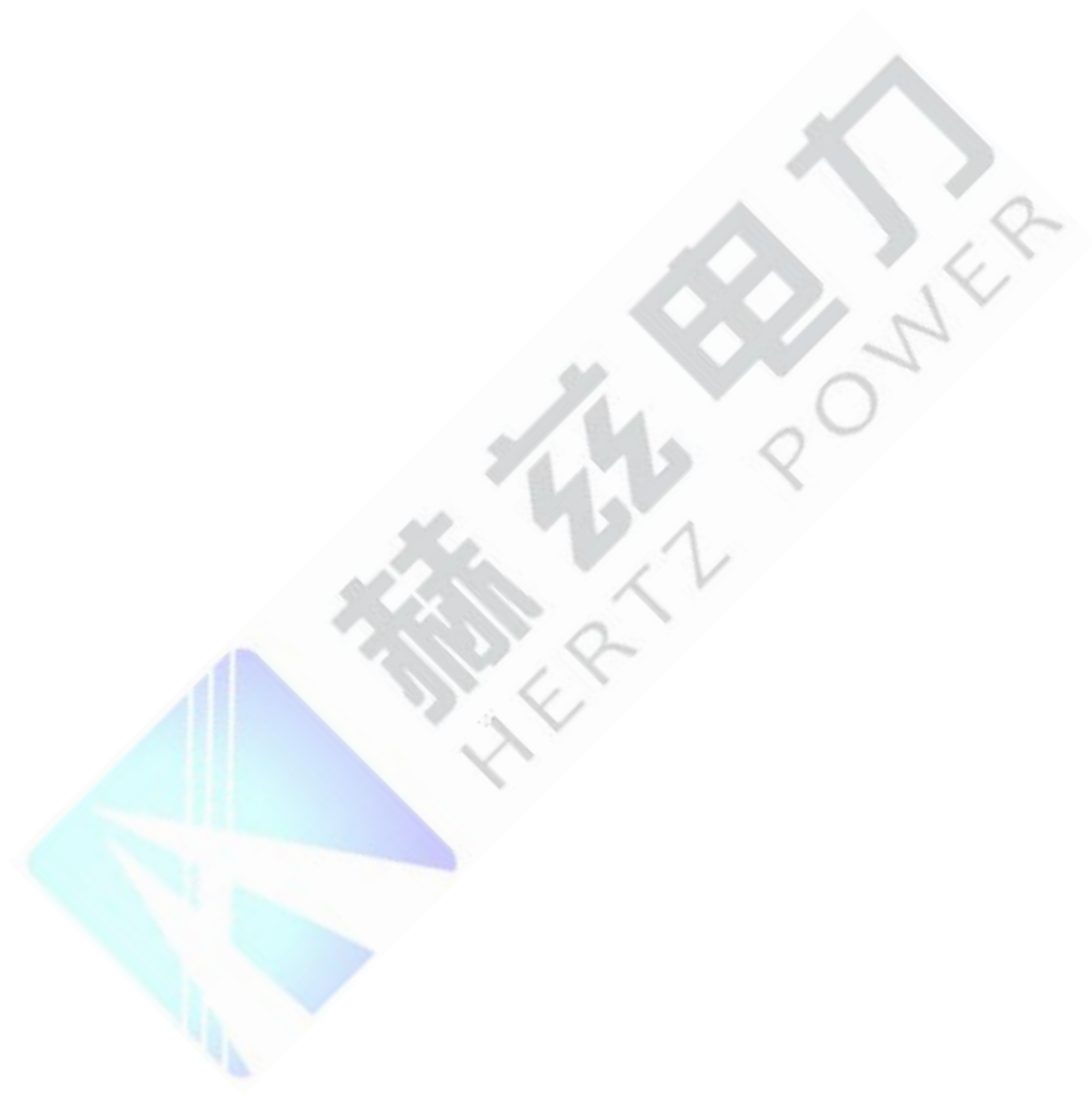




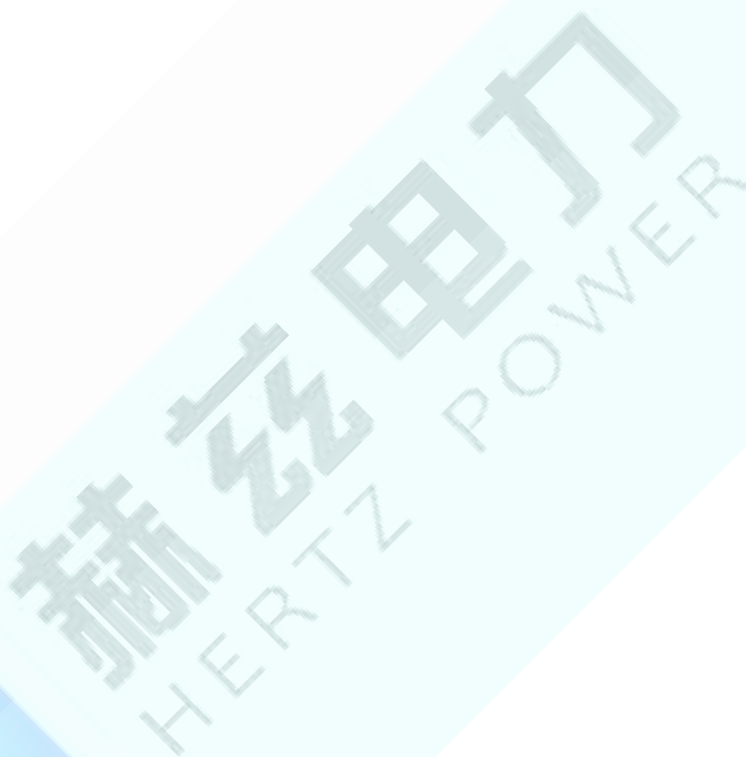
赫兹电力  
HERTZ POWER

产品宗旨：技术领先，质量可靠，轻便易用

服务宗旨：快速响应，时间到满意，超过期



HZJB-330T



赫兹电力  
HERTZ POWER

“ ”

“ ”

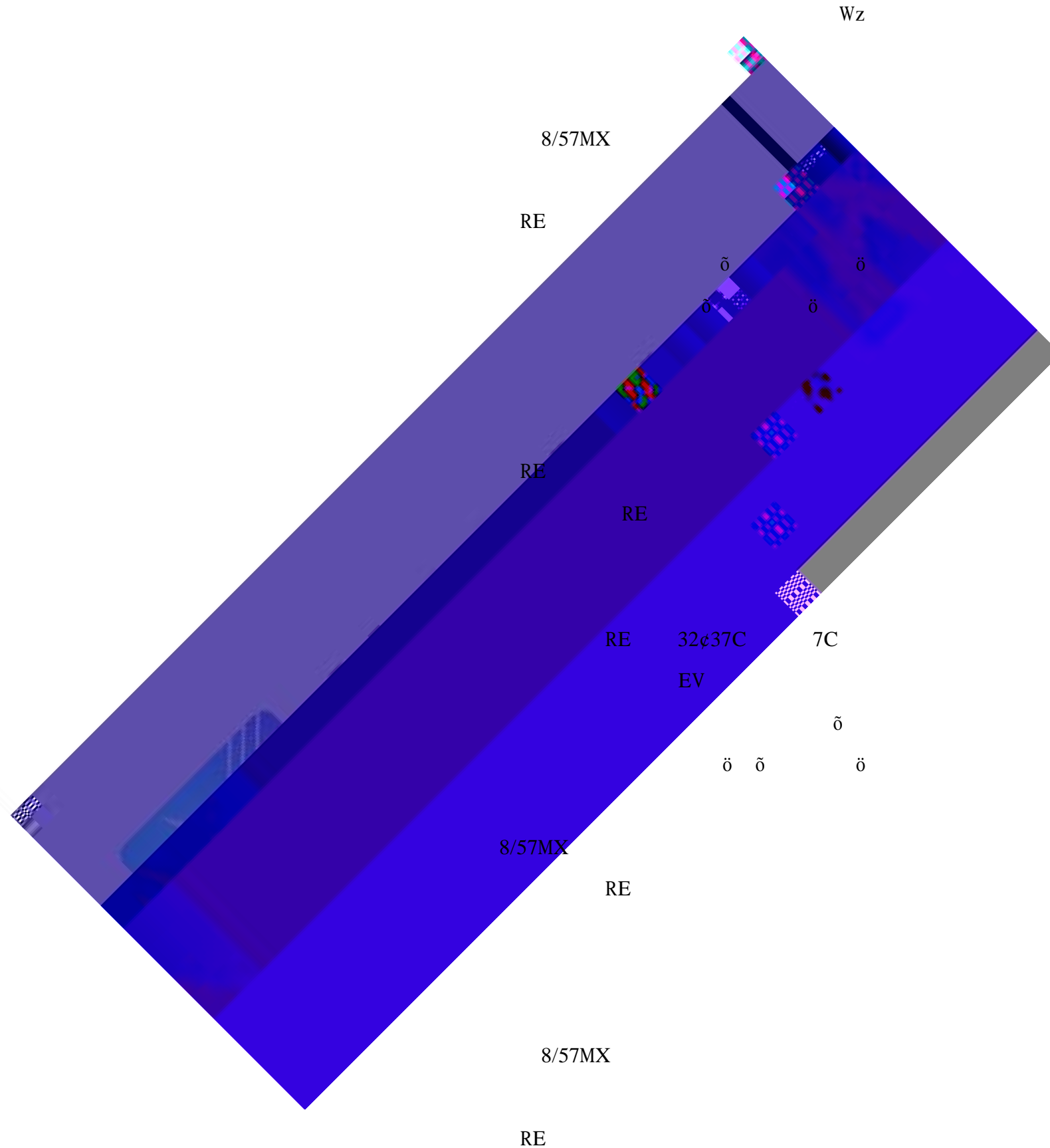
“ PC ” Windows

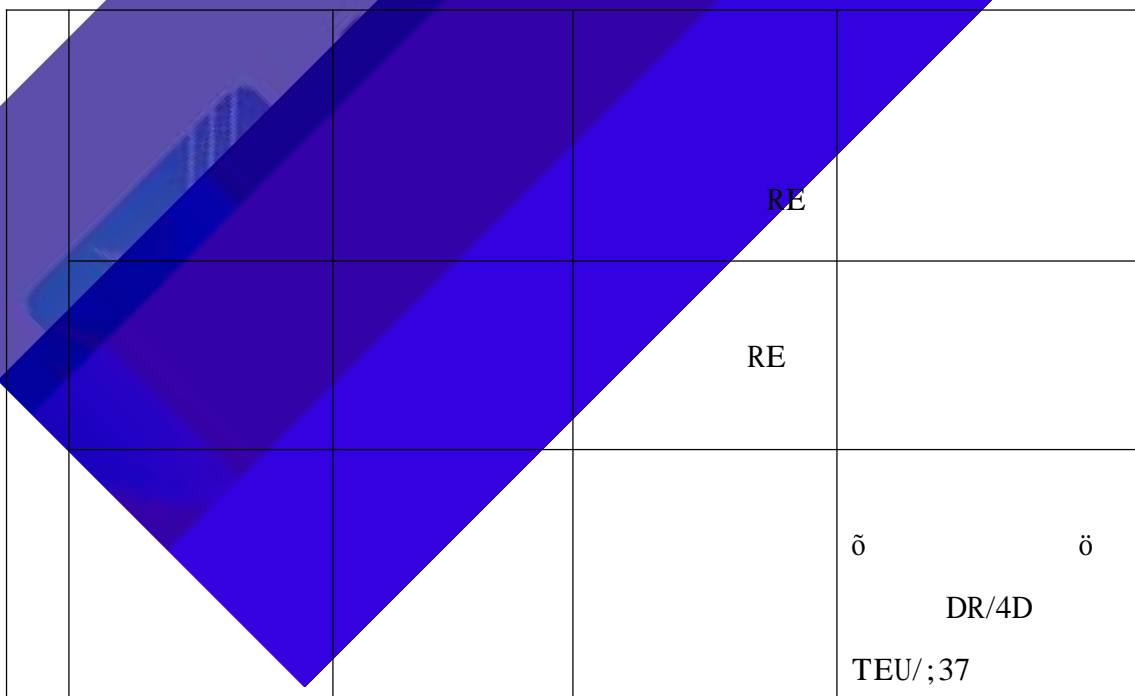
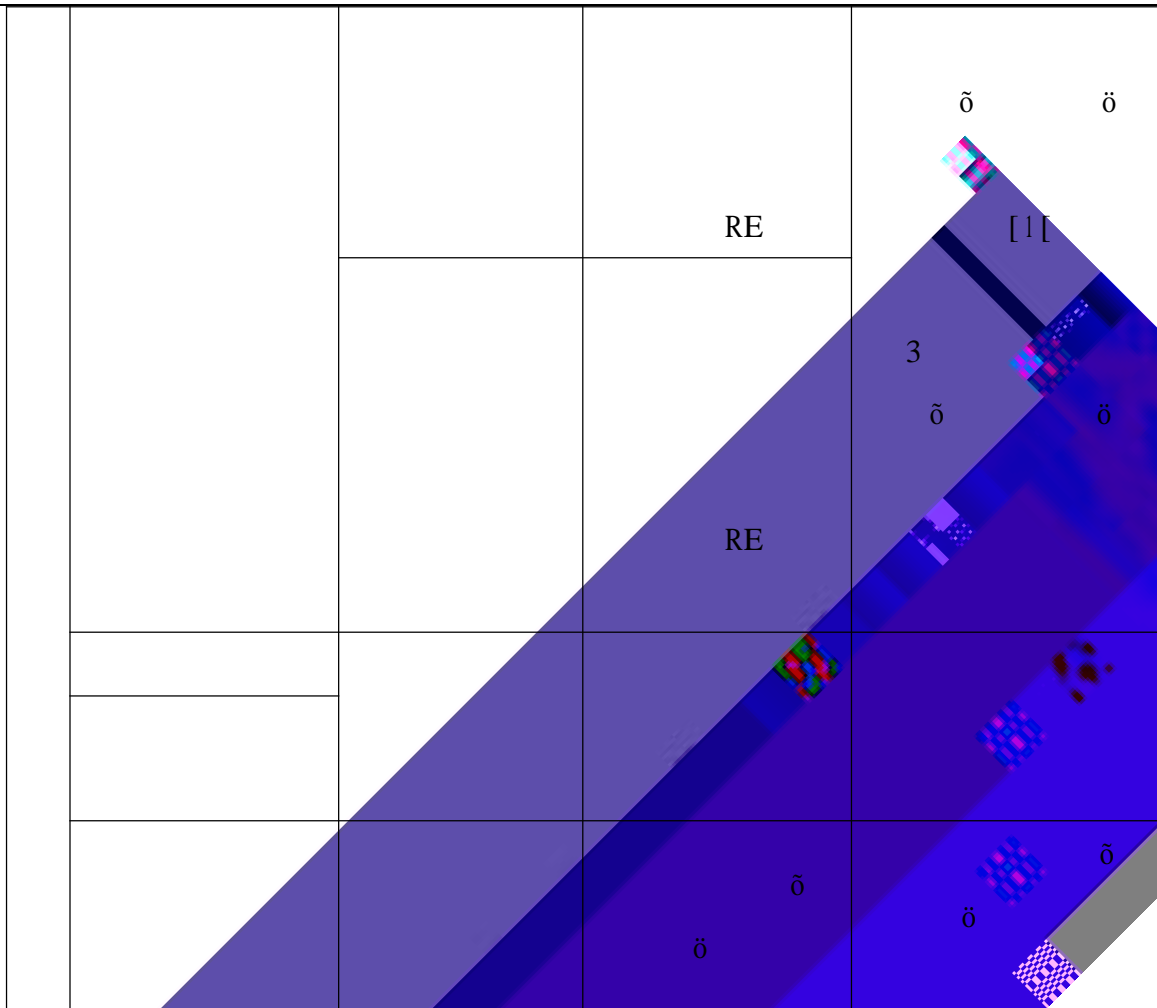
RE

