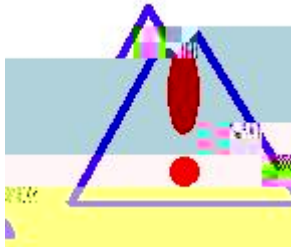


$\mathfrak{a}$     $\tilde{E}$     $\infty$     $\infty$     $\Delta$     $\mathfrak{a}$     $\mathfrak{n}$     $\parallel$   
 $\mathfrak{a}$     $\sim$     $\uparrow$     $\mathfrak{a}$     $\mathfrak{n}$



$\mathfrak{I}$     $\tilde{E}$     $\infty$   
 $\mathfrak{a}$     $\mathfrak{n}$     $\sim$     $\mathfrak{a}$     $\neq$   
 $\neg$     $\mathfrak{I}$     $\int$   
 $\tilde{E}$     $\vdash$     $\mathfrak{I}$     $\Psi$



$\sim$     $\nexists$     $\sim$     $\mathbb{1}$   
 $\Psi^{\infty}$   
 $\mathcal{D}_p$     $\tilde{\omega}$     $\neg$     $\neg$     $\eta$

$\bar{G}$   
 $\tilde{E}^{\text{ap}} \quad \text{ap} \quad \bar{U} \quad \dot{\rho}^{\text{ap}} \quad \mathbb{F}$   
 $\quad \quad \quad \dot{\rho}^{\text{ap}} \quad \mathbb{F} \quad \tilde{\omega} \quad \acute{k}$   
 $\gamma^{\text{ap}} \quad \mathbb{F} \quad \tilde{e} \quad \acute{k}$   
 $\eta$   
 $\quad \quad \downarrow \quad \eta \quad \gamma \tilde{\omega}_{-1} \quad H \quad \text{ap}$   
 $\dot{t} \quad K_v \quad \dot{t}^{\text{ap}} \quad \dot{t} \int \quad \tilde{\omega}^{\sim} \quad \bar{U} \quad \downarrow$   
 $\text{ap} \quad \gamma^{\sim} \quad \dot{\rho} \, a$   
 $\quad \gamma^{\sim} \quad \quad \quad \quad \quad \quad \quad k$   
 $\text{---} \quad \quad \quad H$   
 $a \quad \gamma^{\sim} \quad a \quad \text{ap} \quad \text{ap}$   
 $\quad \quad \quad \quad \quad \quad \quad \sim$   
 $\text{ap} \quad \text{ap} \quad \text{ap}$   
 $\quad \quad \quad \mathcal{D}_\rho \quad r \quad \text{ap}$   
 $\quad \sim \quad \mathbb{F} \quad \parallel \quad \bar{G}^{\text{ap}}$   
 $\quad \quad \quad \gamma \quad \mathcal{D}_\rho \downarrow \quad \text{ap}$   
 $\quad \gamma \quad \text{ap} \quad \parallel \quad \text{ap} \quad a$   
 $\gamma \, \dot{B} \quad \gamma \quad \gamma \quad H$   
 $\sim \quad \eta \quad \mathfrak{b} \quad \downarrow \quad \sim \quad \mathfrak{b}^{\text{ap}}$   
 $a \quad \bar{G} \quad \gamma^{\sim} \quad a \quad \text{ap} \quad \gamma \quad \bar{G}$

