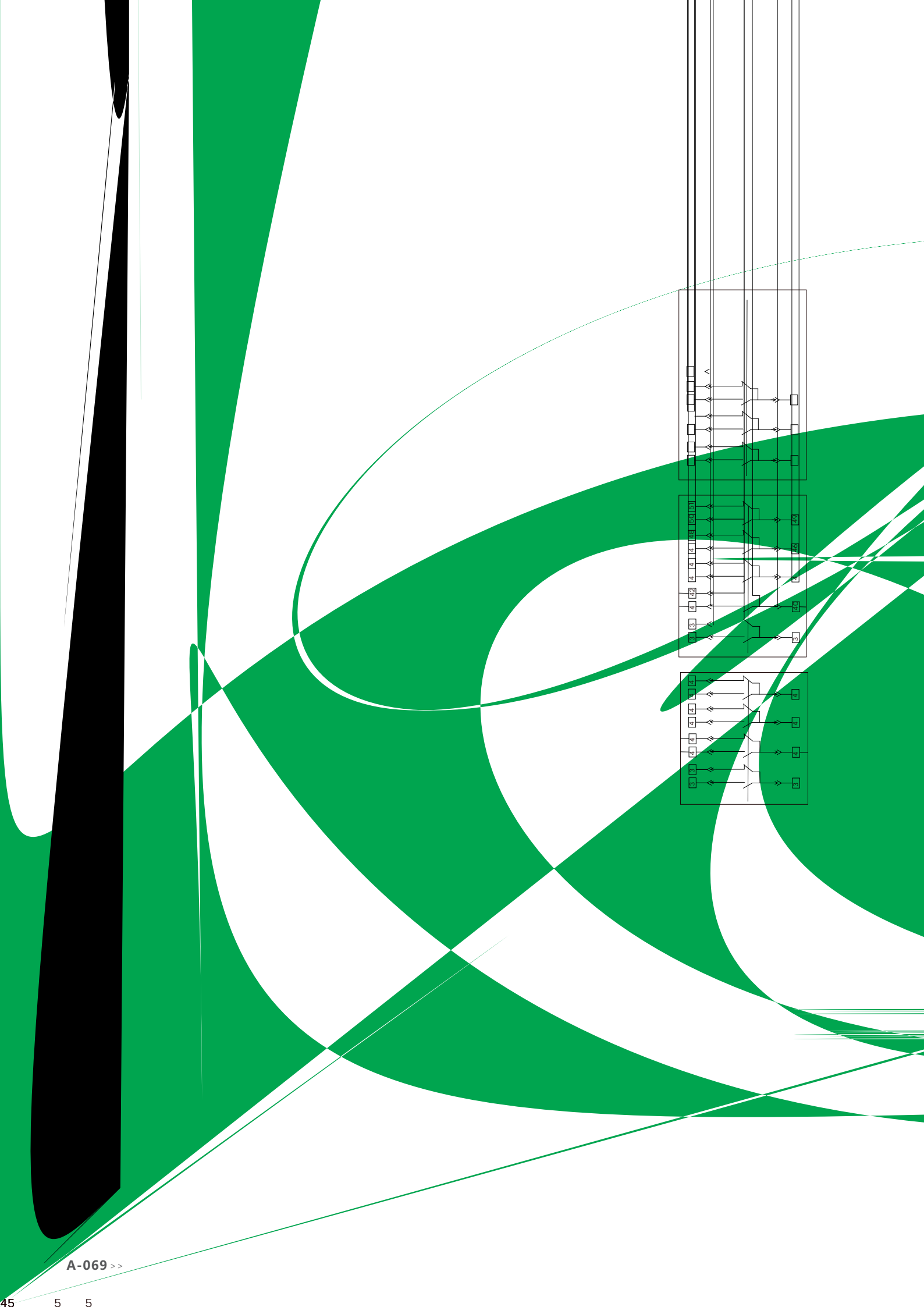
| In(A) | a(mm) |
|-------|-------|
| 2500 | 20 |
| 2900 | 30 |