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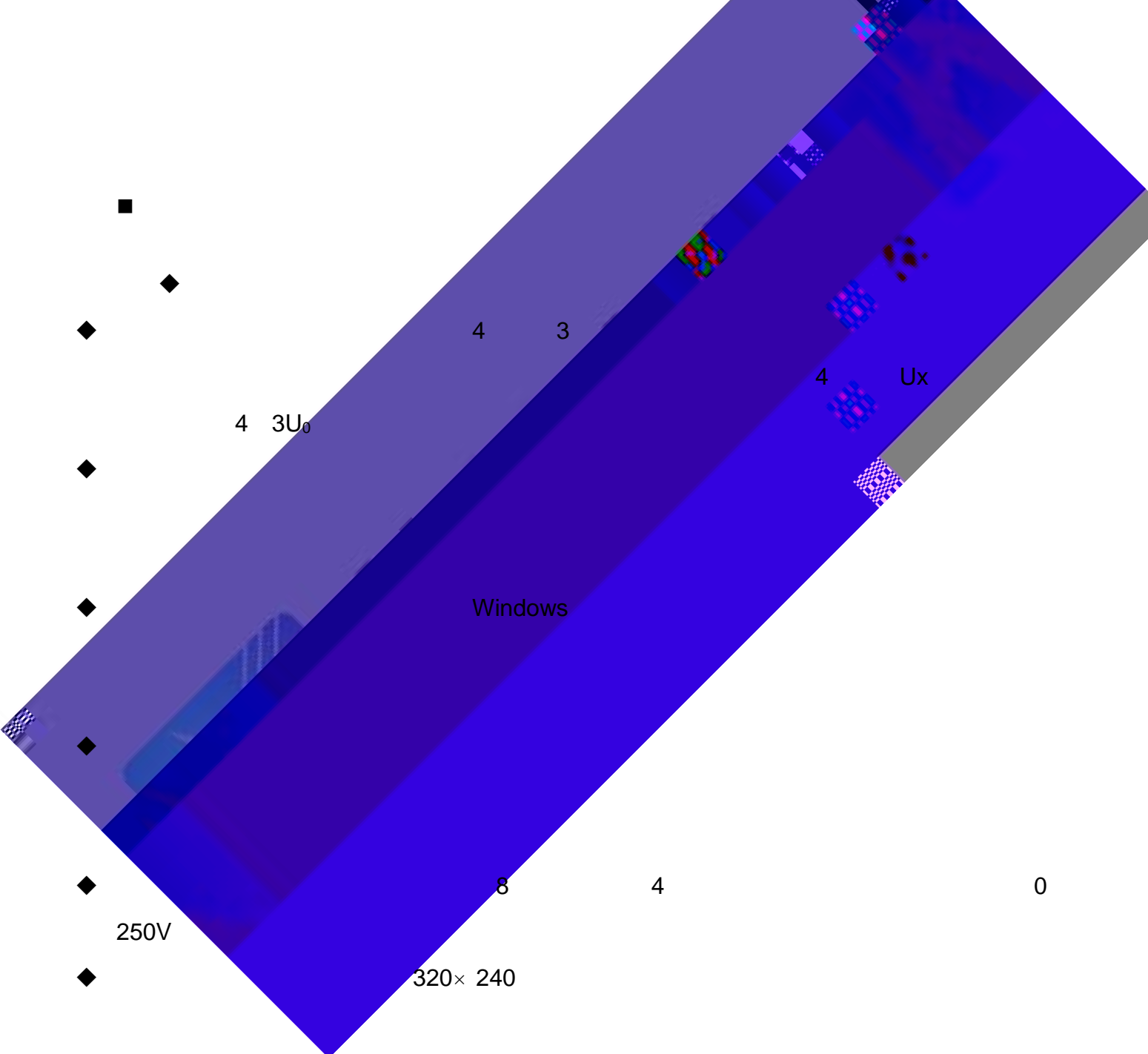
			ö ö
			ö ö
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			ö RE
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		RE	







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110V 220V

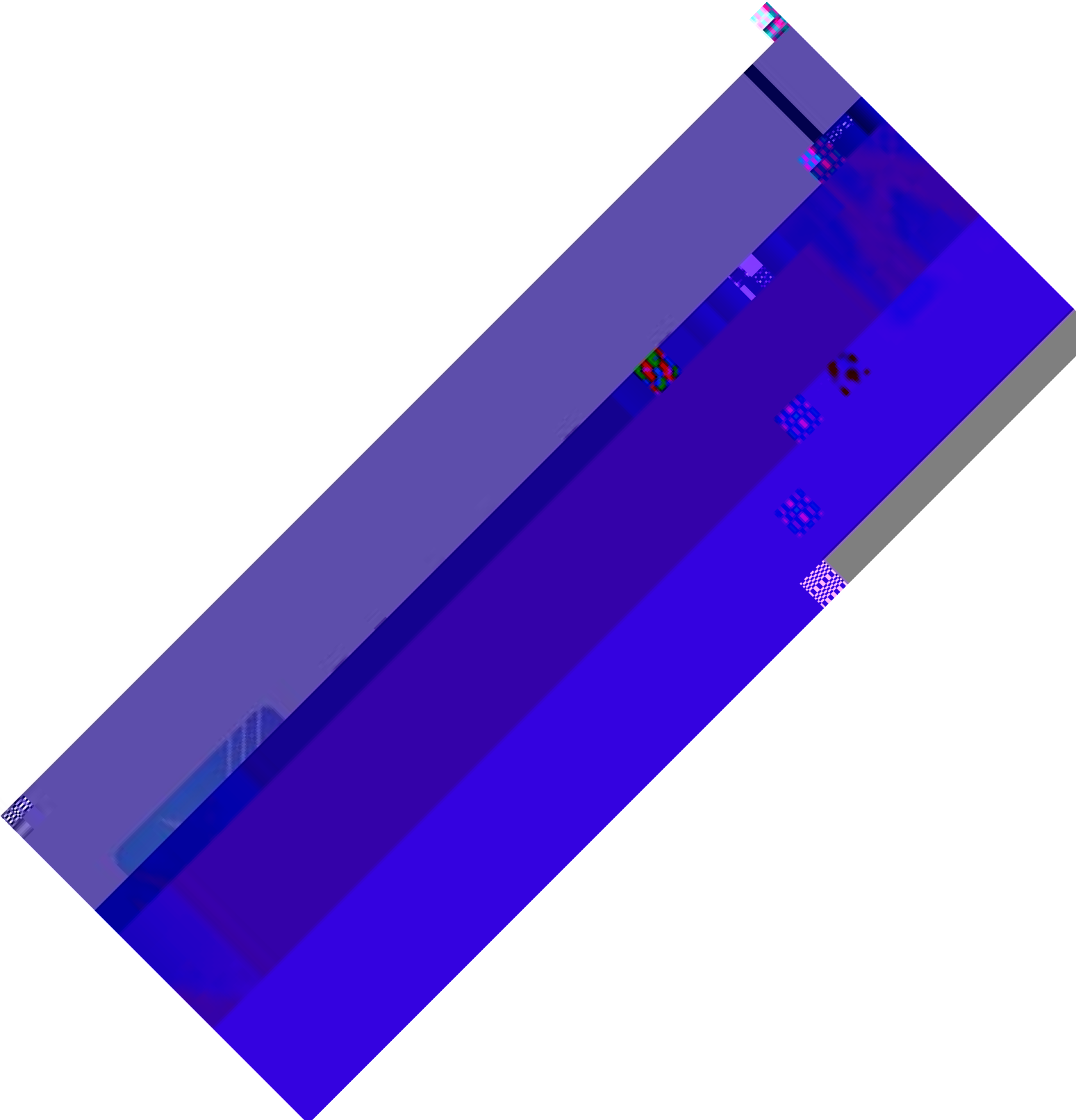


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027-83267669



D/A

D/A



10A

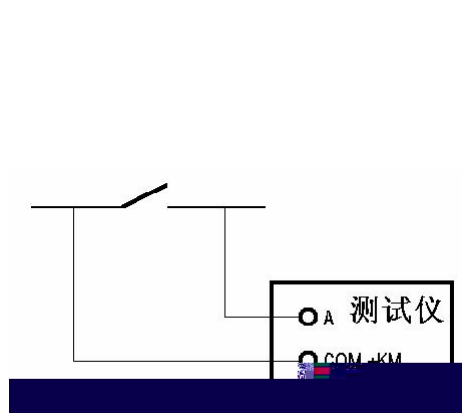


0 250V

10A

0 6V

11 250V



320×240

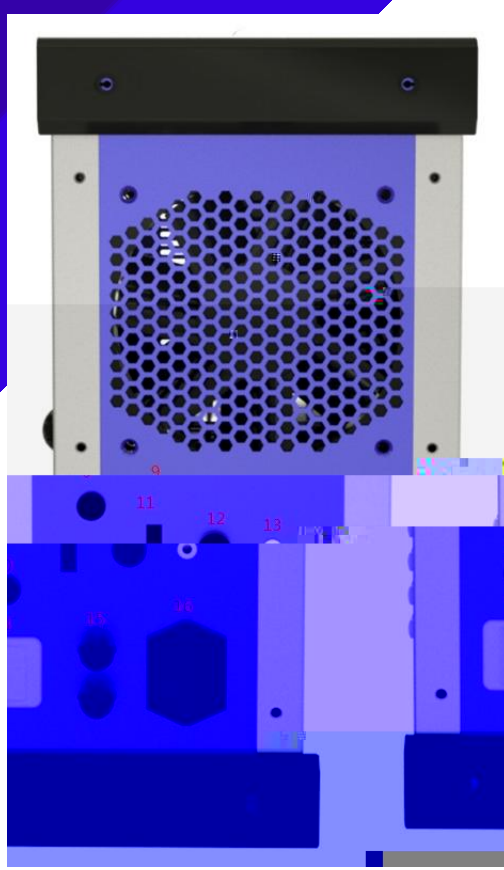
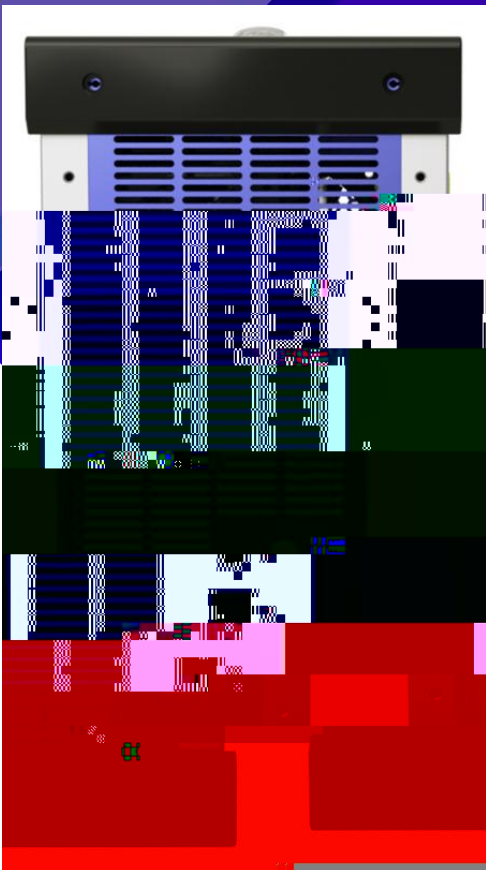


