1. INTERRUPTOR DE 220KV

Kawara Trade S.A.

AUTORIZACIÓN DEL FABRICANTE

Kawara Trade S.A.

FORMULARIO N° 2

AUTORIZACIÓN DEL FABRICANTE, REPRESENTANTE O DISTRIBUIDOR

Fecha: 30 de agosto de 2022

ID No.: 414153

A: Administración Nacional de Electricidad (ANDE)
POR CUANTO

Nosotros **Jiangsu Rugao High Voltage Electric Apparatus Co., Ltd.**, como fabricantes oficiales de **Interruptores, Seccionadores**, con fábricas ubicadas en **No.1, West Huimin Road, Rugao, Jiangsu,226572,China,** mediante el presente instrumento autorizamos a **KAWARA TRADE S.A.** con **dirección en Plaza Cagancha Nro. 1145 Piso 6, Montevideo – Uruguay** a presentar una oferta con el propósito de suministrar los siguientes bienes de fabricación nuestra, **Interruptores, Seccionadores**, y a posteriormente firmar el contrato.

Cuando existan servicios conexos como parte del contrato, reconocemos que **KAWARA TRADE S.A.** cuenta con la capacidad para llevarlos a cabo.

Asimismo, confirmamos haber el leído las Condiciones Contractuales y expresamos nuestra conformidad con lo allí establecido en materia de avales, garantías, plazos y cualquier otro aspecto.

Por este medio extendemos nuestro aval y plena garantía, conforme a las bases y condiciones, respecto a los bienes ofrecidos por la firma antes mencionada.

Firma:

Nombre: **WENBIN NING**

Cargo: **Responsable Legal de Sieyuan en Paraguay**

Debidamente autorizado para firmar esta Autorización en nombre de: **KAWARA TRADE S.A.**

Fechado en el día 25 de agosto de 2022.

Kawara Trade S.A.

TEST REPORT

Kawara Trade S.A.

CESI

ISMES IPH BERLIN FGH

TEST REPORT

APPROVED B5027720-1

Client	**JIANGSU RUGAO** HIGH VOLTAGE ELECTRIC APPARATUS CO., Ltd of P.R. CHINA
Address of the client	**No.1, Huimin West Road, Economic Development Zone, 226500 RUGAO CITY, China**
Manufacturer	JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO., Ltd of P.R. CHINA
Tested samples/items	**Enclosure type "mechanism box"** **Enclosure type "control box"**
Tests carried out	**Verification of the degree of protection IP55 cat. 2**
Standards/Specifications	**IEC 62271-100:2012 High voltage switchgear and controlgear** **IEC 60529:2001 Verification of the degree of protection of enclosures**

Tests date **from 11/11/2015** **to 13/11/2015**

The results reported in this document relate only to the tested samples/items.

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No. of pages	12	**No. of pages annexed**	--
Issue date	27/11/2016		
Prepared	T&C -CER- PRO - Andrea Padovani		
Verified	T&C- CER – PRO- Mirko Balaz		
Approved	T&C – CER– Roberto Piccin		

CESI S.p.A.
Testing & Certification Division
Business Area Certification
Il Responsabile
(Roberto Piccin)

Mod. RPRO v. 8

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1 SPECIFIC INFORMATION

Date of receipt of the test samples/items		October 19, 2015	
Test location		CESI - Milano - Via Rubattino 54	
Test laboratory		Laboratorio antideflagrante e minori AD – P172	
CESI testing team		X	Mr. Andrea Padovani
		X	Mr. Marco Tritto
		-	--
Test witnessed by		X	Mr. CHEN XIAOLEI
		X	Mr. FAN XINGCAI
		X	Mr. ZHENG YAOQING
Reference documents		Protocol reference	B3032907
		Operative procedure	IP laboratori description – n. CESI A4507800
Information about sampling		--	
	Sampling date	--	
	Carried out by	--	
Has the samples/items to be retained?		YES/NO	
	If YES until ../../..	--	

2 REVISION HISTORY

Revision No.	List of modifications
0	First issue
1	Modify "identification of the test object " Insert the number of the drawing and the number of identification.

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3 TEST OBJECT

3.1 Delivery note

Delivery note n. RG15008

4 CESI IDENTIFICATION

sample n.	description
1	**Enclosure type "mechanism box"**
2	**enclosure type "control box"**

5 TEST OBJECT CONDITION

X	New, as provided by Client
--	As after the test

6 IDENTIFICATION OF THE TEST OBJECT

The Manufacturer guarantees that the tested object is manufactured according to the submitted drawings.
CESI checked that these drawings adequately represent in shape and dimensions the essential details and the parts of the tested object.
These drawings identified by CESI and numbered B6021373 no.1 to 62 have been returned to the Client.

7 TESTS SEQUENCE

tests sequence	type of test	sample n°
1	verification of the degree of protection IP5X cat.2	1,2
2	verification of the degree of protection IPX5	1,2

8 MEASUREMENT OF UNCERTAINTIES

The measurement of uncertainties of physical dimension not related that influenced test result are the following:

pressure:	±2%
air flow meter:	±2%
water flow meter:	±3%
air pressure:	±2%
water pressure:	±1%
dimensions:	±2%
ambient temperature	±2°C
atmospheric pressure	±0,133 kPA
relative humidity	±2%

The uncertainties are estimated at the level of twice the standard deviation and have to be considered as maximum values in all the case.

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9 VERIFICATION OF THE DEGREE OF PROTECTION IP55 CAT. 2

9.1 Test for the verification of the degree of protection indicated by the first characteristic numeral "5" CAT. 2

9.1.1 Atmospheric conditions

date:	11/11/2015	time:	14.00

$T_{amb.}$ [°C]	17,2	$H_{rel.}$ [%]	69,0	P_{air} [hPa]	1008,1
CESI: 55790 - 55791 - 55789		CESI: 55790 - 55791 - 55789		CESI: 55790 - 055787	

9.1.2 Test for the verification of the degree of protection indicated by the first characteristic numeral "5"

Tests performed as follows:

- test for protection against access to hazardous parts (par. 12)
- test for protection against solid foreign objects (par. 13)

test for protection against									
	access to hazardous parts		solid foreign objects						
sample n°	rigid wire diameter [mm]	test force [N]	category 1	category 2	depression inside the object [mbar]	test object volume [m³]	extraction rate [m³/h]	duration [h]	chambre temperature [°C]
	CESI: 017259	CESI: 014680			CESI: 013147		CESI:	CESI: 017675	CESI: 05864 - 05866
1	1	1 ± 10%	--	X	--	--	--	8	18
2	1	1 ± 10%	--	X	--	--	--	8	18