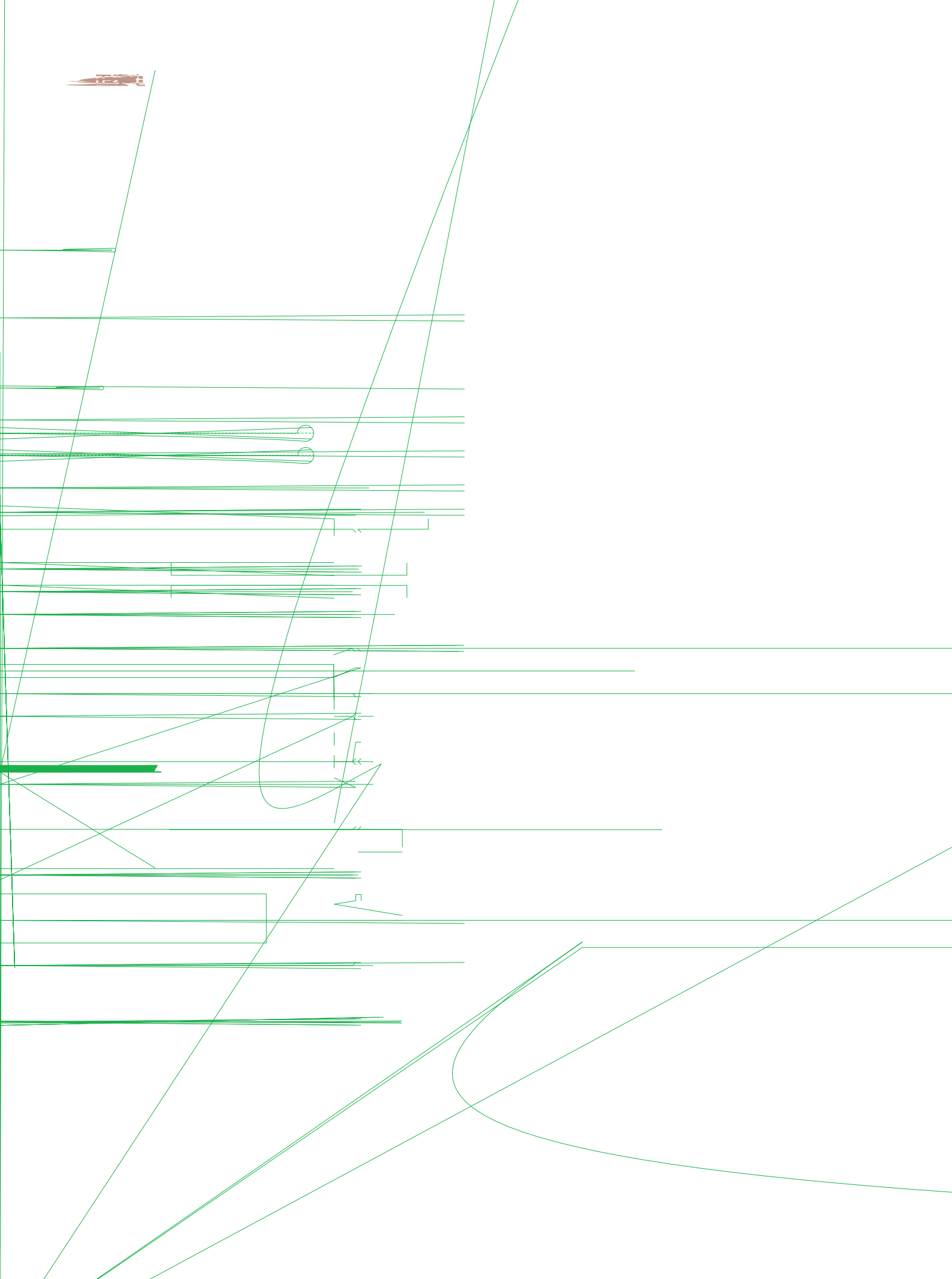








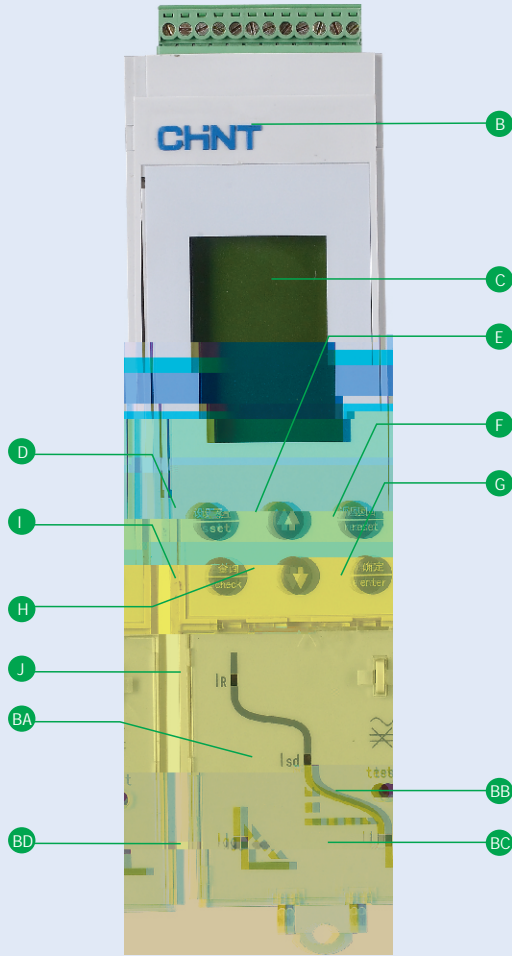
A-069 >>



A-071 >>

A

I D1 9 :



B

C

D

E

F

G

H

I

J

Zc

BA

Zfu

BB

tvtt

BC

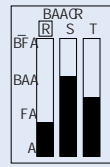
Z

BD

Zx

I ㉔1
111111
111111
111111

E B



I ㉔B1

| 1级菜单 | 2级菜单 | 3级菜单 | 4级菜单 | 5级菜单 |
|------|------|--|--|------|
| | | ㉔ ㉔ ㉔ ㉔ | ㉔ N BAAAR ㉔ N BBAABR ㉔ N U J I R ㉔ N 1AR ㉔ N 1AR Z ENA 1AR ㉔ N BDAAR ㉔ N BBAAR ㉔ N BDI AR ㉔ N 1CAAR ㉔ N 1AR Z ENA 1AR ㉔ N D6 ㉔ N F6 | |
| | | BAA6 | ㉔ N B6 | |
| | | - ㉔ - ㉔ = ㉔ - ㉔ | BF - ㉔ ㉔ N BAAAR ㉔ N BBAABR ㉔ N U J I R ㉔ N 1AR ㉔ N BAFAR ㉔ N BBAEAR ㉔ N BABAR ㉔ N 1AR | |
| f | | f r s N D I Ag f s t N D I Ag f t r N D I Ag f r EN 1 C C Ag f s EN 1 C C Ag f t EN 1 C C Ag f r % N D I Ag A6 R S 1 | | |
| W | FAY' | | | |
| V | | Va N 1 C A A h y Vb N 1 B A % . y Vd N 1 C A A g R y Va N 1 C A A h y Vb N 1 C A A % . y Va N 1 A h y Vb N 1 A % . y | | |



| 1级菜单 | 2级菜单 | 3级菜单 | 4级菜单 | 5级菜单 |
|------|------|----------|-------------------|-----------------|
| | | | | = 5000A = 5.0IR |
| | | | | = 0.1s |