110V 220V

1.5A

2A 250V

2A 250V



5

GPS

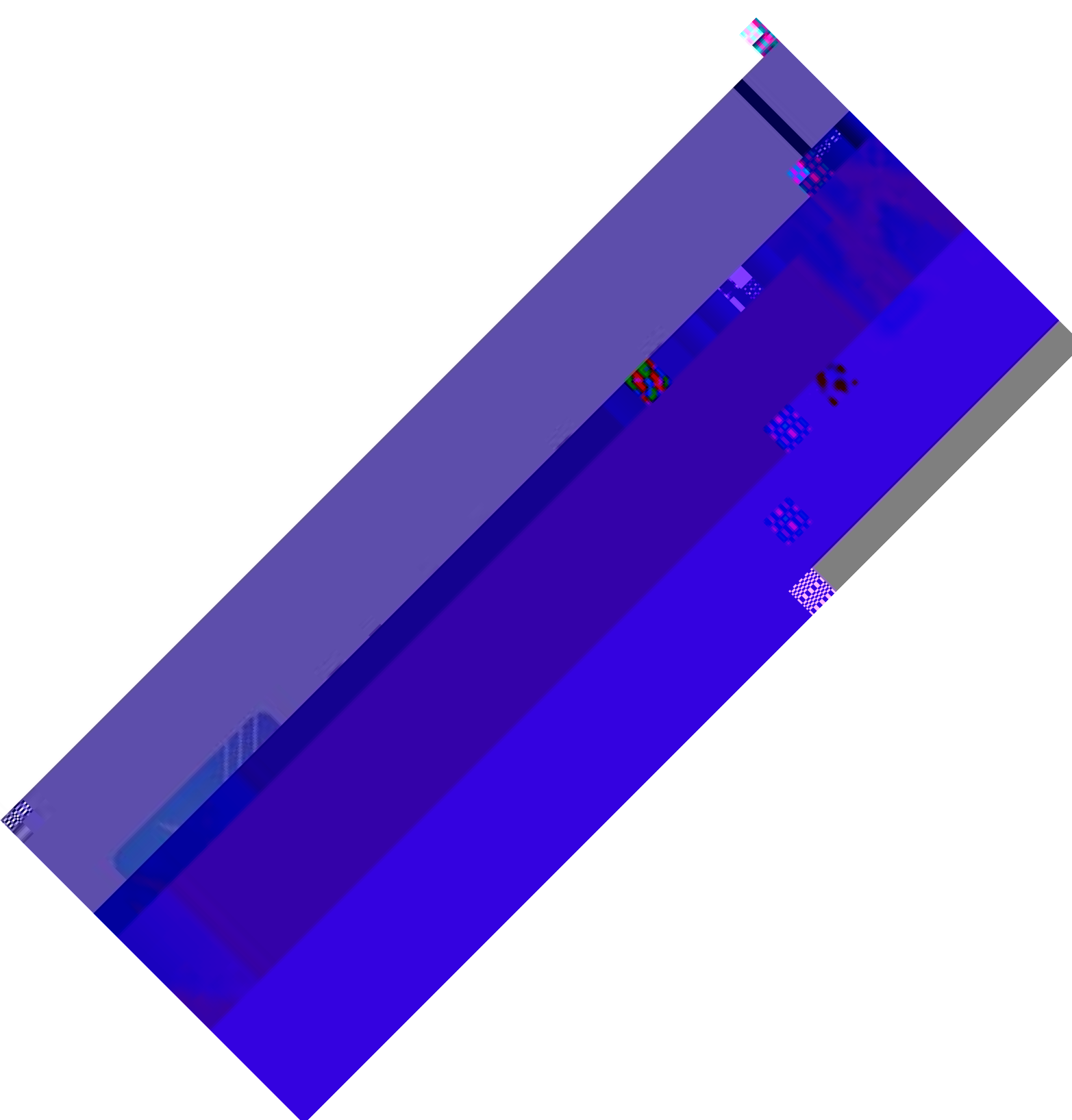
USB

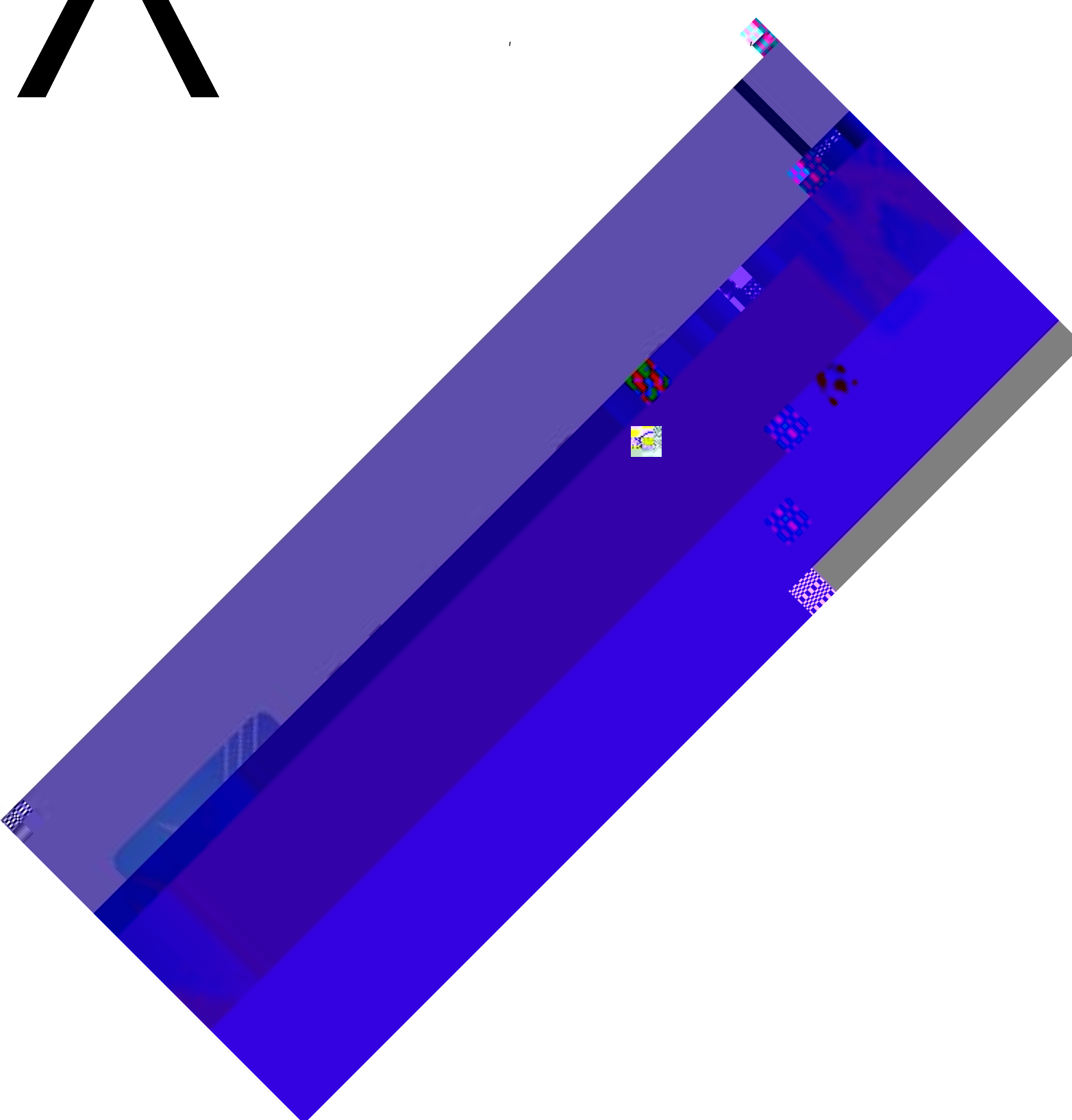
USB

U

220V

220v







●

Uab

Ua

Ub



s

V!

IA IN

ω

A COM

A

8A

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ω

0.1A

# 1



赫兹电力  
HERTZ POWER

# AMPAGE

【交流试验】					
相	幅值	步长	相位	步长	
Va	100.00V	0.00V	0°	0°	
Vb	0.00V	0.00V	0°	0°	
Vc	0.00V	0.00V	0°	0°	
Ia	0.00A	0.10A	0°	0°	
Ib	0.00A	0.00A	0°	0°	
Ic	0.00A	0.00A	0°	0°	
频率			50.00	0.00	自动试验
动作时间			0.110s		

【交流试验】					
相	幅值	步长	相位	步长	
Va	100.00V	0.00V	0°	0°	
Vb	0.00V	0.00V	0°	0°	

赫兹电力  
HERTZ POWER



"

" " " "

Ua Ub Uc Ia Ib Ic

" " " " " " " "

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" " " "

" " " "

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- 

Ua Ub Uc Ia Ib Ic

Ua Ub Uab



“ ”

“ ” “ ”

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“ ” “ ”

“ ” “ ”


“ ”

●

Ua Uc



f/ t



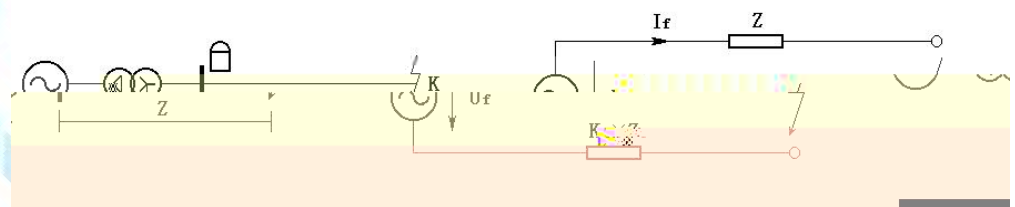
【同期、低周试验】

相	幅值	初相	频率
Va	57.1V	0°	变频率
Vb	57.7V	0°	
Vc	57.7V	0°	
Ia	1A	0°	变频率

【同期、低周试验】

相	幅值	初相	频率
Va	57.1V	0°	变频率
Vb	57.7V	0°	
Vc	57.7V	0°	
Ia	1A	0°	变频率







57.7V      0A      "      "      c

- A B C      R      c
- 



1

35kv

5A

A C

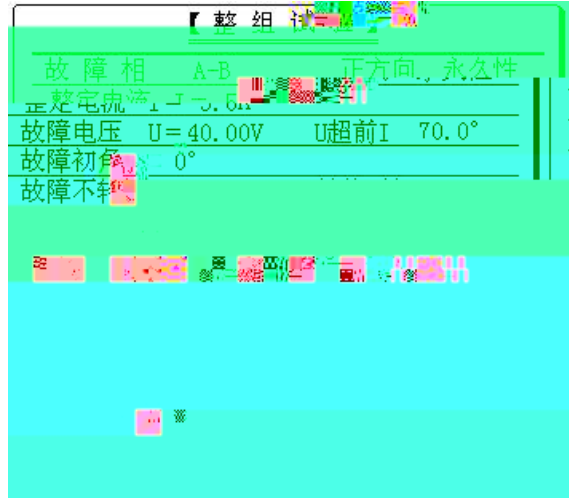
A

COM

40V

ABC

R







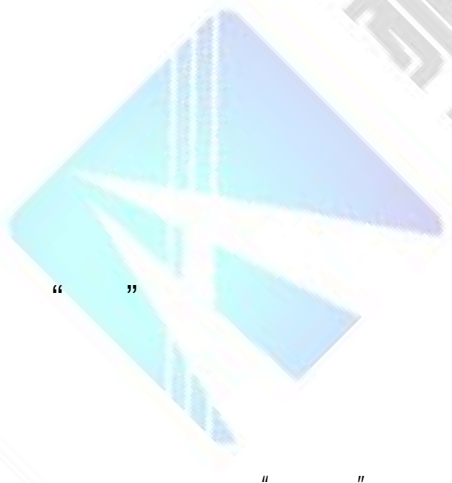
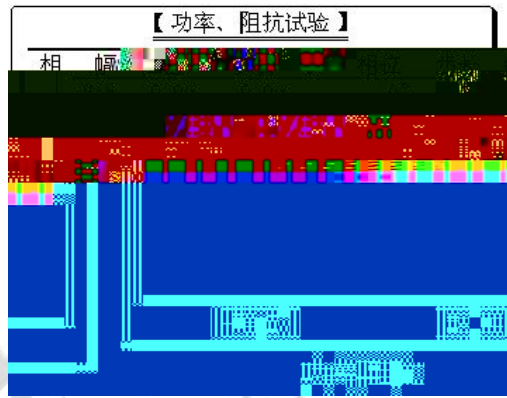
90°

3

57.7V

90°

57.7V



“ ”

“ ”

“ ” “ ”

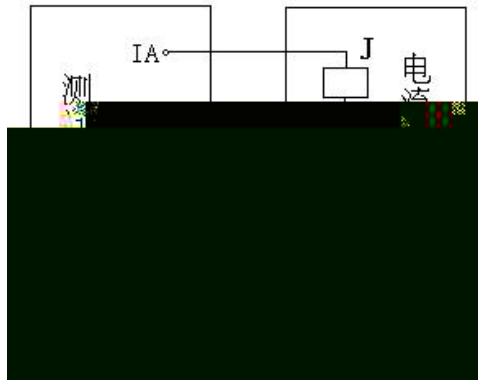
“ ” “ ”

,

“ ”



		UA	UB	UC	UN
IC	IN		UAB	100V	IC
	5A	IC			180°
	1°	1°			







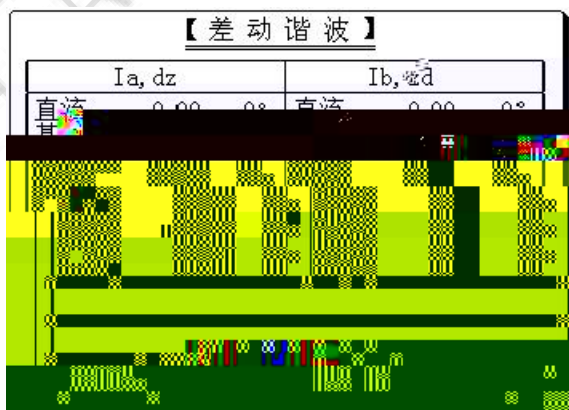
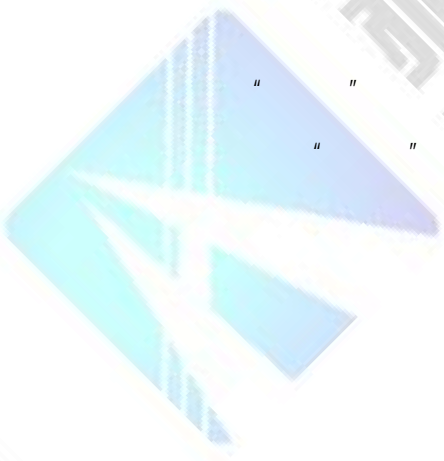


$I_a$   $I_b$   $I_{dz}$   
 $I_{zd}$   
 $I_{dz}$   $I_{zd}$  6  $I_{dz}$   $I_{zd}$



HERTZ POWER

“ ” “ ”  
“ ” “ ” “ ”

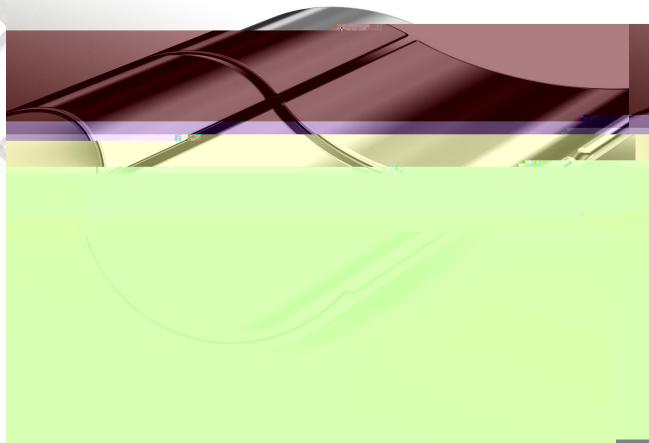








赫兹电力  
HERTZ POWER



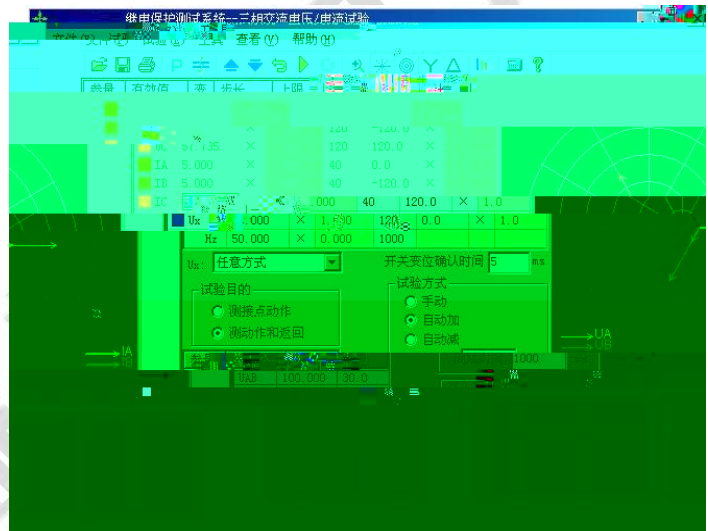
V2.0

“ ” “ ” “ ” “ ” “ ” “ ” “ ”

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Evtn-U

“ ” “ ” “ ” “ ” “ ” “ ” “ ” “ ”

Evtn-T

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Evtn-Z

GUE

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027-83267669





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赫兹电力  
HERTZ POWER



" "

V

A

-180~360°

" -181°"

" 179°"

120V

Ua

120V 0° Ub

120V 180°

Uab

240V

40A

" "

" "

" "

" "

0.001

0.1

" "

" "



Ux



+3U<sub>o</sub>

-3U<sub>o</sub>

+√5 × 3U<sub>o</sub>

-√5 × 3U<sub>o</sub>

U<sub>x</sub>

U<sub>A</sub>

U<sub>B</sub>

U<sub>C</sub>

3U<sub>o</sub>

U<sub>A</sub> U<sub>B</sub> U<sub>C</sub>



U<sub>A</sub>

U<sub>x</sub>

# α u | P' @ | Ä



"

"

U<sub>x</sub>

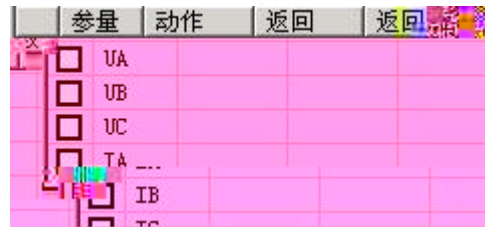


赫兹电力  
HERTZ POWER



◆ ○  
" "  
20ms 5ms

◆ ○  
" " " "



◆ ○  
" " " "



0A

57.735V

" Z/ " " R/X"



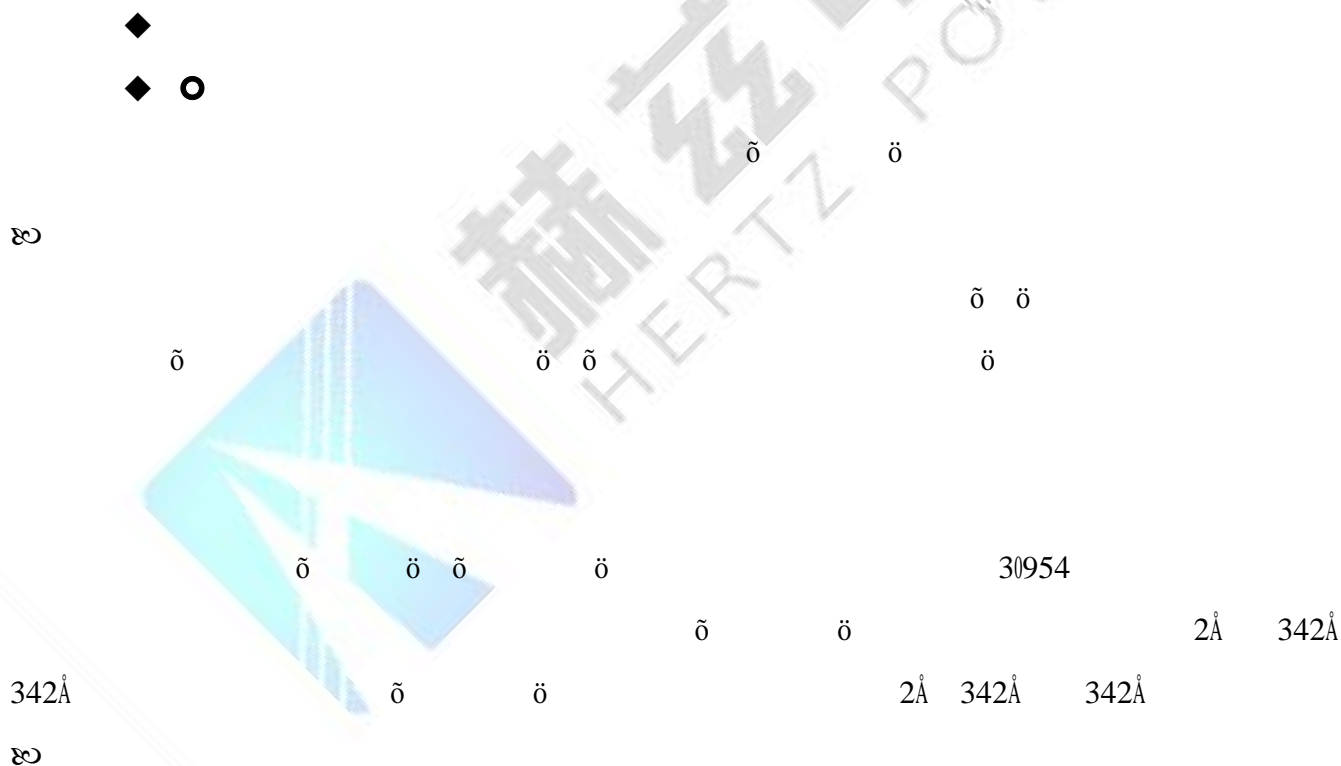
赫兹电力  
HERTZ POWER

产品宗旨：技术领先，质量可靠，  
服务宗旨：快速响，  
易用  
满意  
过期



赫兹电力  
HERTZ POWER

“ U ”