9.1.3 Test results

The protection is in compliance with the acceptance criteria given in paragraph 12.3 and 13.3 of the IEC 60529, namely: no talcum powder observed inside test objects.	
notes	---------

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9.2 Test for the verification of the degree of protection indicated by the second characteristic numeral "5"

9.2.1 Atmospheric conditions

date:	13/11/2015	time:	15.30

$T_{amb.}$ [°C]	15,5	$H_{rel.}$ [%]	70,0	P_{air} [hPa]	1012,3
CESI: 55790 - 55791 - 55789		CESI: 55790 - 55791 - 55789		CESI: 55790 - 055787	

9.2.2 Test for the verification of the degree of protection indicated by the second characteristic numeral "5"

Tests performed as follow:

- Test for protection against water (par. 14.2.5 – nozzle 6,3 mm)

sample n°	Internal diameter of the nozzle [mm]		distance from nozzle to enclosure surface [m]	test duration (1 minute/m² off enclosure surface with 3 minute minimum) [minute]	Water pressure [kPa]	Delivery rate [liter/minute]
	[X] n. CESI:39160	[—] n. CESI:39163	CESI: 31593	CESI: 17675	CESI: 18962	CESI: 14828
	[X] n. CESI:39161	[—] n. CESI:39164				
1	6,3		2,5 ÷ 3,0	3	(1)	12,5 ± 5%
2	6,3		2,5 ÷ 3,0	3	(1)	12,5 ± 5%

9.2.3 Test results

The protection is in compliance with the acceptance criteria given in paragraph 14.3 of the IEC 60529, namely: no water observed inside test objects.	
notes	----------

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10 PHOTOGRAPHS OF THE TESTED OBJECTS

Foto n. 1

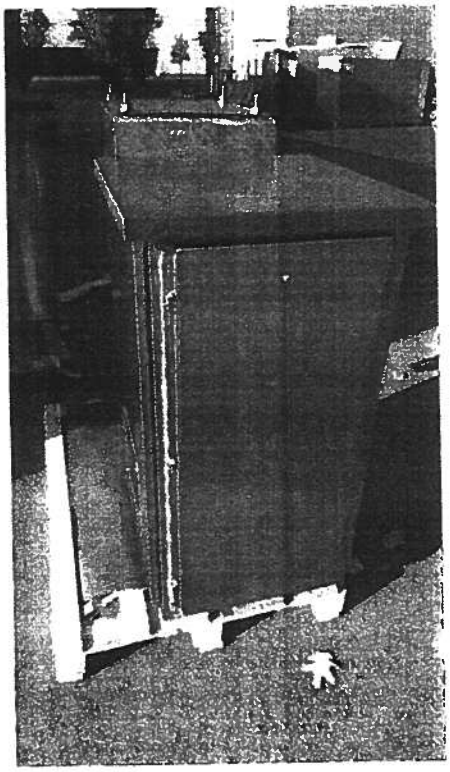

Foto n. 2

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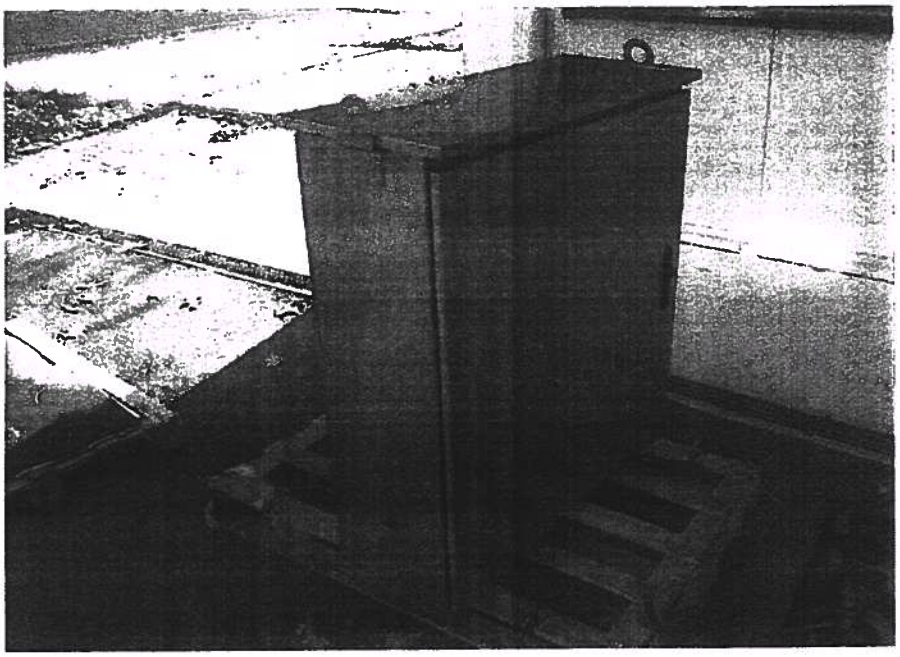