| | | | | = 2000A = 2.0IR |
| | | | | = C1, 0.1s@ 6IR |
| | | | = 10000A = 10.0In | |
| | | | = 200% | |
| | | | = 800A | |
| | | | = 0.4s | |
| | | | = 6.0 | |
| | | | = 600A | |
| | | | = 0.1s | |
| | | | = 100A | |
| | | | = 0.1s | |
| | | | = 8.0A | |
| | | | = 0.75s | |
| | | | = 5.0A | |
| | | | = 0.1s | |
| | | | = 4.0A | |
| | | | = 0.1s | |
| | | = I | | |
| | 1 | = 800A | | |
| | 1 | = 50% tR | | |
| | 2 | = 700A | | |
| | 2 | = 25% tR | | |
| | | | = | |
| | | | = 200V | |
| | | | = 0.2s | |
| | | | = 320V | |
| | | | = 60.0s | |
| | | | = | |
| | | | = 480V | |
| | | | = 1s | |
| | | | = 400V | |
| | | | = 60.0s | |
| | U | | = | |
| | | | = 10% | |
| | | | = 1s | |
| | | | = 5% | |
| | | | = 60.0s | |

8.4.4

| 1级菜单 | 2级菜单 | 3级菜单 | 4级菜单 | 5级菜单 |
|------|------------|-----------|------|------|
| | | | | |
| | | 300 | | |
| | | 219 | | |
| | | 120 | | |
| | | 20 | | |
| | | | | |
| | | T= 0.20s | | |
| | | Umax= 0V | | |
| | | 11:24:59 | | |
| | | 6/17 | | |
| | 1 | F= 0.00Hz | | |
| | 2004/06/17 | Uab= 0V | | |
| | | Ubc= 0V | | |
| | | Uca= 0V | | |
| | | | | |