$2\text{\AA}$        $\delta\text{WCD}$     $\text{KE}\delta$     $\delta\text{WDE}$     $\text{KC}\delta$     $\delta\text{WEC}$     $\text{KD}\delta$        $2\text{\AA}$        $\delta\text{WCD}$   
 $\text{KC}\delta$     $\delta\text{WDE}$     $\text{KD}\delta$     $\delta\text{WEC}$     $\text{KE}\delta$



;2Å 82X ö ö  
2Å WD?2X 2Å WCD 82X 2Å

KE WCD 2Å  
67Å 67Å 357Å



öVX

ö

790957X

2C

ö ö  
ö ö

ö ö









" "



110V 220V

110V 220V



赫兹电力  
HERTZ POWER



UA=110V UB= 110V

UA UB

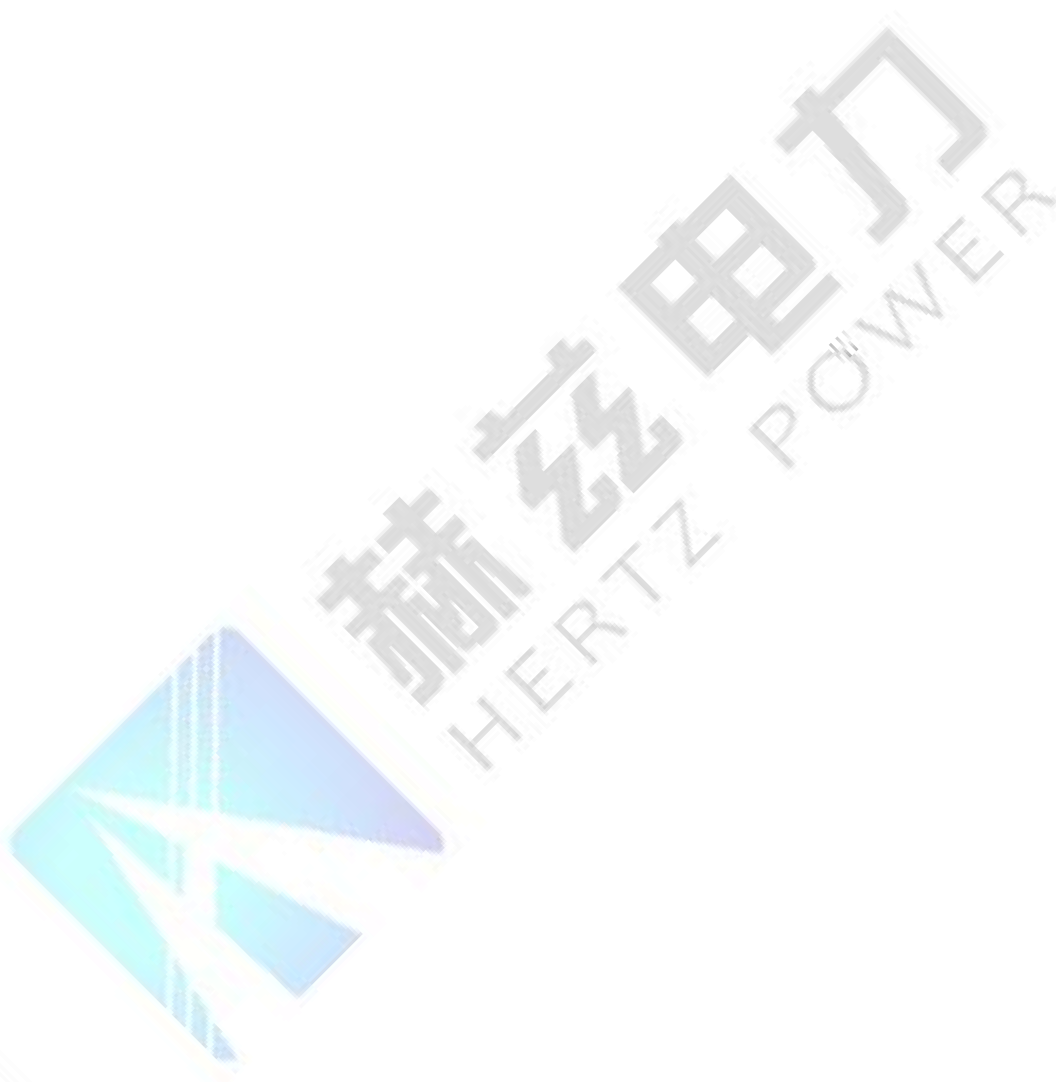
225



220V

" "

UA UB



■

" " 4 3 " - "

9

●

9

4

3

●

● Ux

●

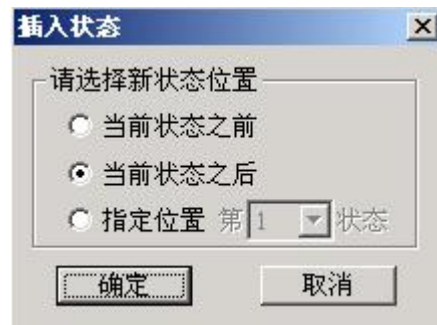


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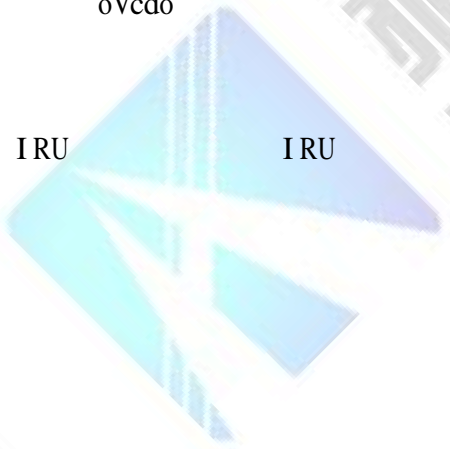
ö ö ö ö ö  
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öVcdö

( GPS IRU IRU 3 È Î ) é J @ F % 0 1 2 7 YHA27°

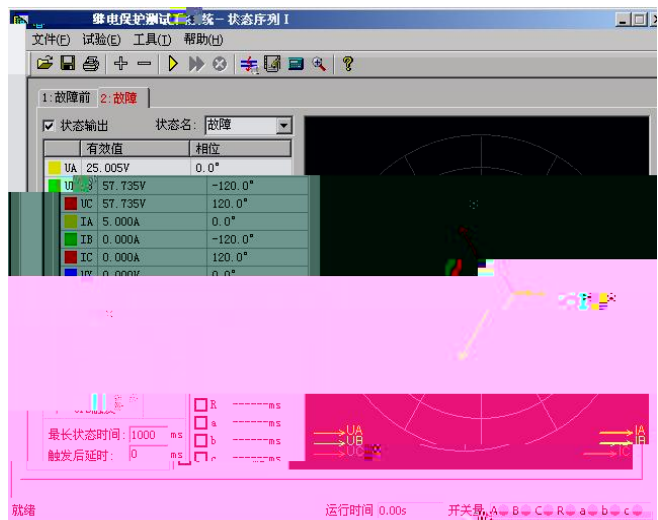
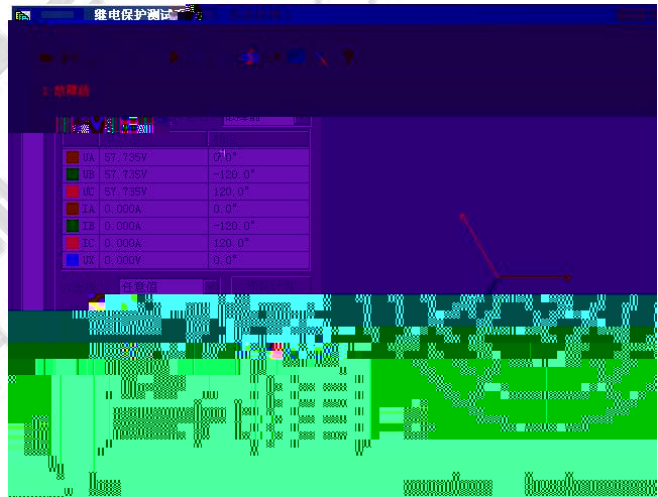
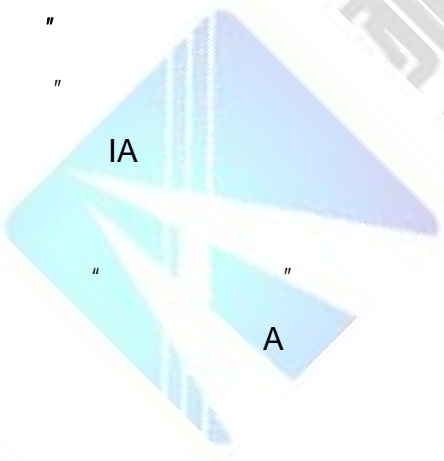




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R

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" " "



赫兹电力  
HERTZ POWER

■

“ ”

● UA UB UC IA IB IC

2 20

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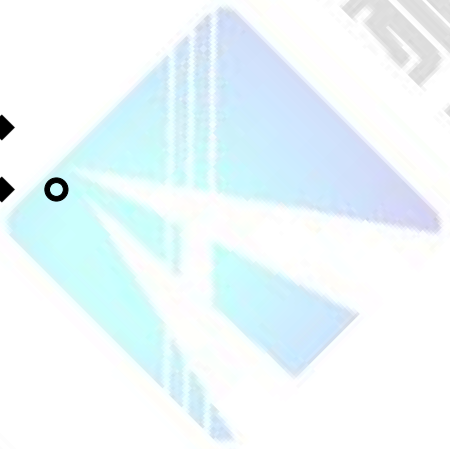
●

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赫兹电力  
HERTZ POWER

0



刷新

清零

" "

" "

4φ42

C

" 2° " D

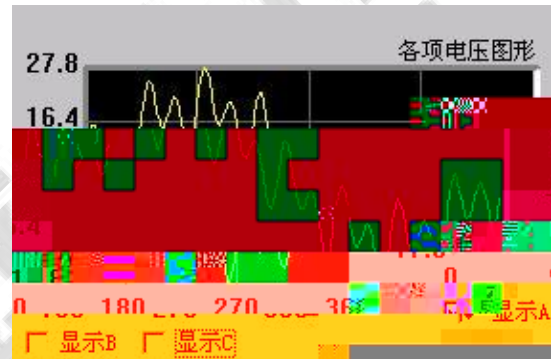
" 342° "

E

" 342° "

3

A



-160~160V

0~120V

-10~10A

0~40A

120V 40A/30A

120V

40A/30A

2

A

20

"

"

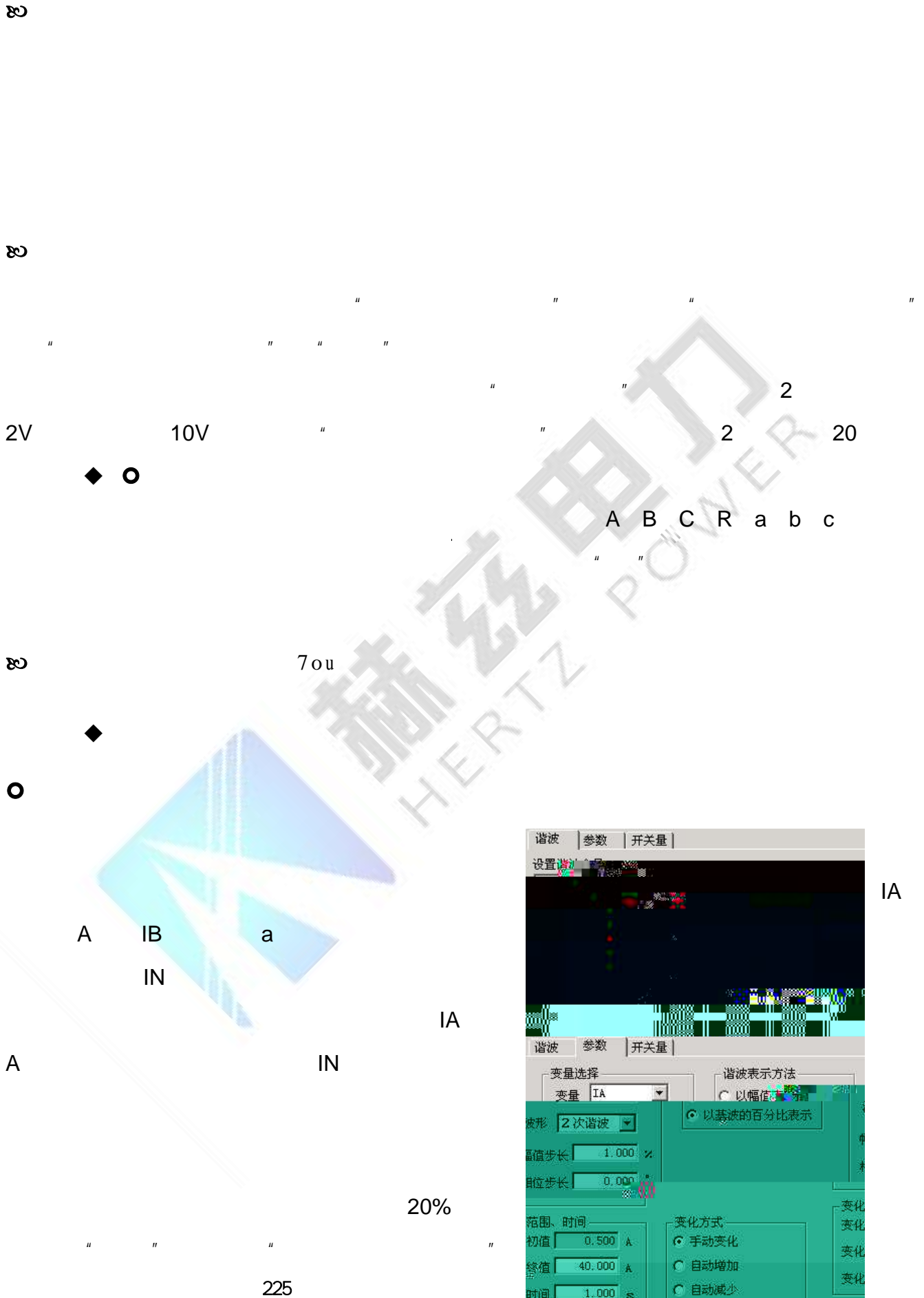
A

V

"

"