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1. 电源 AC220V ± 5%, 50/60Hz

功率因数 0.9 以上 效率 90% 以上

1 220V 功率 8kW 效率 90% 以上 UPS 效率

2. 频率 30kHz 40kHz 50kHz 60kHz 80kHz 90kHz

3. 频率 0.1Hz 0.05Hz 0.02Hz 0.01Hz

4. 阻抗

30kV 0.1Hz-1.1uF 0.05Hz-2.2uF 0.02Hz-5.5uF 0.01Hz-

11uF

40kV 0.1Hz-0.8uF 0.05Hz-1.6uF 0.02Hz-4uF 0.01Hz-8uF

50kV 0.1Hz-0.7uF 0.05Hz-1.4uF 0.02Hz-3.5uF 0.01Hz-7uF

60kV 0.1Hz-0.6uF 0.05Hz-1.2uF 0.02Hz-3uF 0.01Hz-6uF

80kV 0.1Hz-0.5uF 0.05Hz-1.0uF 0.02Hz-2.5uF 0.01Hz-5uF

90kV 0.1Hz-0.3uF 0.05Hz-0.6uF 0.02Hz-1.5uF 0.01Hz-

3uF

5. 精度 3%

6. 电压 ≤ 3

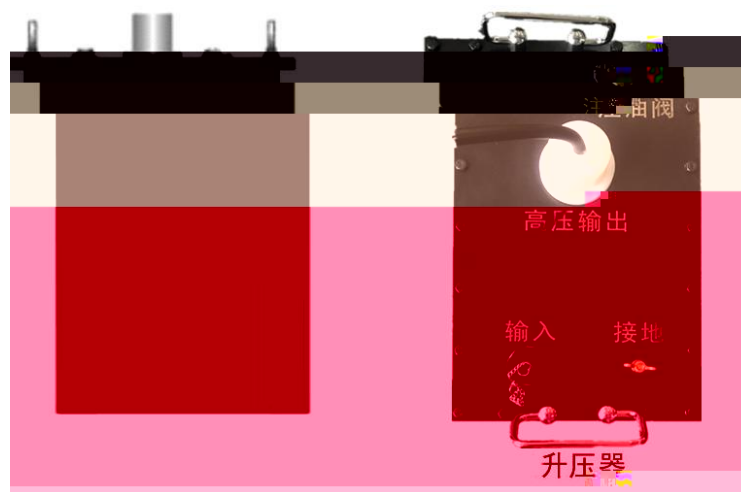
7. 电压 ≤ 5

8. 温度 -10 +40 ≤ 85 RH



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Ω AC220V

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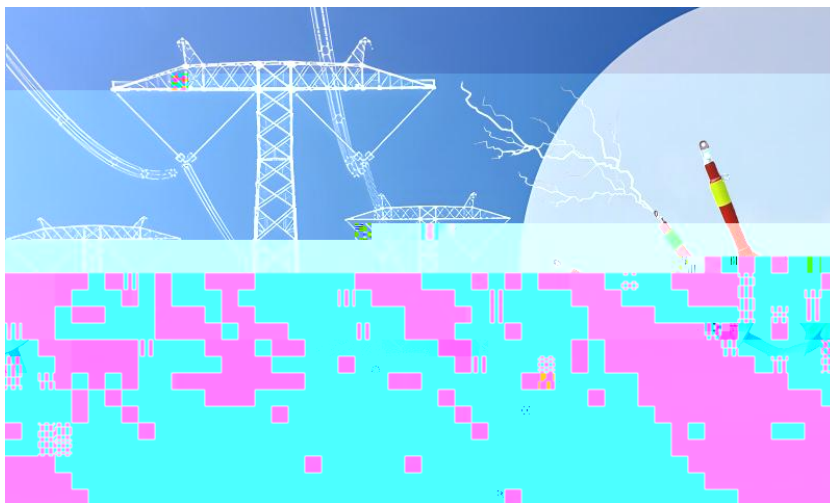
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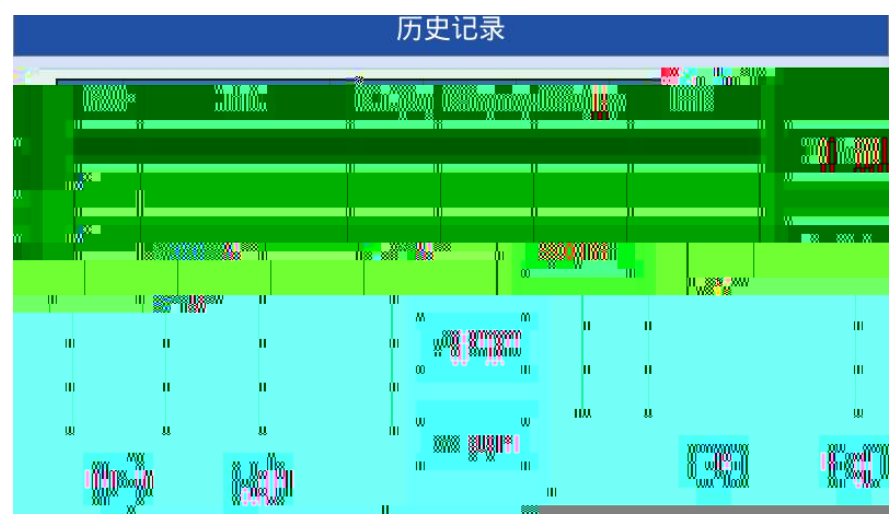
3. No 4  $\beta$  0.1Hz 0.05Hz 0.02Hz  
0.01Hz ~ “ ” ǎ  
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“ ” ǎ ~ ǎ 7