Foto n. 3

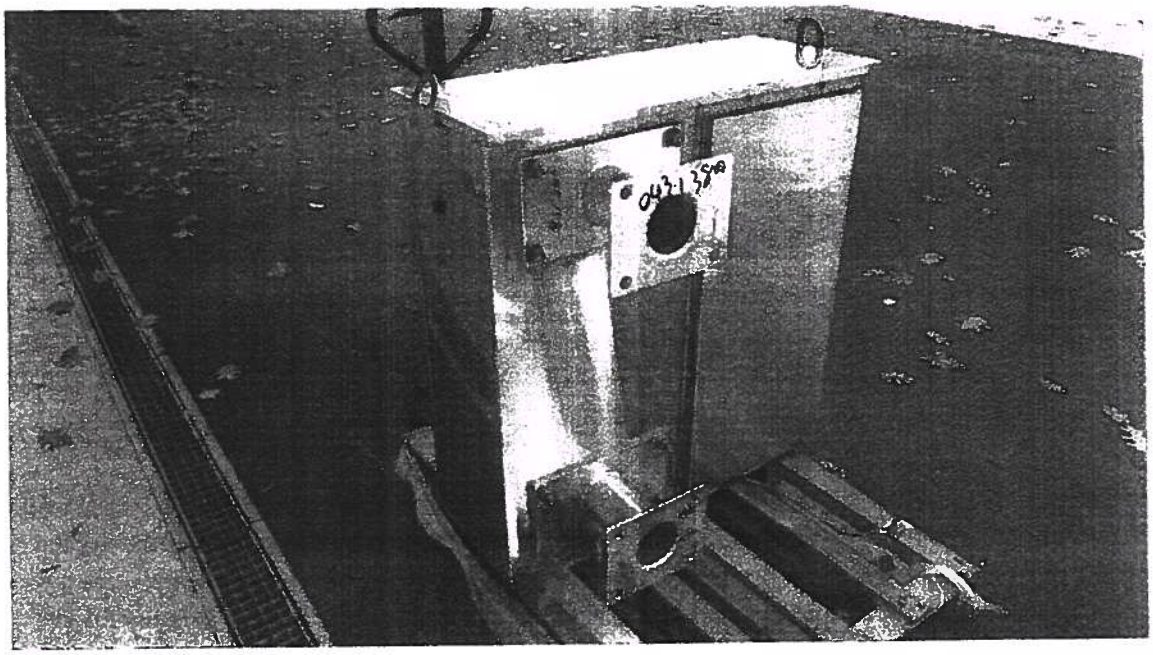

Foto n. 4

Kawara Trade S.A.

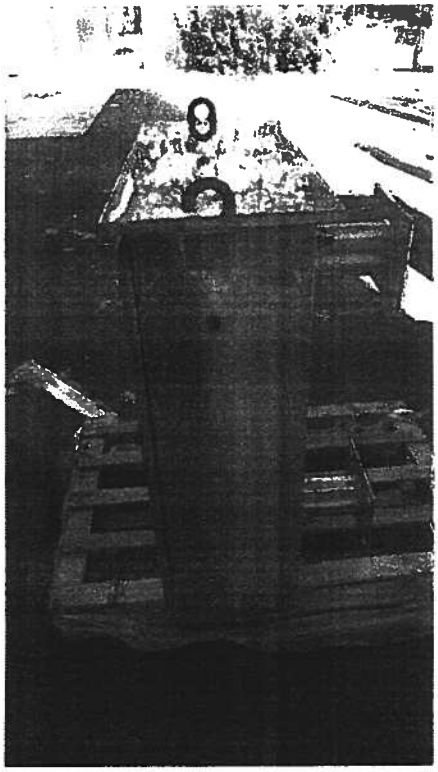

Foto n. 5

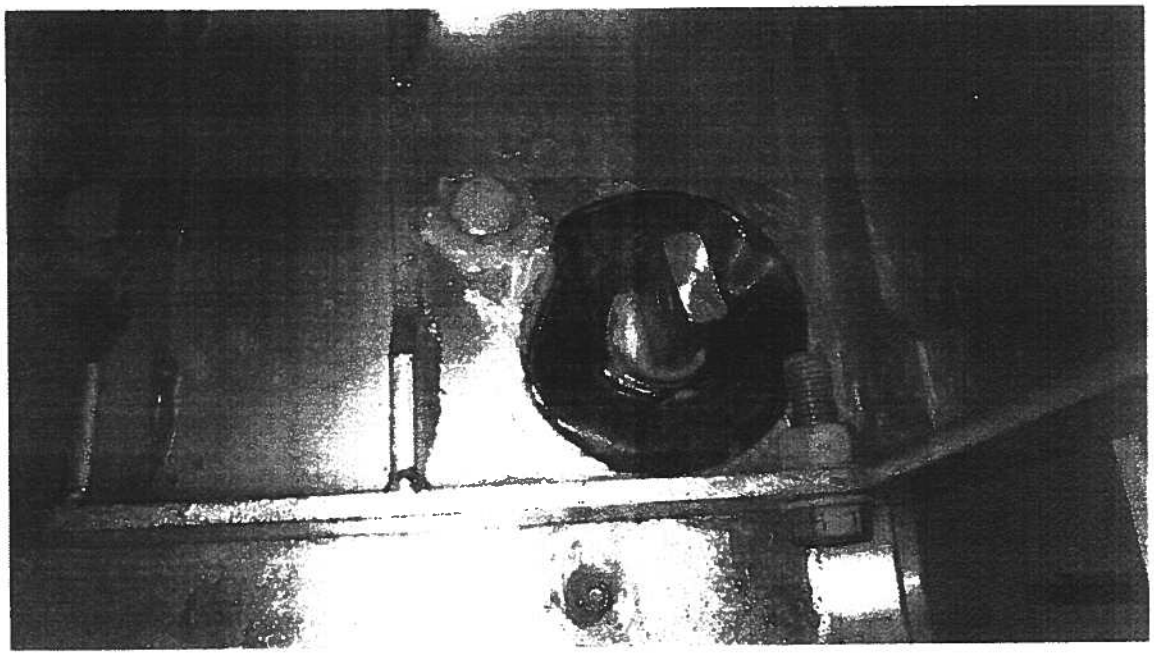

Foto n. 6

Kawara Trade S.A.