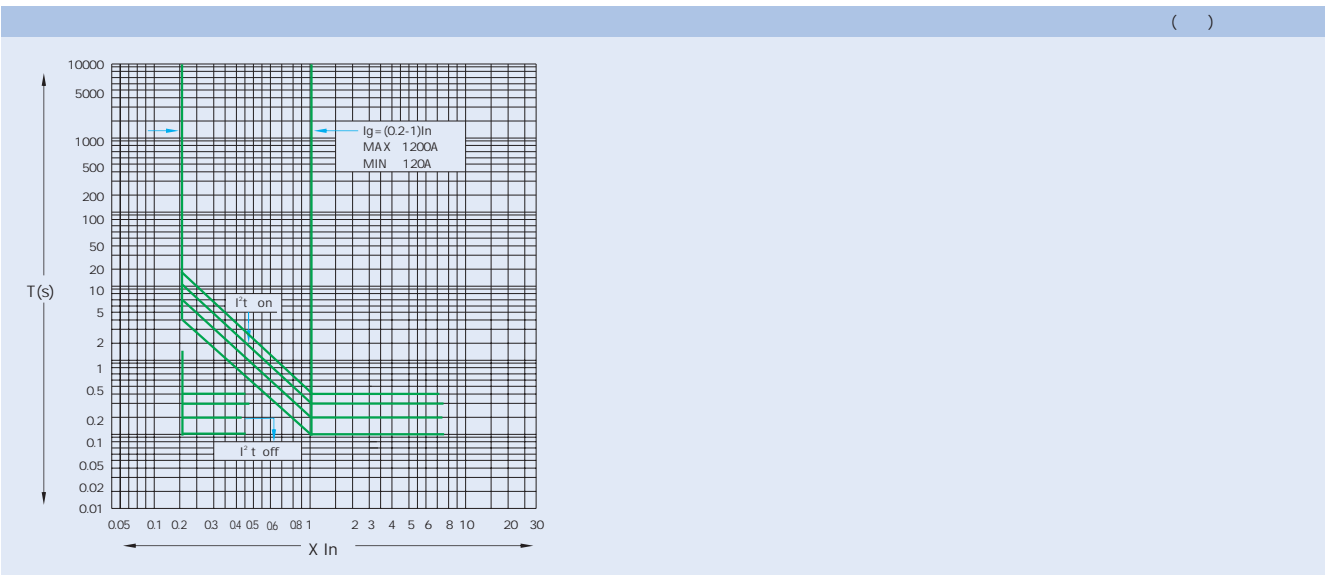
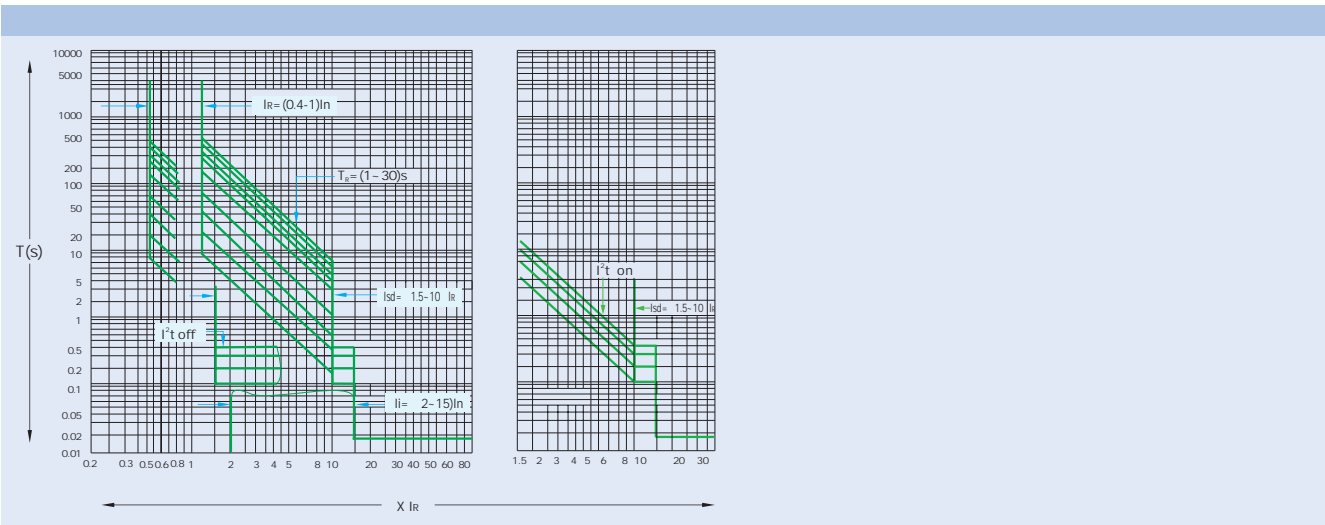
| 1级菜单 | 2级菜单 | 4级菜单 | 5级菜单 |
|------|-------|-----------|------|
| | | A | |
| | | T= 0.4s | |
| | | I= 4300A | |
| | | O O 16 | |
| | 8 | Ia= 4300A | |
| | | Ib= 4200A | |
| | | Ic= 4000A | |
| | | In= 150A | |
| | 1 DI | Di | |
| | | Di1 | |
| | | O O 16 | |
| | | | |
| | 8 | Umax= 0V | |
| | | O O 16 | |
| | 1 | O O 16 | |
| | | | |
| | 8 | O O 16 | w . |