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$\sim$



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 $\int \sim$  No  $\neq$  “



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 $\vee \sim$  №≠ №  $\mathcal{D}_p$  “  
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3.2.1

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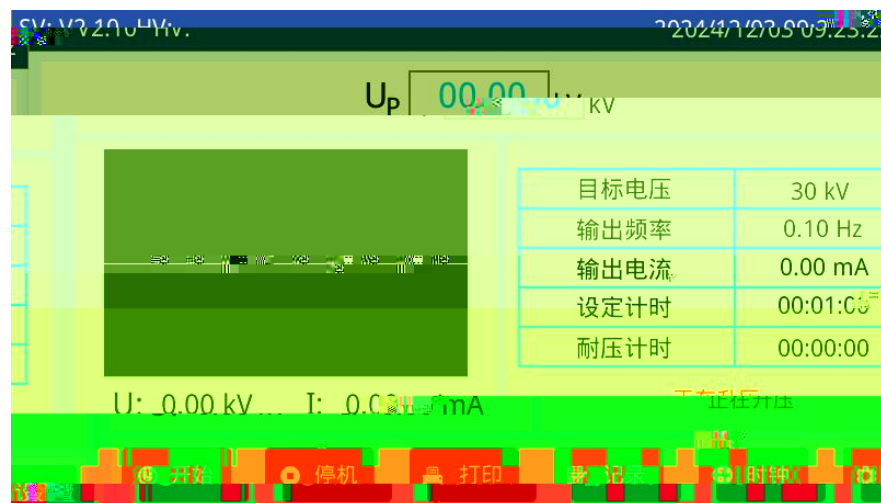
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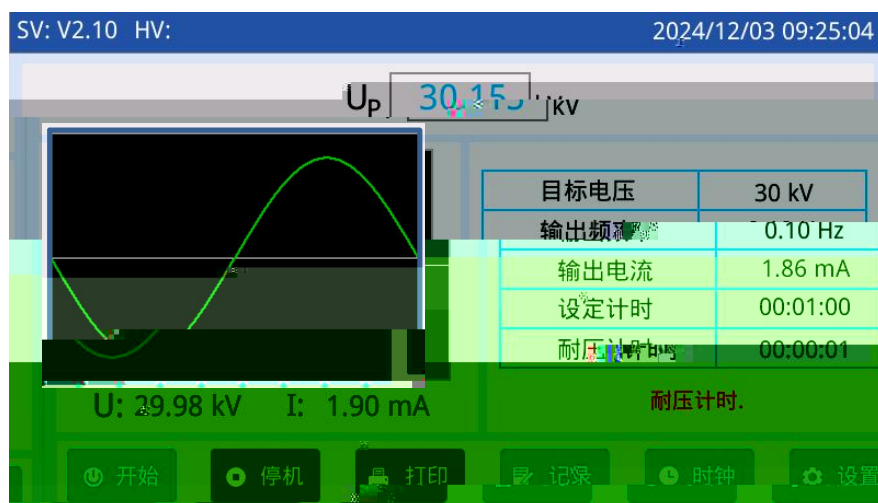
10