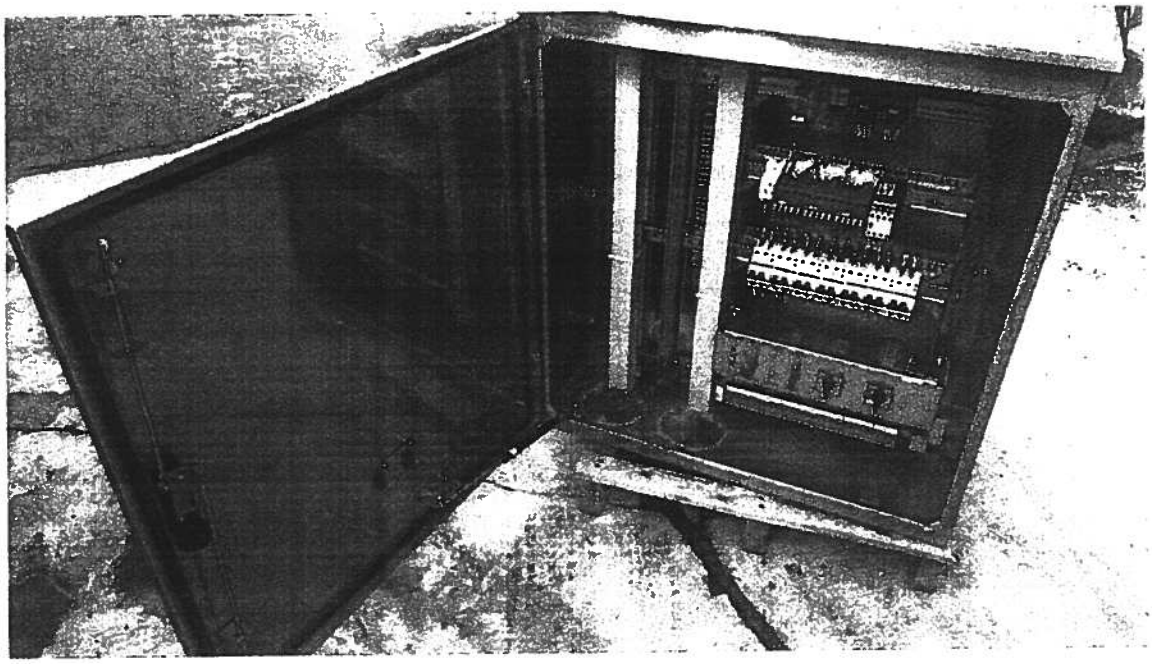

Foto n. 7

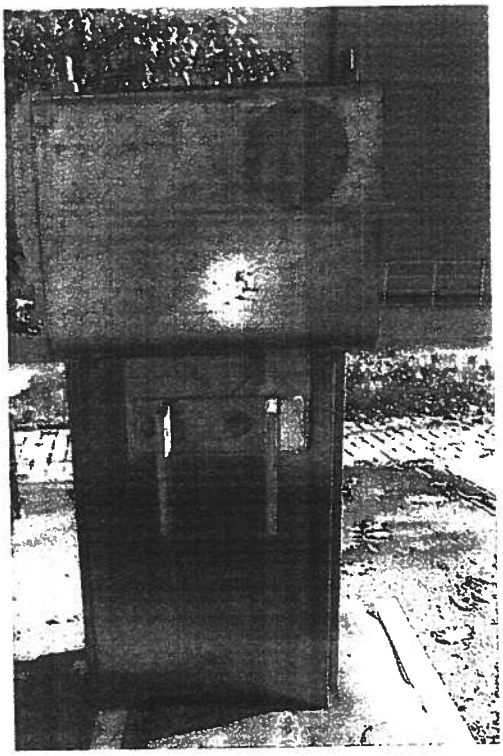

Foto n. 8

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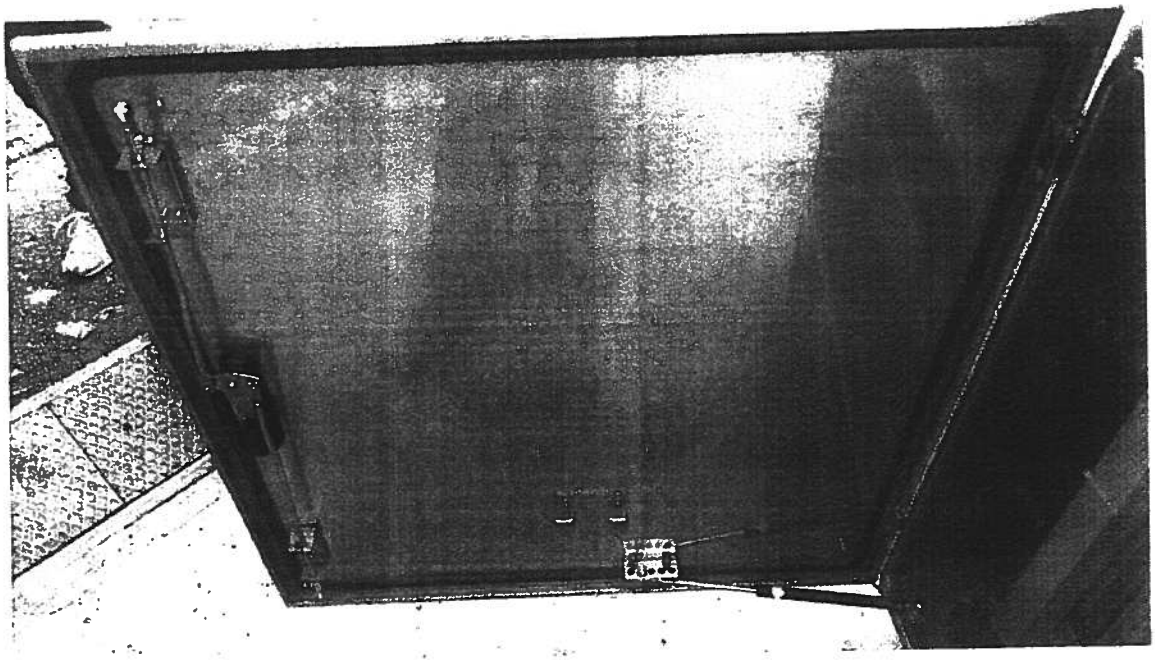

Foto n. 9

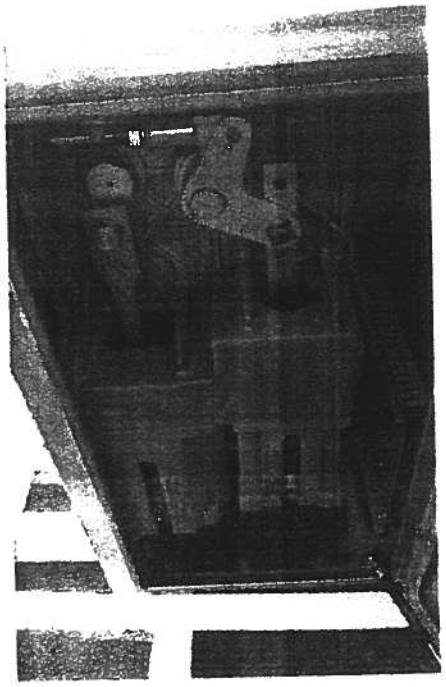

Foto n. 10

Kawara Trade S.A.