谐波	参数	开关量
变量选择		
变量	<input type="text" value="IA"/>	
波形	<input type="text" value="2次谐波"/>	
幅值步长	<input type="text" value="1.000"/> V	
相位步长	<input type="text" value="0.000"/> °	
谐波表示方法		
<input checked="" type="radio"/> 以幅值表示		
<input type="radio"/> 以基波的百分比表示		
变化范围、时间		
变化初值	<input type="text" value="0.000"/> V	
变化终值	<input type="text" value="120.000"/> V	
变化时间	<input type="text" value="1.000"/> s	
变化方式		
<input checked="" type="radio"/> 手动变化		
<input type="radio"/> 自动增加		
<input type="radio"/> 自动减少		



谐波 参数 开关量

设置谐波

谐波表示方法

变量选择 谐波表示方法

变量 IA

以幅值表示

以基波的百分比表示

波形 2次谐波

幅值步长 1.000%

相位步长 0.000°

范围、时间

初值 0.500 A

终值 40.000 A

时间 1.000 s

变化方式

手动变化

自动增加

自动减少



赫兹电力

HERTZ POWER

产品宗旨：技术领先，质量可靠，轻便易用

服务宗旨：快速响应，**客户**到满意，**超过期**

IA

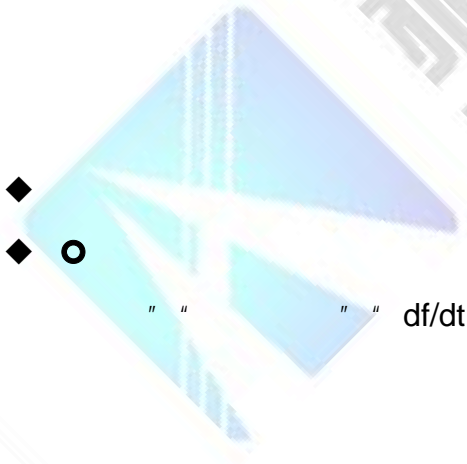
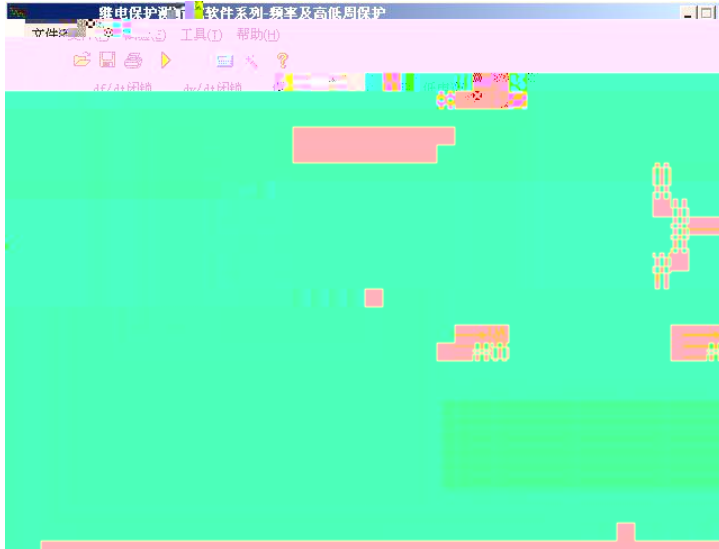


■

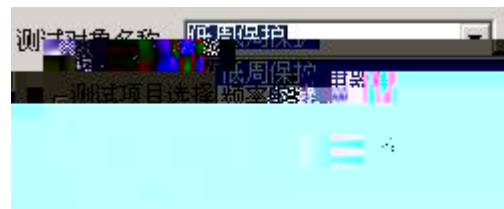
“ ”

●

●



“ ” “ ” “ ” df/dt “ ” dv/dt “ ” “ ” “ ”







赫兹  
HERTZ POWER

量可靠, 轻  
到满意



8

" df/dt "

df/dt

df/dt

df/dt

p i j o

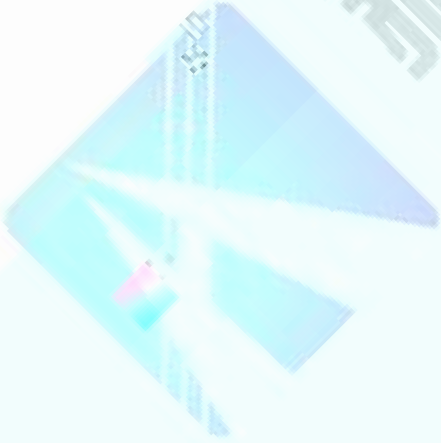
#h



赫兹  
HERTZ POWER

#Σ q

#Σ



赫兹电力  
HERTZ POWER

2

" "

" "

"

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0.05Hz

2

df/dt

2

" "

2

0.2



Hz"

" "

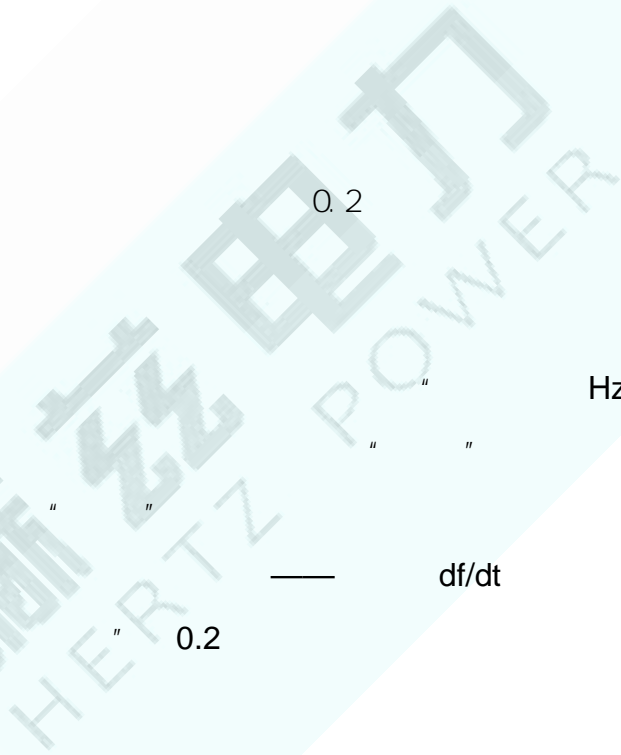
50Hz

df/dt

" — " "

" "

0.2






“ ”

“ ”



“ ”





赫兹电力  
HERTZ POWER

2

U I

90°

UAB

IC

0

U I

" " " "

" "

2

U0 I0 " " U2 I2 "

U0 I0

U2 I2

2

" "

U2 I2

U2 I2



U I

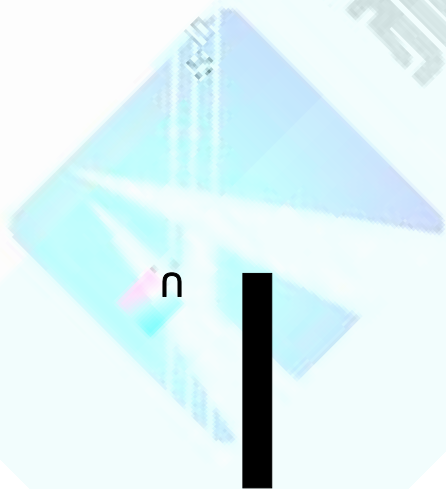


Ö

◆ ○

U I

赫兹电力  
HERTZ POWER

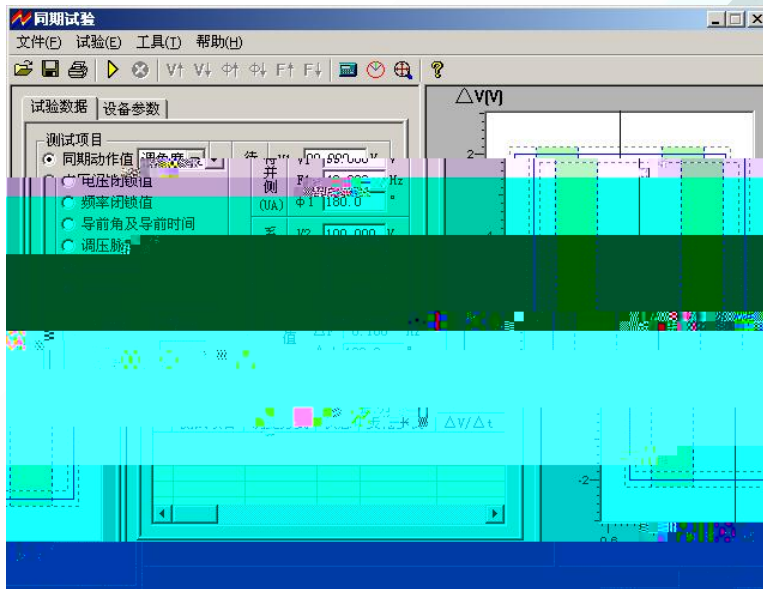


F 2018



赫兹电力  
HERTZ POWER

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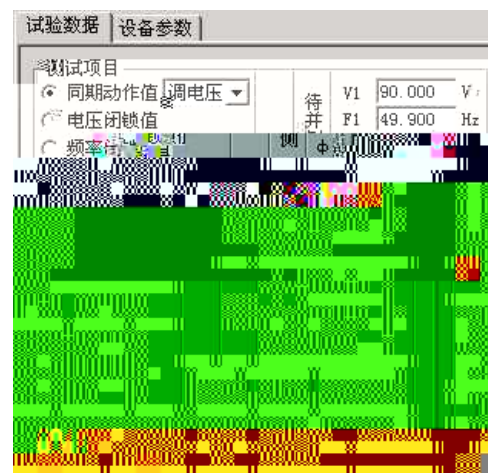


- ◆
- ◆ ○

2

" " " " "

"



“ ” V1 90V F1 1  
49.9Hz 50Hz  
0° “ ” “ ”



2

2

赫兹电力  
HERTZ POWER



2

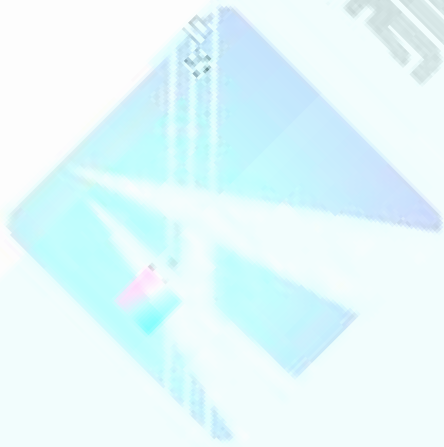
$$= t / Tw \cdot 360^\circ$$

$$Tw = 1 / (f1 - f2)$$

f1

t

f2



赫兹电力  
HERTZ POWER

赫兹电力  
HERTZ POWER



赫兹电力  
HERTZ POWER

产品宗旨：技术领先，质量可靠，使用便易用

服务宗旨：快速响应，货到满，超过期

é

2

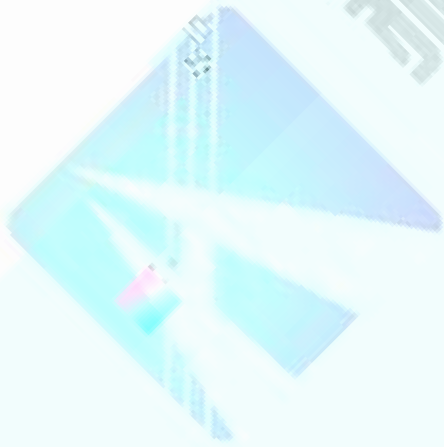
2

2

20

5ms

赫兹电力  
HERTZ POWER





U1

UA

U2

UC

UN

UN

" " " " " " " " "

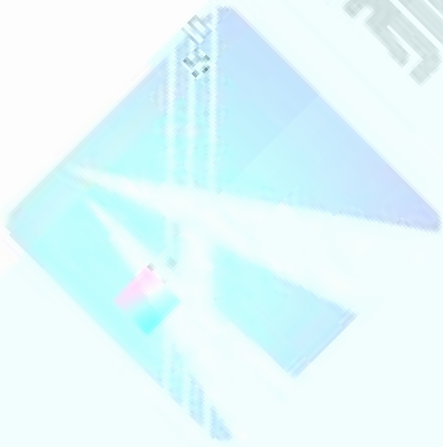
A a B

b

R



赫兹电力  
HERTZ POWER



赫兹电力  
HERTZ POWER



Mq ? \* \21 \3 6 3 +15

\*\3+

\*\2+

Mq

Mqt Mqz

Mqt ? \* T21 T3 6 3 +15

Mqz ? \* Z21 Z3 6 3

\* ;23 + Mq

\*\3+ \*\2+

RU3?RU2

Mq

Mqt Mqz Mq

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赫兹电力  
HERTZ POWER



赫兹电力  
HERTZ POWER

赫兹电力  
HERTZ POWER

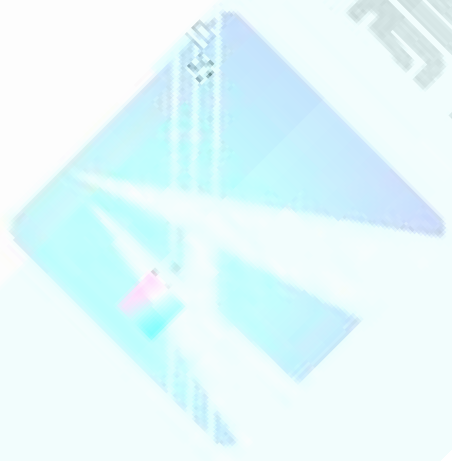


赫兹电力  
HERTZ POWER

产品宗旨: 领先 量可  
服务宗旨: 快速响应, 到满

# 服务

赫兹电力  
HERTZ POWER



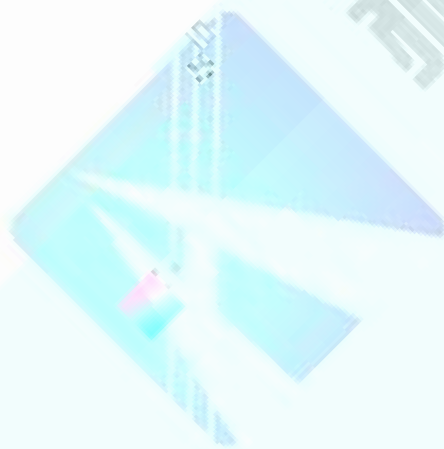


赫兹电力  
HERTZ POWER



" " " " "

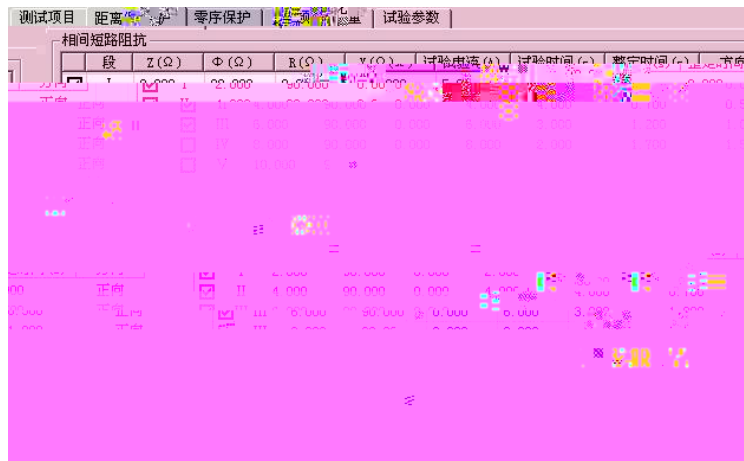
2



赫兹电力  
HERTZ POWER

KL Kr/Kx Z0/Z1

“ ”



“ ”

∞

1 “ ”

2

Z- R-X

3

20 40V

57V

20 30V

57V

4

“ ”

I 0s

II

0.5s

III 1.0s

I II III

0.2s 0.7s 1.2s

0.95

1.05

0.95

1.05

5

“ ”

6

“ ”

“ ” “ ” “ ” “ ”

7

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0.8

0.95

1.05

1.2



赫兹电力  
HERTZ POWER



“ ”