a.

b. 10min

8.5

8.6



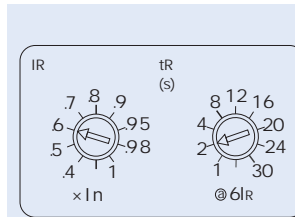
8.6.1

| 额定电流范围 IR | 误差 | 线路电流 I | 动作时间 tR(s) | | | | | | | | | | 时间误差 |
|-----------|------|--------|------------|----|----|-----|-----|-----|-----|-----|-----|--|------|
| (0.4-1)In | ±10% | 1.05IR | 2h | | | | | | | | | | ±15% |
| | | 1.30IR | 1h | | | | | | | | | | |
| | | 1.5IR | 16 | 32 | 64 | 128 | 192 | 256 | 320 | 384 | 480 | | |
| | | 2.0IR | 9 | 18 | 36 | 72 | 108 | 144 | 180 | 216 | 270 | | |
| | | 6.0IR | 1 | 2 | 4 | 8 | 12 | 16 | 20 | 24 | 30 | | |

$I_R = (0.4-0.5-0.6-0.7-0.8-0.9-0.95-0.98-1) \times I_n$ 9

$6I_R$

$t_R = (1-2-4-8-12-16-20-24-30)s$ 9



$I_R = 0.6I_n$

$2s(6I_R)$

$1 \quad I = 6I_R$

2s

$I = 1.5I_R$

T_R

$(1.5I_R)^2 \times T_R = (6I_R)^2 \times 2$

$t_R = 32s$

8.6.2

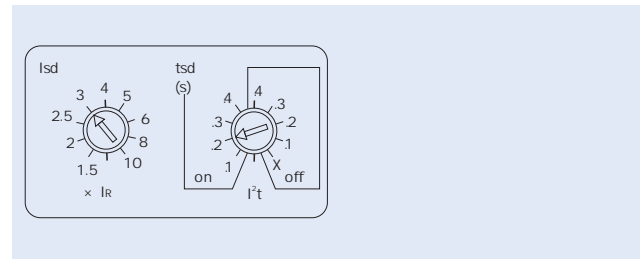
$$I_{sd} = (1.5 \cdot 2 \cdot 2.5 \cdot 3 \cdot 4 \cdot 5 \cdot 6 \cdot 8 \cdot 10) \times I_R \quad (I^2 t_{off})$$