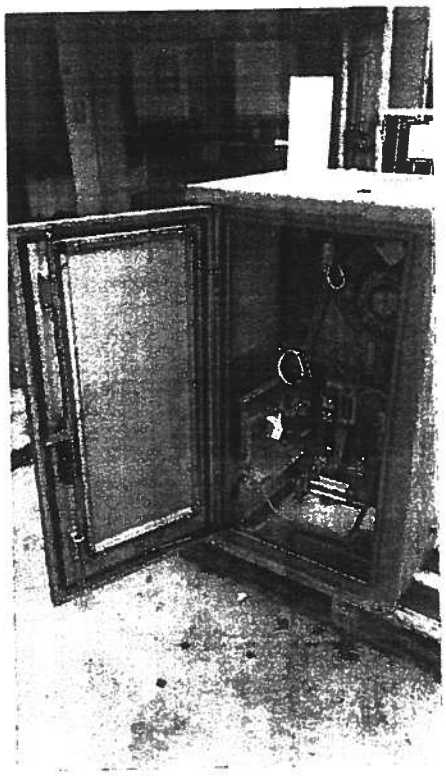

Foto n. 11

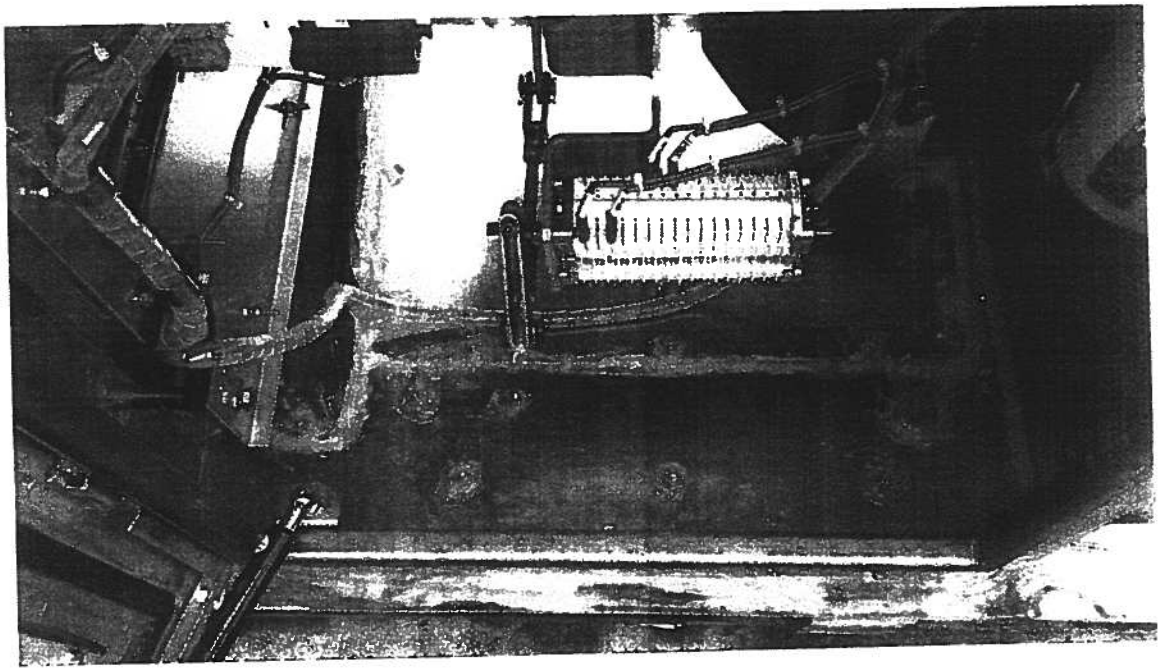

Foto n. 12

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Client	JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO., Ltd of P.R. CHINA
Address of the client	No.1, Huimin West Road, Economic Development Zone, 226500 Rugao City, China
Manufacturer	JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO., Ltd of P.R. CHINA
Tested samples/items	Single-pole of a three-pole 252 kV SF6 live-tank circuit-breaker with single operating mechanism
Tests carried out	Capacitive current switching tests for verification of: - Cable-charging current switching - Line-charging current switching
Standards/Specifications	IEC 62271-100 (2012) IEC 62271-101 Ed. 2.0 (2012)

Tests date **from** June 18, 2015 **to** June 22, 2015

The results reported in this document relate only to the tested samples/items.

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PAD B5013189 (2116054) - CONFIDENTIAL USE

No. of pages	29	**No. of pages annexed**	360
Issue date	July 23, 2015		
Prepared	PSV - Beccarini Pierangelo B5013189 2925 AUT		
Verified	PHV - Zanchetta Daniele, PSV - Vidori Mauro B5013189 2979 VER B5013189 2158654 VER		
Approved	PMI - The Manager - Arcidiaco Lorenzo B5013189 821814 APP		

CESI S.p.A.
Testing & Certification Division
Testing Operations Area
"Milan Platform"
Manager

Mod. RDPA v. 6

Tests witnessed by

Mr. Wu Peng	JIANGSU RUGAO H.V. ELECTRIC APPARATUS Co., Ltd of P.R. CHINA
Mr. Peng Xiang	JIANGSU RUGAO H.V. ELECTRIC APPARATUS Co., Ltd of P.R. CHINA
Mr. Zheng Yao Qing	JIANGSU RUGAO H.V. ELECTRIC APPARATUS Co., Ltd of P.R. CHINA
Mr. Zhu Peng Xiang	JIANGSU RUGAO H.V. ELECTRIC APPARATUS Co., Ltd of P.R. CHINA

Identification of the object Effected.
The Manufacturer guarantees that the tested object is manufactured according to the submitted drawings.
CESI checked that these drawings adequately represent in shape and dimensions the essential details and the parts of the tested object.
These drawings identified by CESI and numbered B5012403 No. 1 to 23 have been returned to the Client.

Test evaluation
With reference to the Standards/Specifications listed in the first page and the characteristics of the tested sample assigned by manufacturer, the carried out test duty passed SUCCESSFULLY.

Revision history

Revision No.	List of modifications
0	First issue

Only for laboratory requirement, in order to reproduce the test conditions, all the laboratory data are contained in the document marked: B5012900

The reported expanded uncertainties are determined in accordance with the Publication ENV 13005: 1999 "Guide to the expression of uncertainty in measurement" and are based on a standard uncertainty multiplied by a coverage factor k = 2, which for a normal distribution provides a level of confidence of approximately 95 %.