“ ”

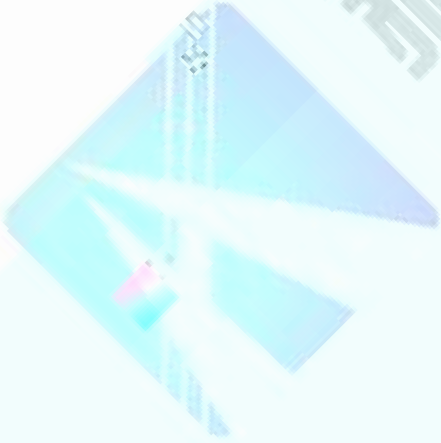


赫兹电力  
HERTZ POWER

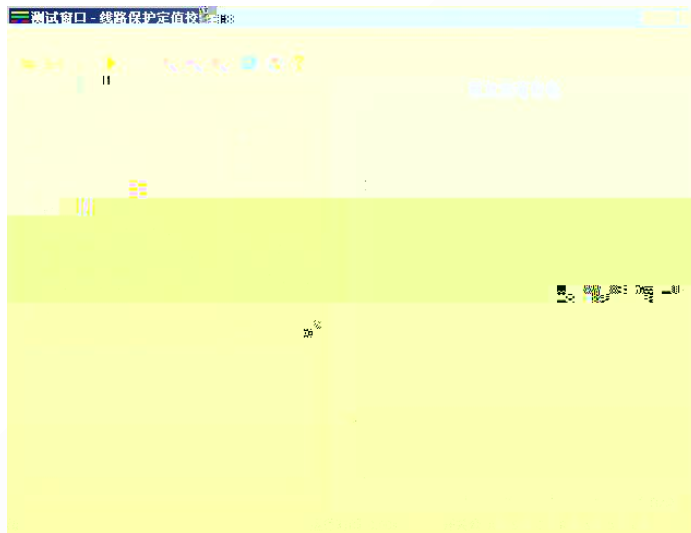
AC BC  
C C  
A B C A C

0.2s



  
**赫兹电力**  
HERTZ POWER

z/t



" R-X" " Z-T"

" KL" " Kr Kx" " Z0/Z1"

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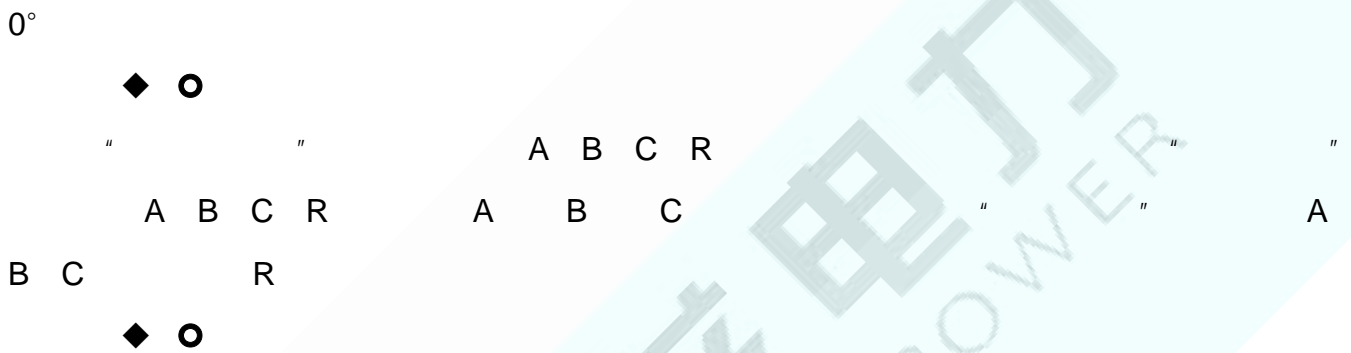
PT

PT

"

PT

100V



阻抗定值校验

段	阻抗Z(Ω)	阻抗R(Ω)	阻抗X(Ω)	试验电流(A)	试验时间(S)	整定时间(S)	方向
I	2.000	0.000	2.000	5.000	0.500	0.500	正向
II	4.000	0.000	4.000	0.700	0.500	0.500	正向
III	6.000	0.000	3.000	2.200	2.000	2.000	正向
IV	8.000	0.000	2.000	1.700	1.500	1.500	正向

R X

R X

0.95 1.05 0.95

0.8 1.2

= x

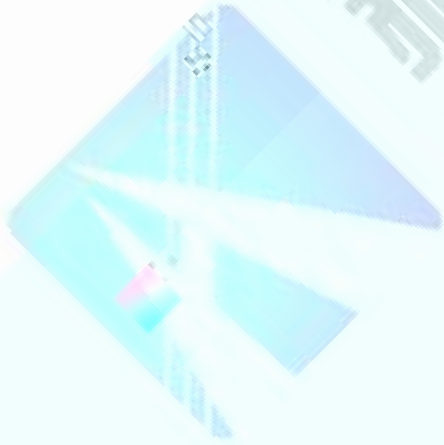


赫兹电力  
HERTZ POWER

产品宗旨：技术领先，质量可靠，轻便易用

服务宗旨：快速响应，客户满意，超过期望

赫兹电力  
HERTZ POWER





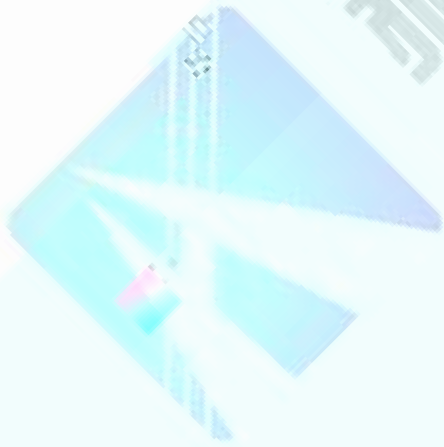
赫兹电力  
HERTZ POWER

产品... 技术领先, 质量可靠, 轻便易用  
服务宗旨: ... 响应, ... 到满意, 超过期...

# HS

" " " "

赫兹电力  
HERTZ POWER



0.95 1.05



M

0.9 1.1

M=0.9

M=1.1

M=1.2

10 20A



**工频变化量阻抗元件**

整定阻抗	3.000	Ω
短路阻抗	78.7	Ω
故障类型	A相接地	
短路电流	5.000	A
整定动作时间	0.500	S
最大故障时间	0.700	S
零序补偿系数	0.667	

M= 0.900      M= 1.100

正向      反向

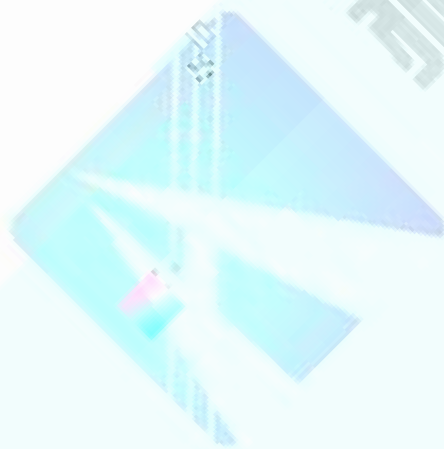


0.2s

0.2s

0.2s

3 s



赫兹电力  
HERTZ POWER

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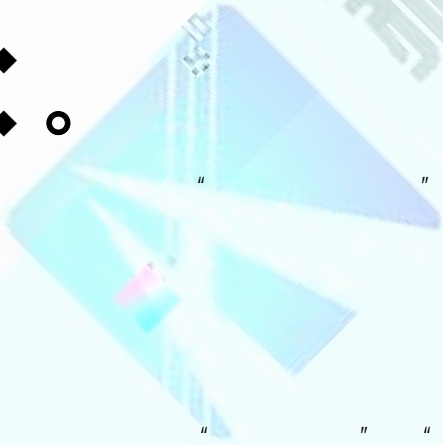
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赫兹电力  
HERTZ POWER





赫兹电力  
HERTZ POWER

80%



" "

" "

" R-X "

" "

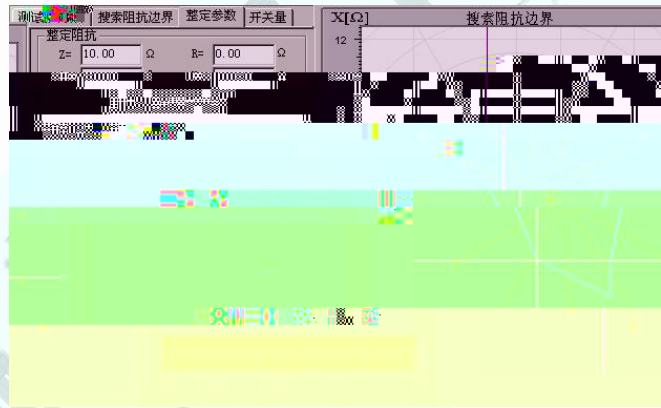
" Z- "

1

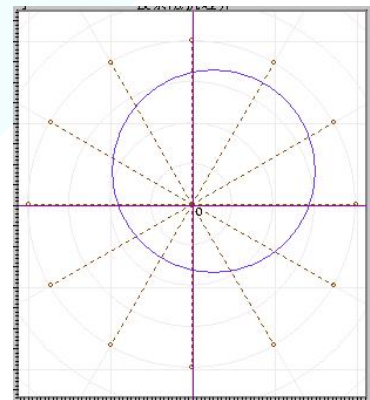
R1 X1

0 0

" "



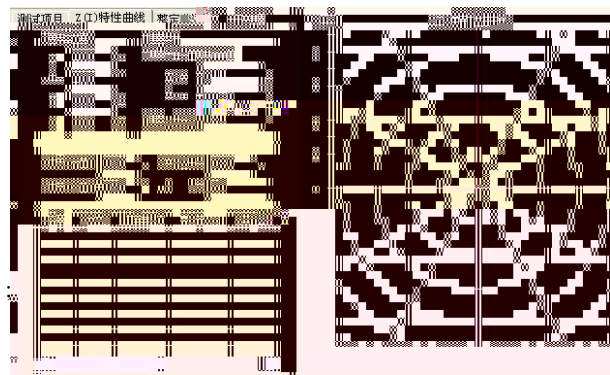
R X



" "

" Z I "

" "



" Z I "

" "

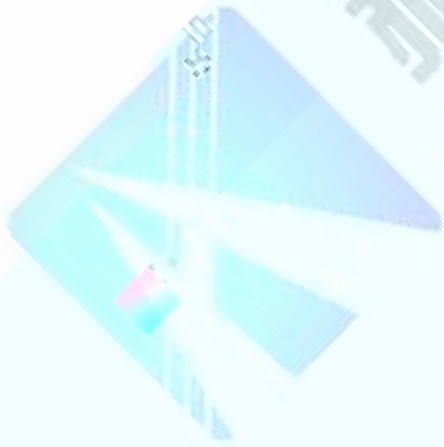
" "

0

" Z V "

" " Z I "

赫兹电力  
HERTZ POWER



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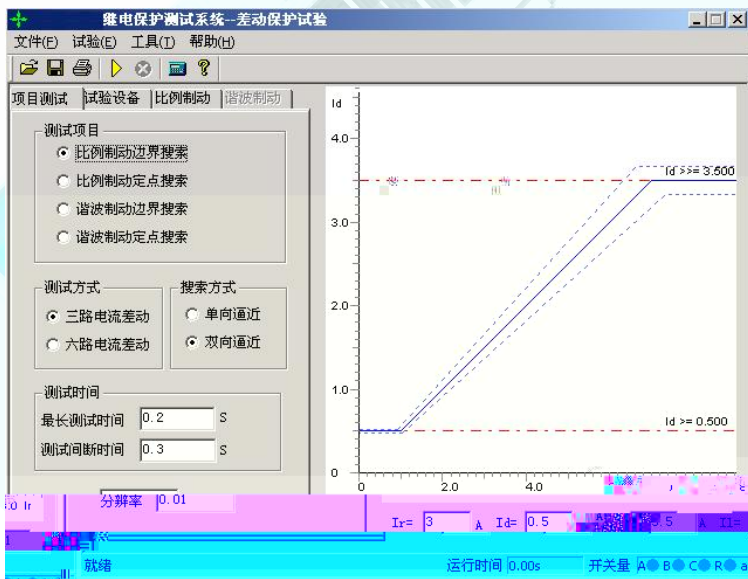
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3





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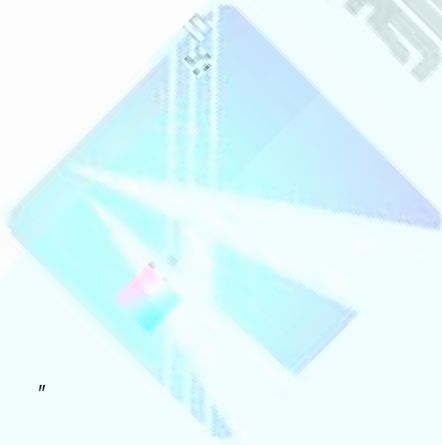
3



3

" " "

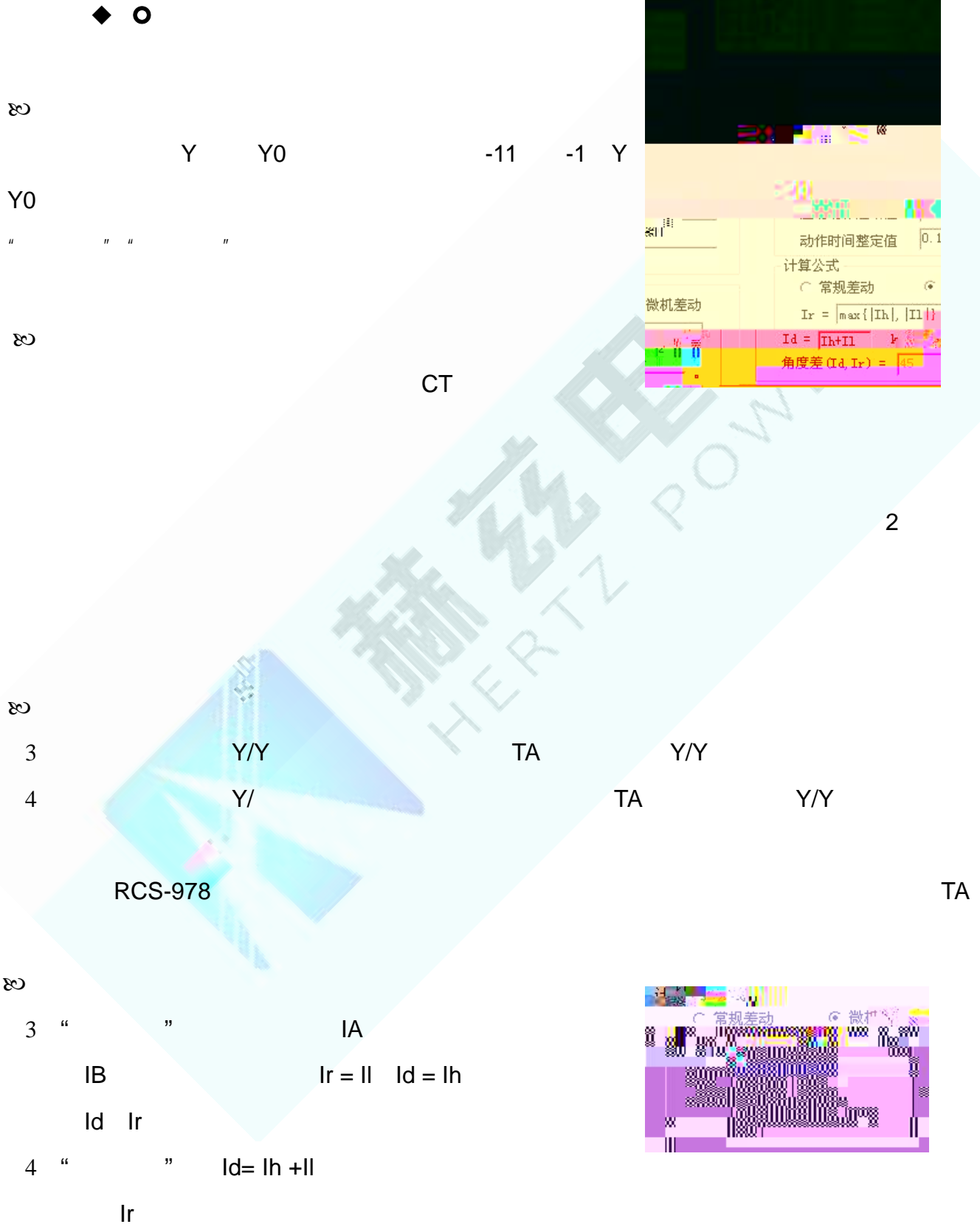
赫兹电力  
HERTZ POWER



" "