$$I_{sd} = 1.15 I_{sd} \quad (I^2 t_{on})$$

$$I = 7 I_R \quad (I^2 t_{on})$$

$$I^2 \times T_{sd} = (10 I_R)^2 \times 0.2$$

$$T_{sd} = 0.41 s$$



$$I = 1.15 I_{sd} \quad I = 10 I_R \quad I = 1.15 I_{sd} \quad I = 10 I_R$$

$$I^2 T_{sd} = (10 I_R)^2 \times 0.2$$

$$3 I_R$$

$$(I^2 t_{on}) \quad t_{sd} = 0.2 s$$

$$I_{sd} = 3 I_R$$

$$(I^2 t_{on}) \quad t_{sd} = 0.2 s$$

$$7 I_R$$

$$T_{sd}$$

$$1.15 I_{sd} = 1.15 \times 3 I_R = 3.45 I_R$$

$$I = 7 I_R \quad 1.15 I_{sd}$$

$$I = 7 I_R \quad 10 I_R$$

$$I^2 \times T_{sd} = (10 I_R)^2 \times 0.2$$

$$(7 I_R)^2 \times T_{sd} = (10 I_R)^2 \times 0.2$$

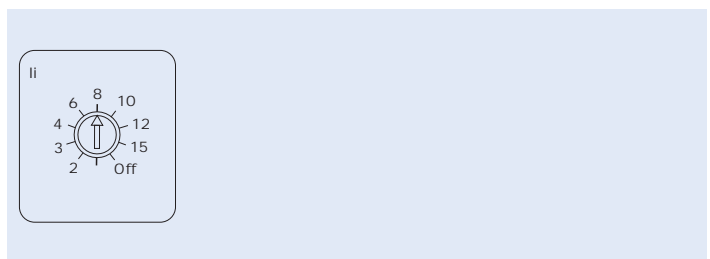
$$T_{sd} = 0.41 s$$

8.6.3

$$I_i = [2 \cdot 3 \cdot 4 \cdot 6 \cdot 8 \cdot 10 \cdot 12 \cdot 15 \cdot \text{off}(\quad)]$$

$$\times I_n \quad 9$$

$$8 I_n$$



8.6.4

Ig

| 额定电流In | A | B | C | D | E | F | G | H | J | 备注 |
|-----------------|------|------|------|------|------|------|-------|-------|-------|-----|
| In 400A | 0.3 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | ×In |
| 400A < In 1200A | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | ×In |
| 1200A < In | 500A | 640A | 720A | 800A | 880A | 960A | 1040A | 1120A | 1200A | |

$$I_g = (A + B + C + D + E + F + G + H + J) \times I_n \quad (9)$$

$$t_g = 0.1s - 0.2s - 0.3s - 0.4s - x \left(\frac{I^2 t_{off}}{I^2 t_{on}} \right) \quad (X)$$

$$I = 1.1 I_g \quad (10)$$

$$t_g = 0.1s - 0.2s - 0.3s - 0.4s$$

$$I = 1.1 I_g \quad (11)$$

$$I^2 T_g = (I_g)^2 t_g \quad (12)$$

$$I_g$$

$$t_g$$

$$I$$

$$T_g$$

$$J \quad J$$

3

In = 800A

$$I = 400A$$

Tg

$$I_n = 800A$$

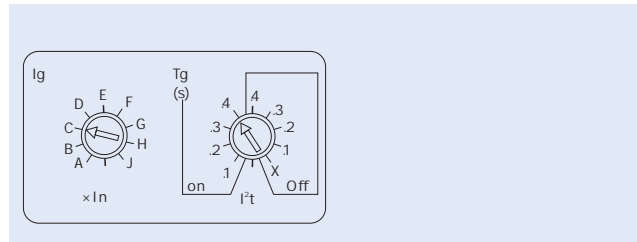
$$C = 0.4$$

$$I_g = C \times I_n = 0.4 \times 800 = 320A$$

$$I = 400A \quad 1.1 I_g$$

$$I^2 T_g = (I_g)^2 t_g$$

$$(400)^2 \times T_g = (320)^2 \times 0.4s \quad T_g = 0.26s$$



$$C \times I_n$$

$$(I^2 t_{on})$$

$$t_g = 0.4s$$

C

0.4s

IR Isd Ii

8.7

a.

" test"

b.

8.8

400A

0.4In

0.2In

400A

0.8In

0.4In

AC220V ST

AC120V

AC380V ST

AC200V

a.

± 5%

b.