- Voltage a.c. ≤ ± 3,0 %
- Current a.c. ≤ ± 3,0 %
- Transient Recovery Voltage ≤ ± 3,0 %
- Resistance d.c. ≤ ± 1,5 %
- Time ≤ ± 1,5 %

Receipt date of the sample June 2015

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Contents	Page	Test date
racteristics of the tested object assigned by the Client	4	
ɜous provisions for the tests	5	
nbols and testing procedure for synthetic tests	6	
tion of the pole under test	7	
he no-load operations	8	
ied out		
ɔacitive current switching tests - Preconditioning tests; No.3 direct short-circuit breaking operations at 50 Hz with 30,0 kA at 13,5 kV	9	June 18, 2015
gle-phase direct line-charging and cable-charging current switching tests; test-duty LC1/CC1 at 50 Hz with 35,0 A at 174,6 kV	10 to 14	June 19, 2015
gle-phase synthetic line-charging and cable-charging current switching tests; test-duty LC2/CC2 at 50 Hz with 250 A at 170,3 kV	15 to 19	June 20 to 22, 2015
ıits	20 to 22	
	23 to 29	
ıexed		
cillograms B5012900 (No. 360 pages)		

Rated characteristics of the tested object assigned by the Client

Circuit-breaker	
Manufacturer	JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO., Ltd of P.R. CHINA
Type /	LW58-252(W)/T4000-50
Serial number	DI140309 pole A
Voltage	252 kV
Normal current	4000 A
Frequency	50 Hz
Lightning impulse withstand voltage (across break / to earth)	1050+206/1050 kV
Power frequency withstand voltage (across break / to earth)	460+146/460 kV
Short-circuit making current	125 kA
Short-circuit breaking current	50 kA
Time constant	45 ms
Minimum clearing time	$43,5 < t \leq 64,0$ ms
Transient recovery voltage (TRV)	
First-pole-to-clear factor	1,3 p.u.
Peak value (u_c)	374 kV
Rate of rise (u_1/t_1)	2 kV/µs
Short-line fault	
Surge impedance	450 Ω
Peak factor	1,6
Out-of-phase breaking current (voltage factor 2,0)	12,5 kA
Duration of short-circuit	3 s
Short-time withstand current	50 kA
Peak withstand current	130 kA
Operating sequence	O-0,3s-CO-3min-CO
Class	C2, M2, E2
Back-to-back capacitor bank breaking current (voltage factor 1,4)	400 A
Cable charging breaking current (voltage factor 1,2)	250 A
Line charging breaking current (voltage factor 1,2)	125 A
Breaking unit per pole	1
Grading capacitor per unit	Not equipped
Pressure of SF6 for insulation and interruption (referred to 20 °C)	
Rated	0,60 MPa abs.
Minimum (Block)	0,45 MPa abs.
Operating mechanism	
Type	Spring operated
Serial number	DI 140309
Supply voltage	
Closing device	220 V d.c.
Opening device	220 V d.c.
Motor	220 V d.c.

Type of network neutral earthing *Effectively earthed neutral systems*

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Miscellaneous provisions for the tests

1) The Client declares the following SF6 pressure for interruption:

   Minimum pressure: 0,45 MPa abs. at 20 °C

2) The cable-charging current switching test-duties CC1 and CC2 has not been performed because covered by the line-charging current switching test-duties LC1 and LC2

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List of symbols and testing procedure for synthetic LC2/CC2 tests

1. The following symbols are used both on pages and oscillograms :

U_{CB}	Equivalent r.m.s. value of the recovery voltage calculated as $u_C/2\sqrt{2}$.
i	r.m.s. value of the power frequency current measured in the last loop of the period of arcing.
f_h	Frequency of the injected current.

2. The tests have been carried out using a synthetic LC oscillating circuit

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Identification of the pole under test

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ACCREDIA
LAB N° 0030

: no-load operations

oltage of the auxiliary device

gram	Operating sequence	Under test Specimen DI140309 Pole	Supply voltage Opening device		Supply voltage Closing device		Supply voltage Motor		Pressure of operating mechanism	Pressure of SF6 for breaking (at 20 °C)	Opening time	Closing time	Opening time	Made before the test	Made after the test
Sheets	-	No.	V d.c.	% Vn	V d.c.	% Vn	V d.c.	% Vn	MPa abs.	MPa abs.	ms	ms	ms	No.	No.
1	O	A	220	100	-	-	220	100	-	0,45	28,6	-	-	1	-
3	CO	A	220	100	220	100	220	100	-	0,45	-	58,3	28,0	1	-
4	O-0,3s-CO	A	220	100	220	100	220	100	-	0,45	28,3	59,1	28,4	1	-
1	O	A	154	70	-	-	187	85	-	0,45	32,5	-	-	1	-
3	CO	A	154	70	187	85	187	85	-	0,45	-	61,3	32,4	1	-
4	O-0,3s-CO	A	154	70	187	85	187	85	-	0,45	32,4	61,1	32,5	1	-
1	O	A	242	110	-	-	187	85	-	0,45	28,2	-	-	1	-
1	O	A	242	110	-	-	187	85	-	0,45	28,6	-	-	4	3
1	O	A	242	110	-	-	187	85	-	0,60	28,4	-	-	52	-
3	CO	A	242	110	242	110	187	85	-	0,60	-	58,4	28,1	52	-
1	O	A	242	110	-	-	187	85	-	0,60	28,5	-	-	-	99
3	CO	A	242	110	242	110	187	85	-	0,60	-	58,5	28,4	-	99
1	O	A	220	100	-	-	220	100	-	0,60	28,9	-	-	-	99
3	CO	A	220	100	220	100	220	100	-	0,60	-	59,7	28,7	-	99
4	O-0,3s-CO	A	220	100	220	100	220	100	-	0,60	28,9	60,2	28,1	-	99
1	O	A	154	70	-	-	187	85	-	0,60	34,3	-	-	-	99
3	CO	A	154	70	187	85	187	85	-	0,60	-	62,2	32,8	-	99
4	O-0,3s-CO	A	154	70	187	85	187	85	-	0,60	33,7	62,6	34,0	-	99

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e current switching tests - Preconditioning tests; No.3 direct short-circuit breaking operations at 50 Hz with 30,0 kA at 13,5 kV

: See S0011
50 Hz Power factor : <0,15 Voltage U_{CB} : 13,5 kV

Test No.	SF6 pressure (abs.) MPa	Supply voltage for operating device Closing V d.c.	Opening V d.c.	Motor V d.c.	Pressure for operating mechanism (abs.) O MPa	CO MPa	O-CO MPa
1-3	0,45	-	154	187	-	-	-

'the apparatus before the tests: new, see photo No.1 Under test : Pole A Supply side of the test circuit connected to : fixed contact

8, 2015

Oscillogram No.	Sheets	Operating sequence	Applied voltage U_{CB}	Current of the current circuit Making I_{MC}	Breaking i symm.	d.c.	ΣkA	Closing time	Make time	Opening time	Arcing time	Break time
		-	kV	kA	kA	%	kA	ms	ms	ms	ms	ms
12	2	O	-	-	30,0	<20	30,0	-	-	32,5	10,6	43,1
13	2	O	-	-	30,0	<20	60,0	-	-	32,5	19,6	52,1
14	2	O	-	-	30,0	<20	90,0	-	-	32,3	14,7	47,0

the apparatus after the tests: not inspected.