10 1 1

3.2.2 L      ρ 1 1      1 1

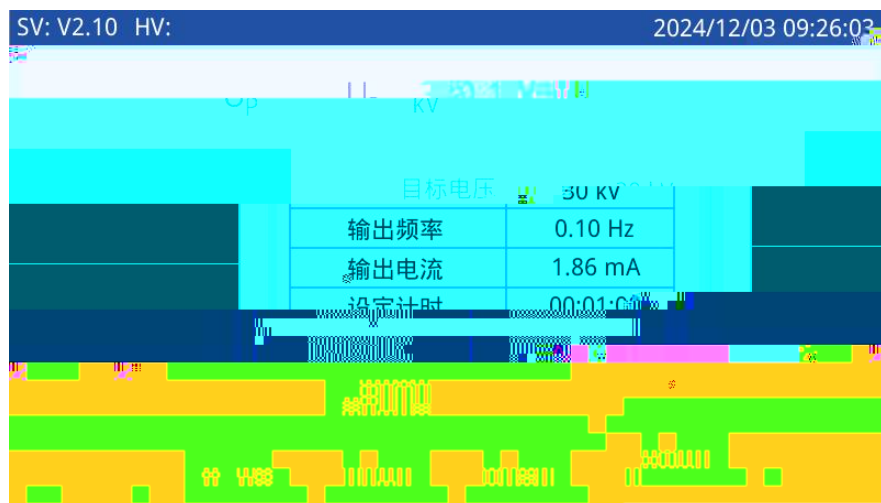
1      H “ 1 ” 11



11 1

3.2.3  $\int_1^{\infty} \frac{1}{x^2} dx = 1$

“ ” 12 п Г

$$\gamma \quad \quad \quad \gamma \quad \quad \quad \gamma \quad \quad \quad \gamma$$


12

$D_p$  “  $\bar{A}$  ”  $\top$

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NIST Special Publication 800-115

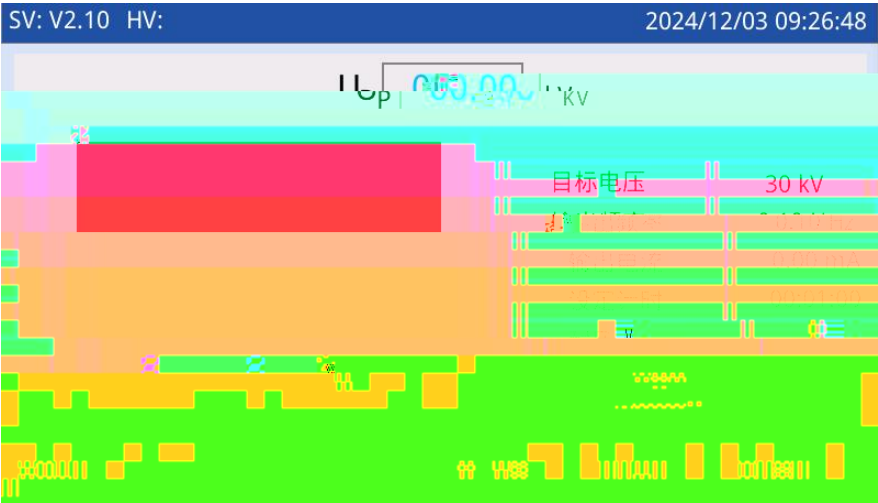
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 $\bar{G}$ 

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| 3.2.4 | $\mathcal{D}_p$ | $\bar{G}$ |
|-------|-----------------|-----------|