± 1.5%

9

9.1

Inm = 1600A 0-7 Inm = 2500A - 6300A
 0.5s 1s 3s 5s
 1/2 85%Ue

| 额定工作电压Ue(V) | AC230 AC400 |
|-------------|--------------|
| (V) | (0.35-0.7)Ue |
| (V) | (0.85-1.1)Ue |
| (V) | 0.35Ue |
| (W) | 20VA |

9.2

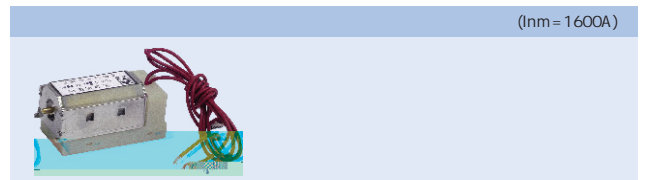
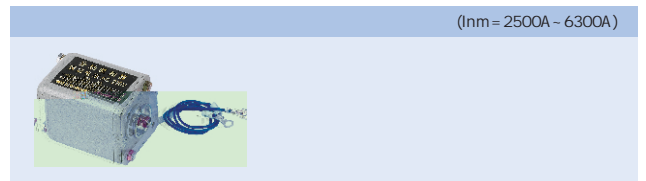
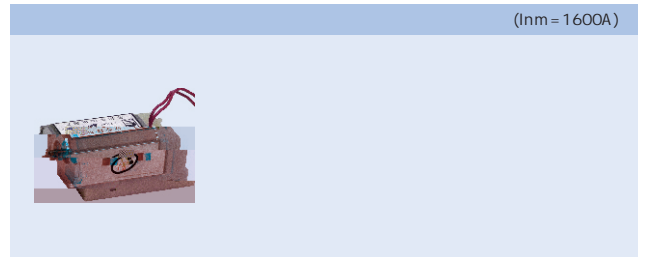
| 额定控制电源电压Us(V) | AC230 AC400 | DC220 DC110 |
|---------------|--------------------|-------------|
| (V) | (0.7-1.1)Us | |
| (W) | 200VA (50±10)ms | 200W |

9.3

| 额定控制电源电压Us(V) | AC230 AC400 | DC220 DC110 |
|---------------|--------------------|-------------|
| (V) | (0.85-1.1)Us | |
| (W) | 200VA (50±10)ms | 200W |

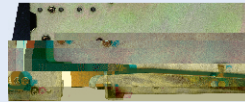
9.4

| 额定控制电源电压Us(V) | AC230 AC400 | DC220 DC110 |
|---------------|------------------|-------------|
| (V) | (0.85-1.1)Us | |
| (W) | 75/150VA < 4s | 75/150W |
| | 3 | |



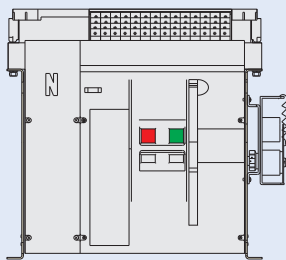


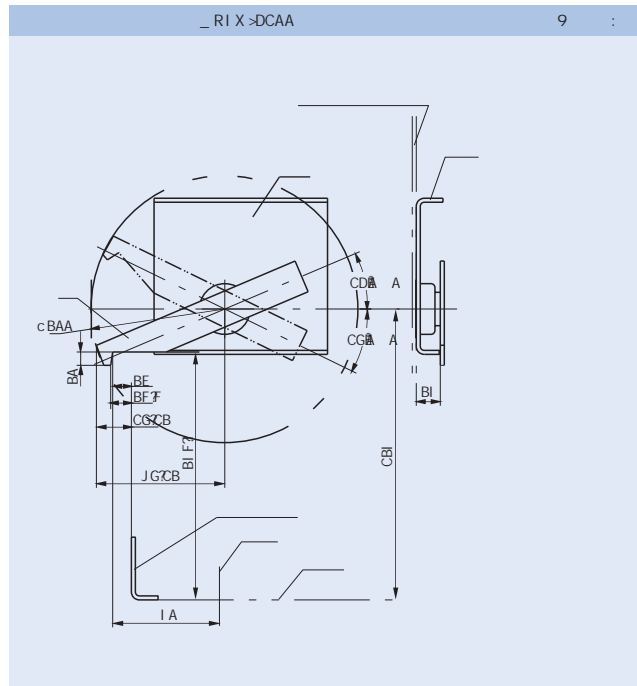
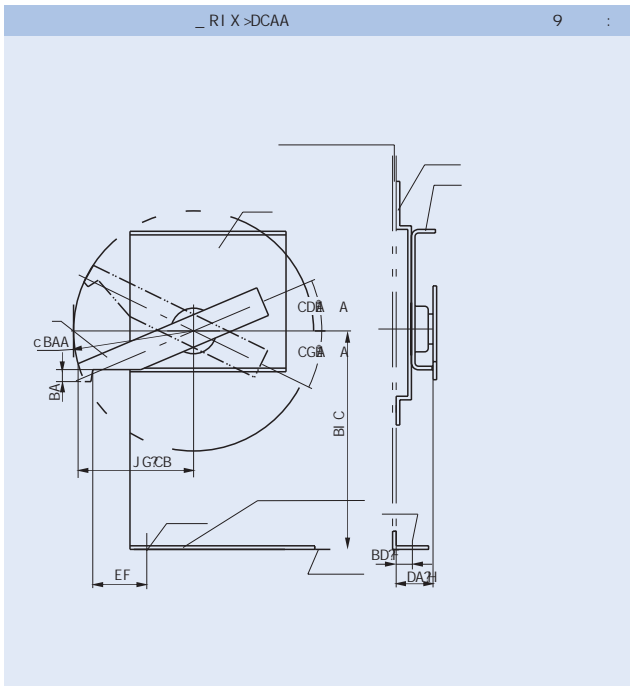
1600