ILAC-MRA ACCREDIA LAB N° 0030

ıse direct line-charging and cable-charging current switching tests; test-duty LC1/CC1 at 50 Hz with 35,0 A at 174,6 kV

: See S0032

:uit : Frequency : 50 Hz Power factor : <0,15 Capacitor bank C_R : 0,65 µF Short-circuit current : 3,1 kA (6 % of short-circuit breaking current)

it : Capacitor bank C_V : 0,65 µF Resistor R : 225 Ω Voltage decay at 300 ms after final arc extinction: <10 %

Test No.	SF6 pressure (abs.) MPa	Supply voltage for operating device Closing V d.c.	Opening V d.c.	Motor V d.c.	Pressure for operating mechanism (abs.) O MPa	CO MPa	O-CO MPa
4 to 51	0,45	-	242	187	-	-	-

'the apparatus before the tests: as after the test No.3 Under test : Pole A Supply side of the test circuit connected to : fixed contact (upper side)

9, 2015

Oscillogram No.	Sheets	Operating sequence	Voltage with circuit-breaker Open	Closed	Making current $i_{max\ peak}$	f_{inrush}	Breaking current i	Recovery voltage u_C	Maximum overvoltage Supply side Closing	Opening	Load side Closing	Opening	Closing time	Make time	Opening time	Arcing time
		-	kV	kV	kA	Hz	A	kV	kV	kV	kV	kV	ms	ms	ms	ms
23	3	O	172,2	174,6	-	-	35,0	+486	-	-	-	-	-	-	28,5	5,0
24	3	O	172,2	174,6	-	-	35,0	+488	-	-	-	-	-	-	28,2	4,4
25	3	O	172,2	174,6	-	-	35,0	+489	-	-	-	-	-	-	28,3	3,6
26	3	O	172,2	174,6	-	-	35,0	+489	-	-	-	-	-	-	28,4	2,5
27	3	O	172,2	174,6	-	-	35,0	+489	-	-	-	-	-	-	28,4	1,8
28	3	O	172,2	174,6	-	-	35,0	+489	-	-	-	-	-	-	28,3	1,2
29	3	O	172,2	174,6	-	-	35,0	+489	-	-	-	-	-	-	28,4	0,3
30	3	O	172,2	174,6	-	-	35,0	+489	-	-	-	-	-	-	28,1	0,1
31	3	O	172,2	174,6	-	-	35,0	-484	-	-	-	-	-	-	28,6	8,7
32	3	O	172,2	174,6	-	-	35,0	-484	-	-	-	-	-	-	28,4	9,2

Kawara Trade S.A.

Cont'd

9, 2015

Oscillogram		Operating sequence	Voltage with circuit-breaker		Making current		Breaking current	Recovery voltage	Maximum overvoltage				Closing time	Make time	Opening time	Arcing time
									Supply side		Load side					
			Open	Closed	$i_{max\ peak}$	f_{inrush}	i	u_C	Closing	Opening	Closing	Opening				
No.	Sheets	-	kV	kV	kA	Hz	A	kV	kV	kV	kV	kV	ms	ms	ms	ms
33	3	O	172,2	174,6	-	-	35,0	+489	-	-	-	-	-	-	28,3	0,3
34	3	O	172,2	174,6	-	-	35,0	+489	-	-	-	-	-	-	28,3	0,3
35	3	O	172,2	174,6	-	-	35,0	+489	-	-	-	-	-	-	28,5	0,3
36	3	O	172,2	174,6	-	-	35,0	+489	-	-	-	-	-	-	28,3	0,3
37	3	O	172,2	174,6	-	-	35,0	-484	-	-	-	-	-	-	28,0	8,6
38	3	O	172,2	174,6	-	-	35,0	-486	-	-	-	-	-	-	28,2	7,6
39	3	O	172,2	174,6	-	-	35,0	-487	-	-	-	-	-	-	28,5	6,4
40	3	O	172,2	174,6	-	-	35,0	-487	-	-	-	-	-	-	28,5	5,7
41	3	O	172,2	174,6	-	-	35,0	-487	-	-	-	-	-	-	28,5	4,7
42	3	O	172,2	174,6	-	-	35,0	-489	-	-	-	-	-	-	28,6	3,9

Cont'd

Kawara Trade S.A.

9, 2015

Oscillogram		Operating sequence	Voltage with circuit-breaker		Making current		Breaking current	Recovery voltage	Maximum overvoltage Supply side		Maximum overvoltage Load side		Closing time	Make time	Opening time	Arcing time
			Open	Closed	$i_{max\ peak}$	f_{inrush}	i	u_C	Closing	Opening	Closing	Opening				
No.	Sheets	-	kV	kV	kA	Hz	A	kV	kV	kV	kV	kV	ms	ms	ms	ms
43	3	O	172,2	174,6	-	-	35,0	-488	-	-	-	-	-	-	28,4	3,0
44	3	O	172,2	174,6	-	-	35,0	-488	-	-	-	-	-	-	28,5	2,2
45	3	O	172,2	174,6	-	-	35,0	-489	-	-	-	-	-	-	28,4	1,6
46	3	O	172,2	174,6	-	-	35,0	-489	-	-	-	-	-	-	28,6	0,7
47	3	O	172,2	174,6	-	-	35,0	-489	-	-	-	-	-	-	28,4	0,2
48	3	O	172,2	174,6	-	-	35,0	+485	-	-	-	-	-	-	28,3	9,5
49	3	O	172,2	174,6	-	-	35,0	+484	-	-	-	-	-	-	28,6	9,6
50	3	O	172,2	174,6	-	-	35,0	-489	-	-	-	-	-	-	28,6	0,2
51	3	O	172,2	174,6	-	-	35,0	-489	-	-	-	-	-	-	28,6	0,3
52	3	O	172,2	174,6	-	-	35,0	-489	-	-	-	-	-	-	28,5	0,3

Cont'd

Kawara Trade S.A.