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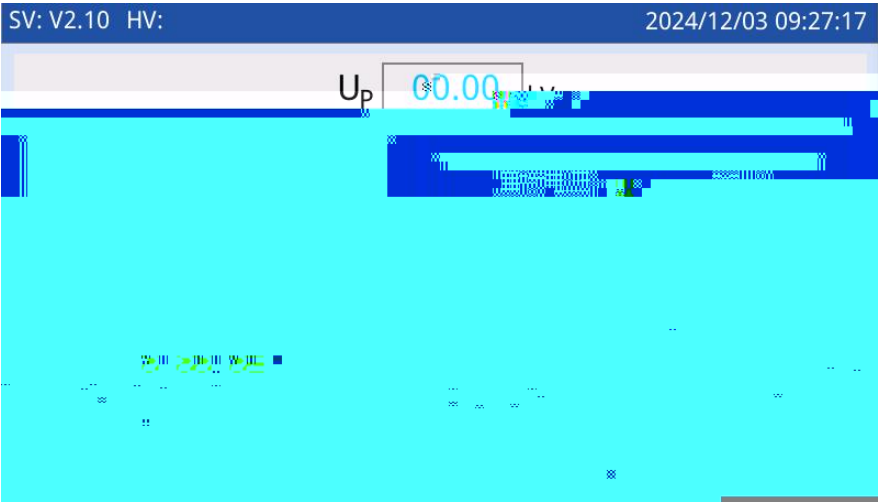
13



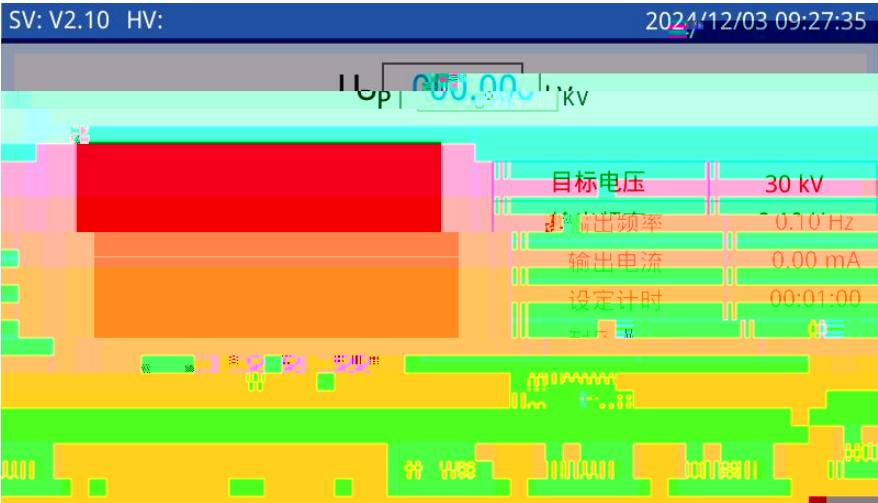
13

3.2.4      П    1      Г      П

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14    1 Г



15       $\bar{G}$

1.  $z$
  2.  $\dot{\omega}$   $\dot{\gamma}$   $\ddot{\alpha}$   $\sim$   $\gamma$
  3.  $1 \gamma$   $U_{\max}=3U_0$   $\dot{t}$   $U_0$   $1$
- $\gamma$
- $\rho 1$   $\ddot{\alpha}$   $1$   $10kV$   $1$   $U_0=6kV$
- $\gamma$   $1$   $\gamma$
- $U_{\max}=3U_0=18kV$
- $\dot{\gamma}$   $\sim$   $z$   $0.1Hz$   $\gamma$   $1 \gamma$   $\gamma$   $3$

| 额定电压   |    |    | 交接试验   |    |    | 预防性试验  |  |  |
|--------|----|----|--------|----|----|--------|--|--|
| $3U_0$ | 5  | 60 | $3U_0$ | 5  | 15 | 1.8/3  |  |  |
| $3U_0$ | 11 | 60 | $3U_0$ | 11 | 15 | 3.6/6  |  |  |
| $3U_0$ | 18 | 60 | $3U_0$ | 18 | 15 | 6/6    |  |  |
| $3U_0$ | 18 | 60 | $3U_0$ | 18 | 15 | 6/10   |  |  |
| $3U_0$ | 26 | 60 | $3U_0$ | 26 | 15 | 8.7/10 |  |  |