NA8G-1600

()





BA1

BA1

11111

11111r?

11111s?

11111t?

11111u?

11111v?

BA1

BA1

11111

BAAg

CF EF

FA6 • HA6

CA

11111

BA1

11111

E ^ G ENBGAAR: ^ BA EN DCAAR :

11111

BA1

11111

E ^ G ENBGAAR: ^ BA EN DCAAR :

11111

BA1

XS1BEAEI

BA1

BB1

| 序号 | 技术问题 | 可能产生的原因 | 检查及排除方法 |
|----|--------|---------|--------------------------------|
| B | 9 : | 9 : | B1 C1 D1 E1 F1 |
| | | 9 : | B1 C1 D1 E1 F1 |
| | | 9 : | B1 C1 D1 E1 F1 |
| C | | | B1 C1 HA6 f v |
| | | | B1 C1 IF6 f v |
| | | | 9 : |
| | | | |
| | | | B1 C1 IF6 f t |
| | | | B1 C1 IF6 f t |
| | | | |
| D | | | B1 C1 D1 E1 |
| E | | | B1 C1 IF6 f t |
| F | | | B1 C1 IF6 f t |
| G | | | |
| H | | | |
| I | | | B1 C1 IF6 f t |

| 用户 | 订货台数 | 订货日期 | 联系电话 |
|-------|-----------------------------------|-----------------------------|----------------------|
| | NA8G-1600 | NA8G-3200 | NA8G-6300 |
| (In)A | 200 400 630 800 1000 1250 1600 | 1600 2000 2500 2900 3200 | 4000 5000 6300() |

(Inm=6300)

() ()

In=6300)

| | |
|------|--|
| (M) | IR=1In, tR=2s@ 6IR; lsd= 8IR, tsd=0.4s; li=12In; lg off(, , In 1200A , lg=0.5×In, In > 1200 , lg=800/In) |
| | IR _____In (0.4,0.5,0.6,0.7,0.8,0.9,0.95,0.98,1) _____s (1,2,4,8,12,16,20,24,30) |
| | lsd _____IR (1.5,2,2.5,3,4,5,6,8,10) _____s (0.1,0.2,0.3,0.4,off) |
| | li _____In (2,3,4,6,8,10,12,15,off) |
| | lg _____In _____s (0.1,0.2,0.3,0.4,off) _____s (0.1,0.2,0.3,0.4,off) |
| (H) | IR=1In tR=2s@ 6IR lsd=8IR tsd=0.4s lsd=6IR tsd=0.2s@ 6IR li=12In lg OFF (, lg=0.5×In k=2 tg=0.4s) |
| | IR _____ |
| | IR (1.5-10 _____) |
| | lsd _____ |
| | li _____ |

| | |
|--|-----------------------------------|
| | lg _____ |
| | AC400V AC230V DC220V DC110V DC24V |

| | |
|-----|---|
| () | MCR _____ |
|) | ZSI _____ |
| () | _____s(Inm=1600 1-3-5s Inm=2500-6300 1-2-3-4-5s) |
| | AC400V AC230V |
| | AC400V AC230V DC220V DC110V |
| | AC400V AC230V DC220V DC110V |
| | AC400V AC230V DC220V DC110V |
| | 4 () 3 3 4 4 (Inm=2500-6300) |
| | 5 6 (Inm=1600) |

| | |
|--|--------------|
| | (Inm=1600) |
| | () |

| | |
|-----------|------------------------------|
| 1 | |
| 2 Inm (A) | Inm 1600 2500 3200 4000 6300 |