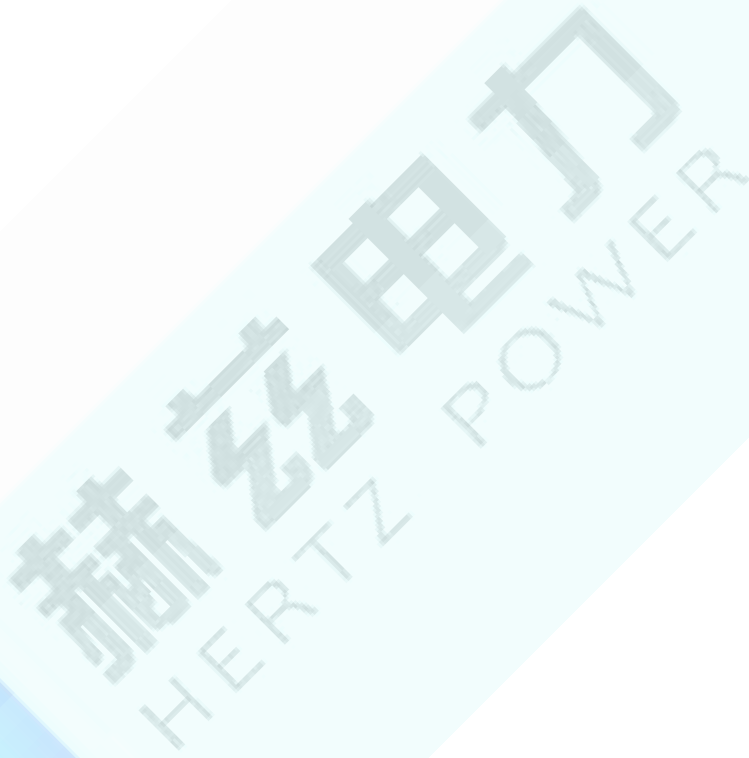
" " "

3





2



赫兹电力  
HERTZ POWER

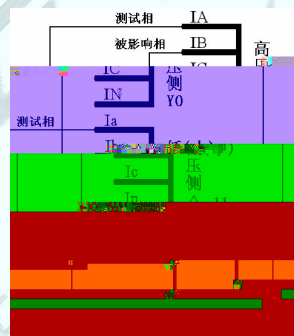
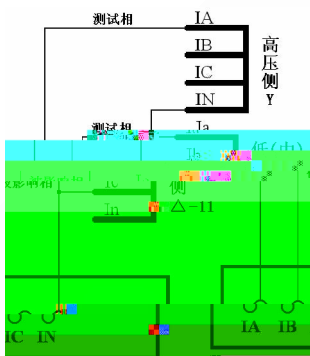
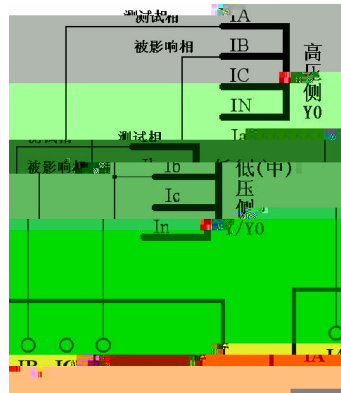
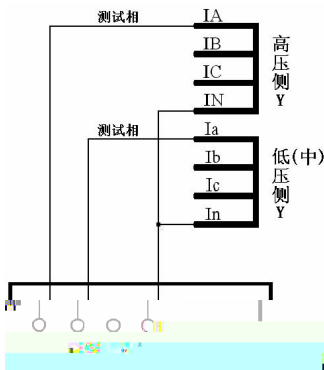


赫兹电力  
HERTZ POWER

产品宗旨：技术领先，质量可靠，轻便易用

服务宗旨：快速响应，随叫随到，超过期望

赫兹电力  
HERTZ POWER



Y

$$I_{A0} = I_A - I_B \quad I_{B0} = I_B - I_C \quad I_{C0} = I_C - I_A$$

$$I_{a0} = I_a - I_c \quad I_{b0} = I_b - I_a \quad I_{c0} = I_c - I_b$$

Y0, Y



产品宗旨：技术领先，质量可靠，轻便易用  
服务宗旨：快速响应，客户满意，超过期望



赫兹电力  
HERTZ POWER

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ND ND  
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 3 3 40A  
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 2A A  
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Kg3?Up1 30954 W3p EV3  
 Kg4?Up1 30954 W4p EV4

Kg3 Kg4 ô ô K KK  
 Up ô ô  
 W3p W4p ô ô K KK  
 EV3 EV4 ô ô K KK EV

Kg3 Kg4 30954  
 Kg3 Kg3?Up1 30954 W3p EV3  
 30954

[1[1 /33 M3 M4 M5

M3?3130954?20799

M4?W4p EV4l 30954 W3p EV3

M4?W5p EV5l W3p EV3

3

M3?3

M4?W4p EV4l W3p EV3

M4?30954 W5p EV5l W3p EV3

M3?3

M4?Kg3lKg4

M4? Kg3lKg5

M3	M4	M5 ô ô	K	KK	KKK	
kg3	kg4	kg5 ô ô	K	KK	KKK	
W3p	W4p	W5p ô ô	K	KK	KKK	
EV3	EV4	EV5 ô ô	K	KK	KKK	EV

TEU/;9:

Mr j ?Md, K4p/ okpl K4p Md? okp K4p/ oczlK4p/ okp 6

K4p K4p/ okp

K4p/ ocz



CST-141B -200B

[1 /33 Kf ?K3 -K4 Kt ?K3/K4-14

M3?3 M4?Mrn

[1 [1 /33 Kf ?K3 -K4 -K5 Kt ?Ocz}K3 K4 K5;j

M3?3 M4?Mr o M5?Mrn

K3 K4 K5 ô ô

Mr o Mrn ô ô



PST-641

Y/ -11

225

027-83267669

$Kf? \cdot K3 - K4 \cdot Kt? \cdot K3 / K4 \cdot I4$

$M3?30954 \quad M4?Kg3Kg4$

$Kg3 \quad Kg4 \quad \hat{\delta} \quad \hat{\delta}$

⊕ PST-621/622 Y/Y/ -11-12

$Kf? \cdot K3 - K4 - K5 \cdot Kt? \cdot Ocz \cdot K3 \cdot K4 \cdot K5 \cdot j$

$K1=1.732 \quad K2=1.732 \quad U2n \quad CT2/ \quad U1n \quad CT1$

$K3= U3n \quad CT3/ \quad U1n \quad CT1$

⊕

$I_d = |I1 + I2 + I3| \quad I_r = \text{Max}\{|I1| \quad |I2| \quad |I3|\}$

$K1=1 \quad K2=U2n \quad CT2/ \quad U1n \quad CT1$

$K3= U3n \quad CT3/ \quad U1n \quad CT1$

⊕

$I_d = |I1 + I2 + I3| \quad I_r = ||I_d| - |I1| - |I2| - |I3||$

$K1=1.954 \quad M4?30954 \quad f57 \quad M5?f58$

⊕ RCS-9671 Y/ -11

$Kf? \cdot K3 - K4 \cdot Kt? \cdot K3 \quad \hat{\delta} \quad K4 \cdot I4$

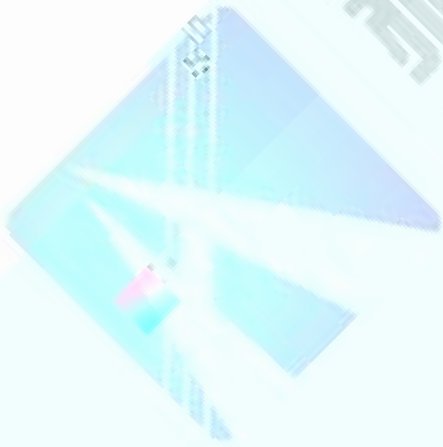
$M3?3 \quad M4?W4p \quad EV4l \quad W3p \quad EV3$

⊕ RCS-978 985 Y/ -11



产品宗旨：技术领先，质量可靠，轻便易用  
服务宗旨：快速响应，**客户**到满意，**超过期**

赫兹电力  
HERTZ POWER



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赫兹电力  
HERTZ POWER

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IA IB

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IA IB

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IA IB

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“ ”

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”20ms

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”20ms

“ ”

<input checked="" type="checkbox"/> 接点A	<input type="checkbox"/> 接点a
<input type="checkbox"/> 接点B	<input type="checkbox"/> 接点b
<input type="checkbox"/> 接点C	<input type="checkbox"/> 接点c
<input type="checkbox"/> 接点B	

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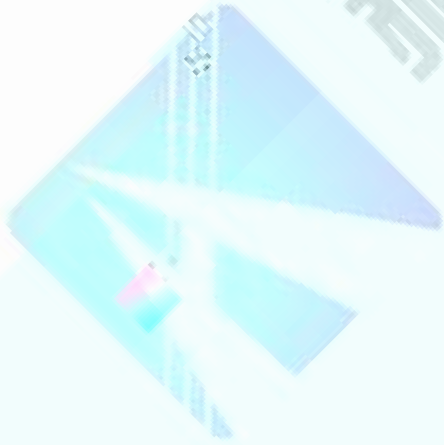
赫兹电力  
HERTZ POWER

赫兹电力  
HERTZ POWER

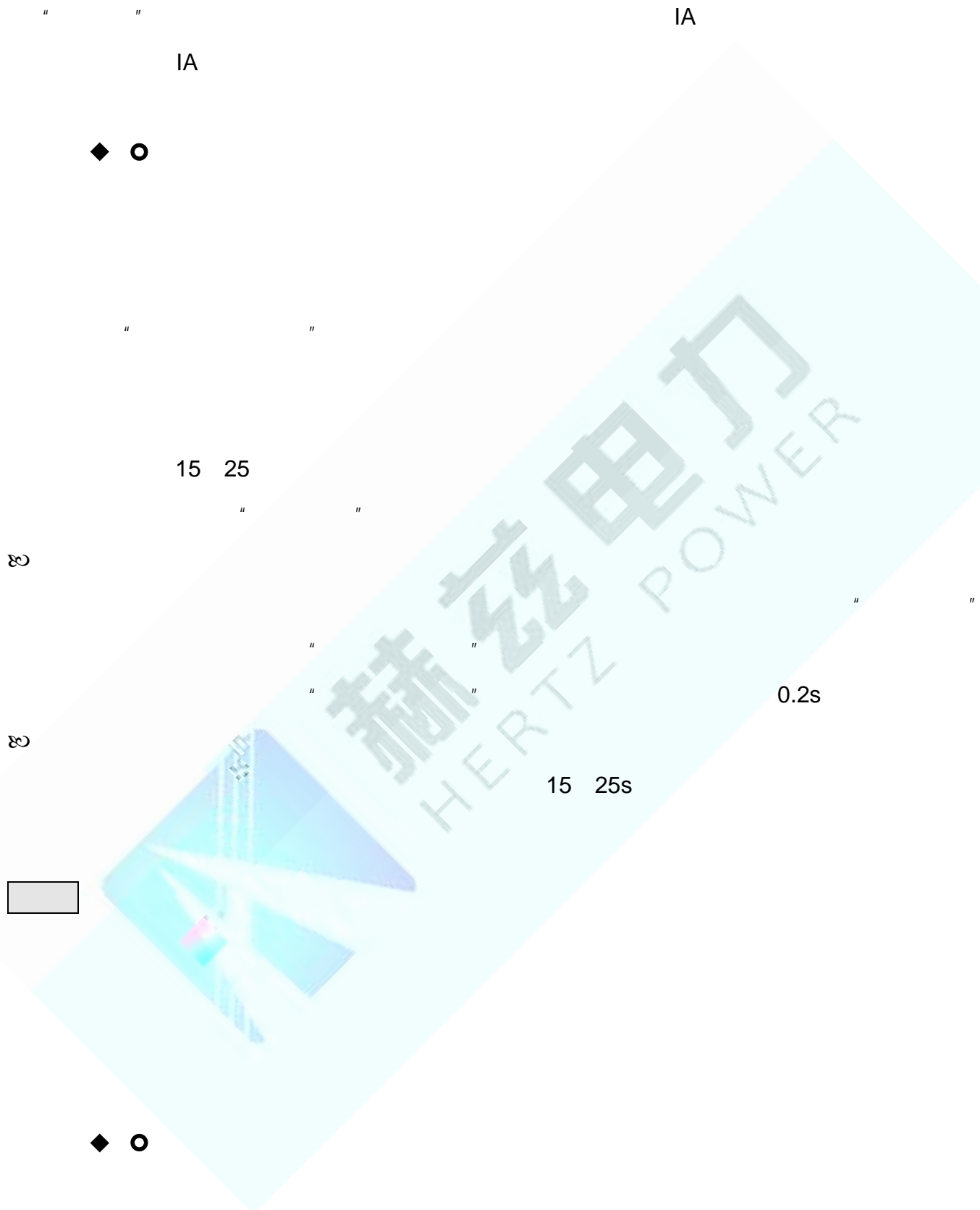
6 35KV

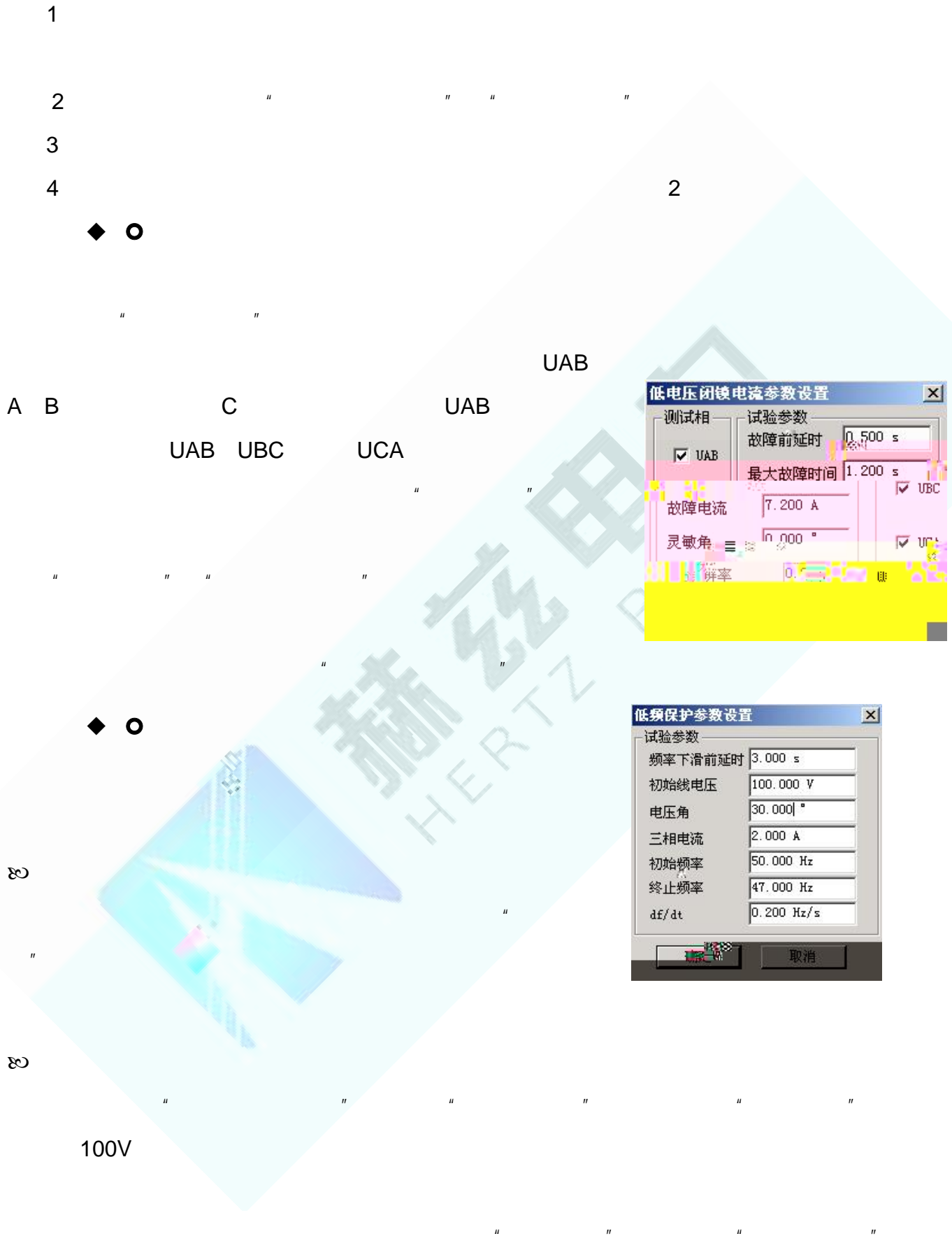
" "