3  $z$   $0.1Hz$   $\gamma$   $1$

UN  $1$   $U_0$   $1$

$0.05 \mu F$   $1 1$   $\eta$

4. 60 №

15 №

5. №

z p ~ 1

6. G v

v 1 T

$$I_0 = 2\pi fCU = 2 \times 3.14 \times 0.1CU(\text{mA}) \dots\dots\dots ('E \quad 1)$$

C v β uF U 1 v v β

kV

2 ~ 10kV (UN=10kV Uo=8.7kV) 4km v

0.21uF/km 0.1Hz v 1 26kV v ↑

3 —

$$I_0 = 2\pi fCU = 2 \times 3.14 \times 0.1CU = 0.628 \times 0.21 \times 4 \times 26/\sqrt{2} = 9.69 \quad \text{mA}$$

G v

$$I = kI_0 \dots\dots\dots ('E \quad 2)$$

i k G ~ k 1

k ŭ 1.5 ↑ G v ~ ŭ 14.5mA

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max 0 R Q € r c 0 D

$$U_{\text{max}} = \sqrt{3} \times 1.2 \times 1.5 \times 13.8 \approx 35.1 (\text{kV})$$

|                | 汽轮发电机 |           |           | 水轮发电机     |         |         |         |
|----------------|-------|-----------|-----------|-----------|---------|---------|---------|
| 发电机容量<br>(MW)  | 200   | 300       | 600       | 400       | 500     | 1000    | 1200    |
| 单相对地电容<br>(pF) | 0.198 | 0.18~0.26 | 0.31~0.34 | 0.22~0.24 | 1.1~1.6 | 1.5~2.5 | 2.0~2.5 |

|   |   |    |   |   |   |     |
|---|---|----|---|---|---|-----|
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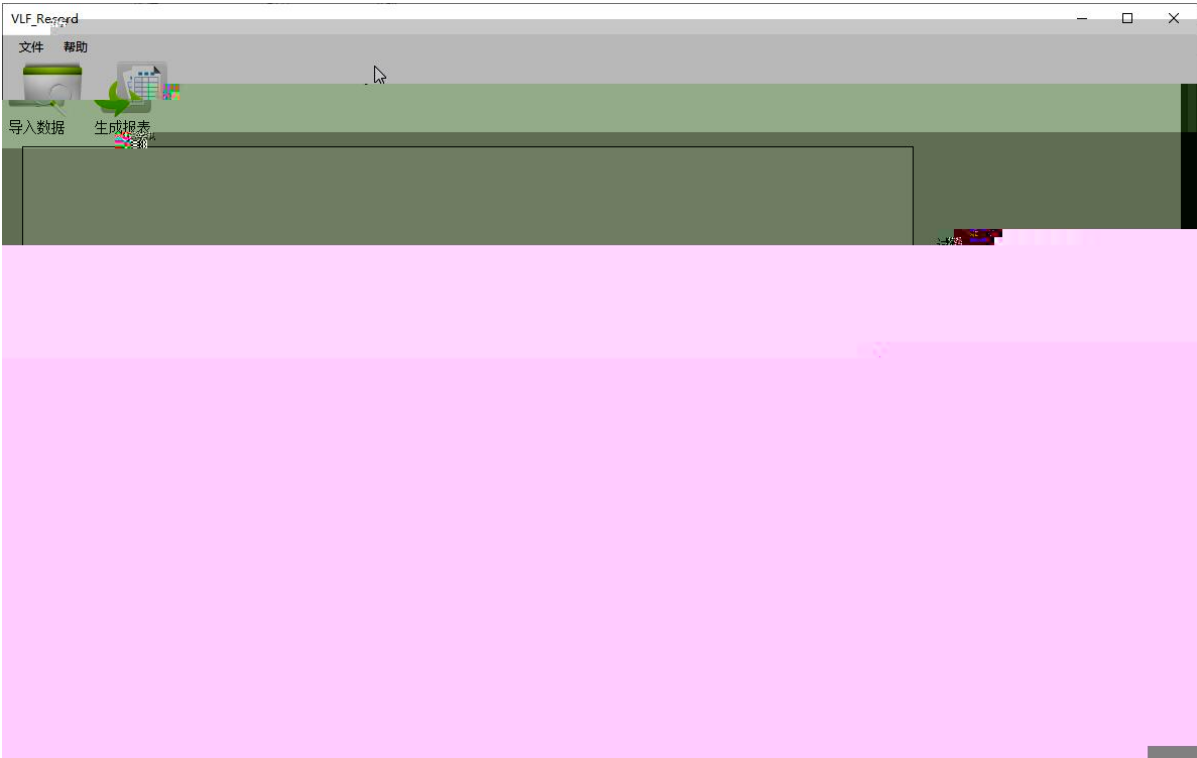
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1.  $\mathfrak{n}$   $\mathfrak{r}$   $\mathfrak{r}$   $\mathfrak{b}$
  2.  $\mathfrak{r}$   $\mathfrak{r}$   $\mathfrak{v}$   $\mathfrak{p}$   $\mathfrak{p}$   $\mathfrak{f}$
  3.  $\mathfrak{p}$   $\mathfrak{n}$   $\mathfrak{b}$   $\mathfrak{u}$   $\mathfrak{n}$   $, \oplus \sim$
  - $\mathfrak{k}$ 
 $\mathfrak{r}$ 
 $\mathfrak{f}$ 
 $\mathfrak{u}$ 
 $\mathfrak{E}$ 
 $\mathfrak{k}$
  4.  $\bar{G}$   $\mathfrak{n}$   $\mathfrak{f}$   $\mathfrak{G}$   $\mathfrak{n}$
  5.  $\mathfrak{r}$   $\mathfrak{r}$   $\mathfrak{f}$   $\mathfrak{r}$   $\mathfrak{H}\mathfrak{N}\mathfrak{o}$
  - 6.