赫兹电力  
HERTZ POWER



赫兹电力  
HERTZ POWER





∞

50Hz

0.5Hz

45Hz

∞

df/dt

0.1Hz"

0.01Hz /

0.2s"



df/dt

df/dt

5s

47Hz



"



45°

45°

45°



2

" " 0

0 " "

--- " " --- "

" --- " " " --- "

" " --- " "

2

90° A IA

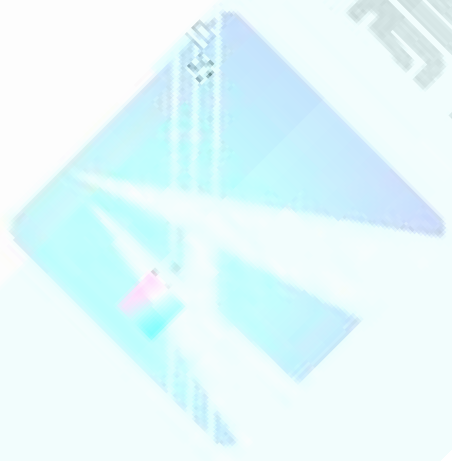
0 UB UC 0 IA

" " UBC " 90° " "

2

1° " "

赫兹电力  
HERTZ POWER



■

" "

RS232

COM1

COM1

COM1

USB

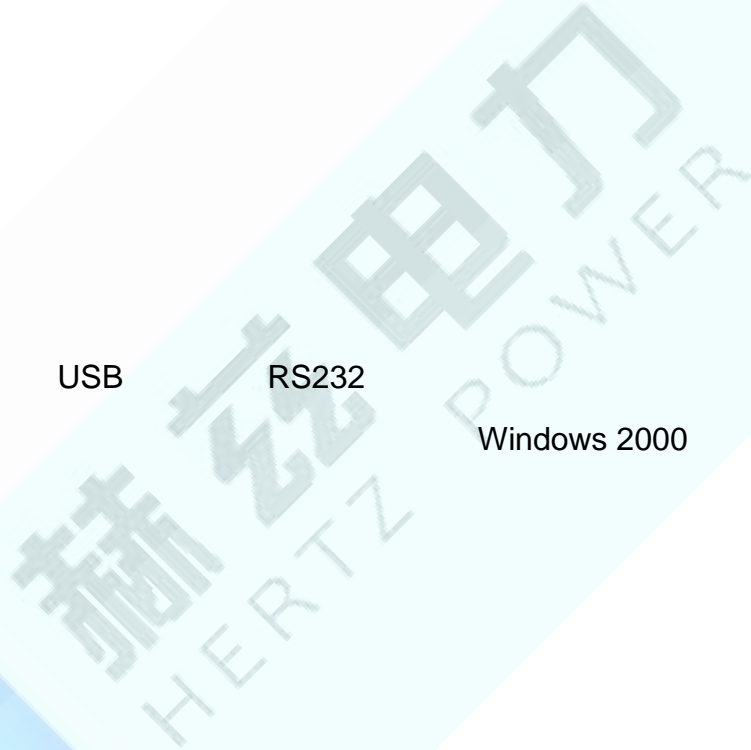
RS232

Windows 2000

" USB "

USB

∞ " USB "

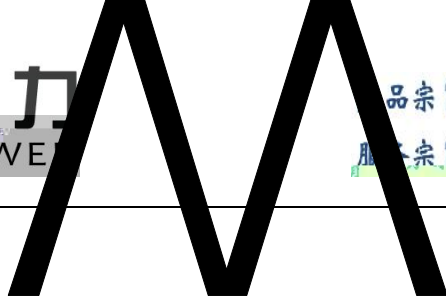


赫兹电力  
HERTZ POWER

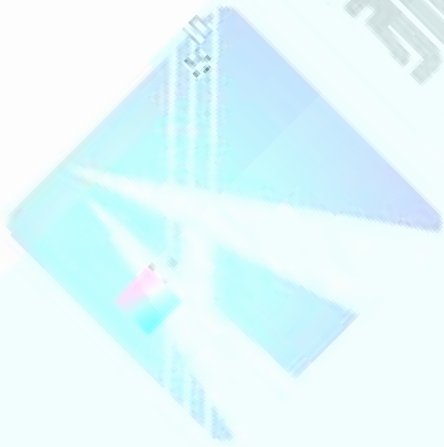


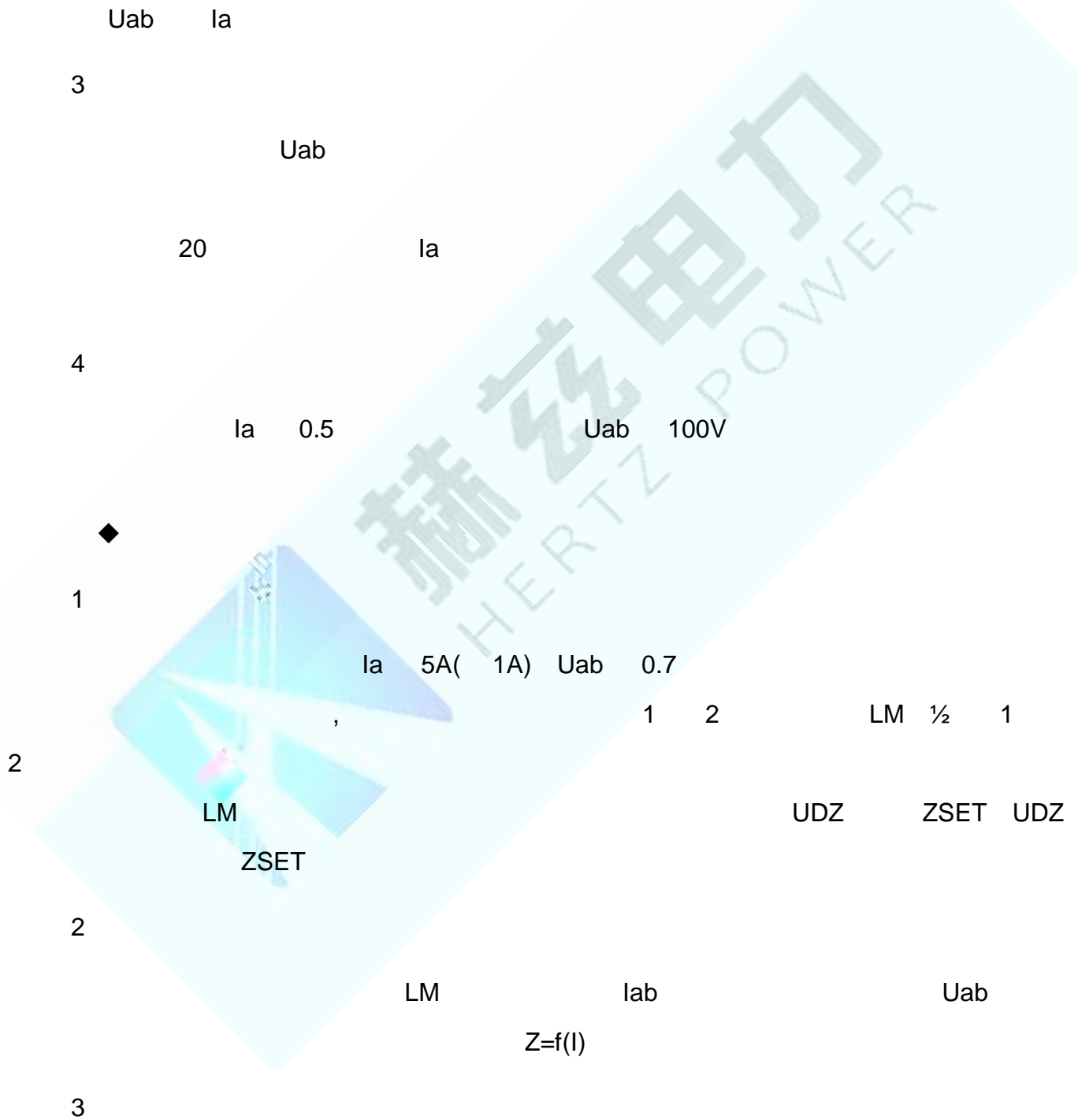
赫兹电力  
HERTZ POWER

产品宗旨：技术领先，质量可靠，轻便易用  
服务宗旨：快速响应，客户满意，超过期望



赫兹电力  
HERTZ POWER

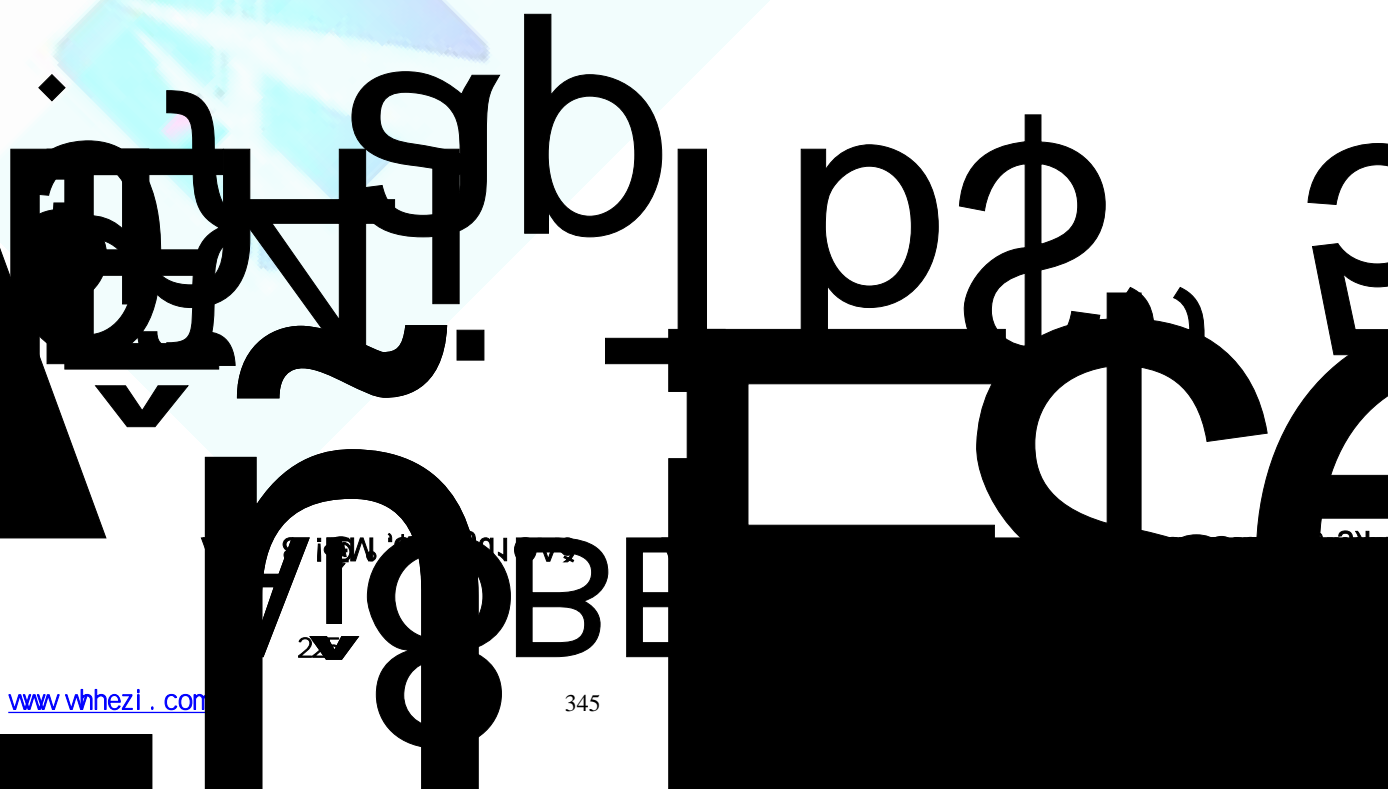




Uab

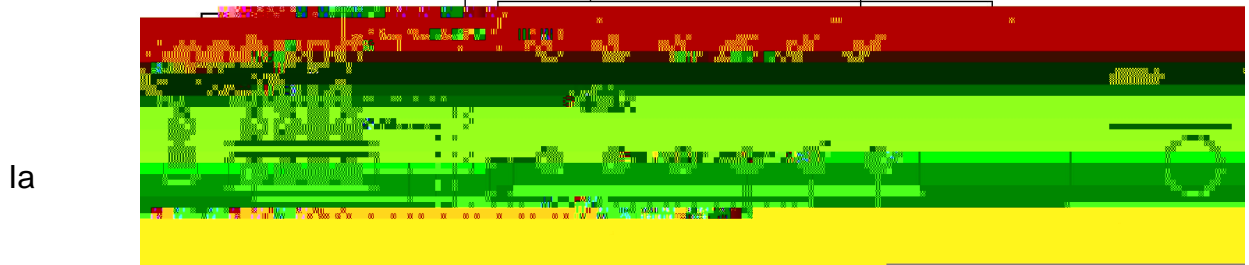


赫兹电力  
HERTZ POWER





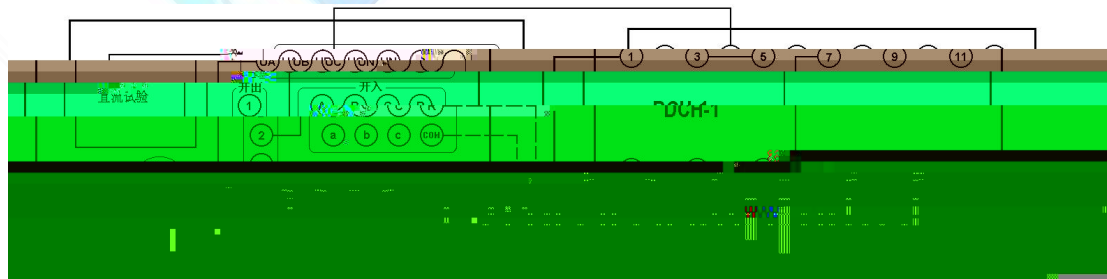
1 PC



Uab	220V	Ua	110V	Ub	110V	Uc	110V
"	"	"	220V				
15	25					Uc	110V
		Uc		110		7	

2

				IA			UAB	220V	UA
110V	UB	110V					"	"	"
220V		15	25						"
"	"			2	UB	2	7		-110V





IDZ





赫兹电力  
HERTZ POWER

产品宗旨：技术领先，质量可靠，轻便易用

服务宗旨：快速响应，**客户**到满意，**超过期**



赫兹电力  
HERTZ POWER