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5.2.2 ~  $D_p$  “ ~ ”  $\Psi$   $\mathcal{F}$  4.3  
~  $D$   $D_p$

| 日期                  | 电压 (kV) | 电流 (mA) | 频率 (Hz) | 时间       |
|---------------------|---------|---------|---------|----------|
| 2020/01/01 00:00:29 | 8.00    | 0.00    | 0.1     | 00:00:00 |
| 2020/01/01 00:03:02 | 0.00    | 0.00    | 0.1     | 00:00:00 |
| 2020/01/01 00:01:35 | 8.77    | 0.60    | 0.1     | 00:00:00 |

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5.2.3

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|-----------|---------------------|---|----------------|
| 1         | L                   | 1 | $\approx$      |
| 2         | $\gamma \downarrow$ | 1 | $\approx$      |
| 3         | $\downarrow$        | 1 |                |
| 4         | $\gamma \downarrow$ | 1 |                |
| 5         |                     | 1 |                |
| 6         |                     | 1 |                |
| 7         | No                  | 1 |                |
| 8         |                     | 1 | $\gamma$       |
| 9         | $\tilde{G}$         | 5 | $\gamma$       |
| 10        | $\downarrow$        | 2 | $\downarrow$   |
| 11        |                     | 1 | M              |
| 12        | $\gamma \downarrow$ | 1 | M              |
| 13        |                     | 1 | M              |
| 14        | U                   | 1 |                |

|                      | $Z$           | $0.1\text{Hz}$ | $\gamma$      | $\lambda$     |
|----------------------|---------------|----------------|---------------|---------------|
| $U / U_N(\text{KV})$ | $1 \text{ Ồ}$ | $1 \text{ Ỗ}$  | $1 \text{ Ồ}$ | $1 \text{ Ỗ}$ |
| $1.8/3$              |               | $\text{KV}$    |               | $\text{KV}$   |