9, 2015

Oscillogram		Operating sequence	Voltage with circuit-breaker		Making current		Breaking current	Recovery voltage	Maximum overvoltage Supply side		Maximum overvoltage Load side		Closing time	Make time	Opening time	Arcing time
			Open	Closed	$i_{max\ peak}$	f_{inrush}	i	u_C	Closing	Opening	Closing	Opening				
No.	Sheets	-	kV	kV	kA	Hz	A	kV	kV	kV	kV	kV	ms	ms	ms	ms
53	3	O	172,2	174,6	-	-	35,0	-489	-	-	-	-	-	-	28,5	0,2
54	3	O	172,2	174,6	-	-	35,0	-489	-	-	-	-	-	-	28,4	0,3
55	3	O	172,2	174,6	-	-	35,0	+487	-	-	-	-	-	-	28,6	8,4
56	3	O	172,2	174,6	-	-	35,0	+487	-	-	-	-	-	-	28,4	7,6
57	3	O	172,2	174,6	-	-	35,0	+487	-	-	-	-	-	-	28,4	6,8
58	3	O	172,2	174,6	-	-	35,0	+487	-	-	-	-	-	-	28,6	5,7
59	3	O	172,2	174,6	-	-	35,0	+486	-	-	-	-	-	-	28,7	8,6
60	3	O	172,2	174,6	-	-	35,0	+484	-	-	-	-	-	-	28,4	9,1
65	3	O	172,2	174,6	-	-	35,0	+487	-	-	-	-	-	-	28,6	8,3
67	3	O	172,2	174,6	-	-	35,0	+488	-	-	-	-	-	-	28,4	7,4

Cont'd

Kawara Trade S.A.

9, 2015

Oscillogram		Operating sequence	Voltage with circuit-breaker		Making current		Breaking current	Recovery voltage	Maximum overvoltage Supply side		Maximum overvoltage Load side		Closing time	Make time	Opening time	Arcing time
			Open	Closed	$i_{max\ peak}$	f_{inrush}	i	u_C	Closing	Opening	Closing	Opening				
No.	Sheets	-	kV	kV	kA	Hz	A	kV	kV	kV	kV	kV	ms	ms	ms	ms
68	3	O	172,2	174,6	-	-	35,0	+487	-	-	-	-	-	-	28,5	6,7
69	3	O	172,2	174,6	-	-	35,0	+487	-	-	-	-	-	-	28,2	6,0
70	3	O	172,2	174,6	-	-	35,0	-484	-	-	-	-	-	-	28,3	7,9
71	3	O	172,2	174,6	-	-	35,0	-484	-	-	-	-	-	-	28,4	7,2
72	3	O	172,2	174,6	-	-	35,0	-488	-	-	-	-	-	-	28,1	6,6
73	3	O	172,2	174,6	-	-	35,0	-488	-	-	-	-	-	-	28,1	5,9
74	3	O	172,2	174,6	-	-	35,0	-487	-	-	-	-	-	-	28,4	4,3
75	3	O	172,2	174,6	-	-	35,0	-489	-	-	-	-	-	-	28,1	4,4

f the apparatus after the tests: not inspected.

Kawara Trade S.A.

ACCREDIA LAB N° 0030

se synthetic line-charging and cable-charging current switching tests; test-duty LC2/CC2 at 50 Hz with 250 A at 170,3 kV

: See S0030

cuit : Frequency : 50 Hz Power factor : <0,15 Voltage U_{CS} : 13,6 kV

cuit : f_h : 253 Hz Frequency of U_{CB} : 39 Hz

spective recovery voltage		
t_2 ms	u_1 kV	t_1 µs
8,7	9	70

Test No.	SF6 pressure (abs.) MPa	Supply voltage for operating device			Pressure for operating mechanism (abs.)		
		Closing V d.c.	Opening V d.c.	Motor V d.c.	O MPa	CO MPa	O-CO MPa
52 to 99	0,60	242	242	187	-	-	-

the apparatus before the tests: as after the test No.51 Under test : Pole A Supply side of the test circuit connected to : moving contact

0, 2015

Oscillogram		Operating sequence	Applied voltage	Making switch delay	Current of the current circuit Making		Breaking	Injected current				Recovery voltage		Closing time	Make time	Opening time	Arcing time
			U_{CB}	t_m	$i_{max\ peak}$	f_{inrush}	i	i_P	t_h	Charge polarity	U_h	U_{CB}	u_C				
No.	Sheets	-	kV	µs	kA	Hz	A	A	µs	Neg./Pos.	kV	kV	kV	ms	ms	ms	ms
84	3	O_S	-	-	-	-	250	250	420	Neg.	-287	167,8	+475	-	-	28,6	4,7
85	3	O_S	-	-	-	-	250	250	420	Neg.	-287	168,2	+476	-	-	28,5	3,2
86	3	O_S	-	-	-	-	250	250	380	Neg.	-287	168,2	+478	-	-	28,5	1,5
87	3	O_S	-	-	-	-	250	250	400	Neg.	-287	170,3	+482	-	-	28,3	0,2
89	3	O_S	-	-	-	-	250	250	370	Neg.	-287	170,3	+482	-	-	28,5	0,1
90	3	O_S	-	-	-	-	250	250	380	Neg.	-287	170,3	+482	-	-	28,5	0,1
91	3	O_S	-	-	-	-	250	250	340	Neg.	-287	169,3	+479	-	-	28,3	6,6
92	3	O_S	-	-	-	-	250	250	360	Neg.	-287	169,3	+479	-	-	28,5	7,9
94	3	O_S	-	-	-	-	250	250	380	Neg.	-287	169,3	+479	-	-	28,5	9,3
95	3	O_S	-	-	-	-	250	250	380	Neg.	-287	169,3	+479	-	-	28,3	7,9

Cont'd

Kawara Trade S.A.

0, 2015

Oscillogram		Operating sequence	Applied voltage	Making switch delay	Current of the current circuit Making		Breaking	Injected current				Recovery voltage		Closing time	Make time	Opening time	Arcing time
			U_{CB}	t_m	$i_{max\ peak}$	f_{inrush}	i	i_P	t_h	Charge polarity	U_h	U_{CB}	u_C				
No.	Sheets	-	kV	µs	kA	Hz	A	A	µs	Neg./Pos.	kV	kV	kV	ms	ms	ms	ms
96	3	O_S	-	-	-	-	250	250	390	Neg.	-287	169,3	+479	-	-	28,7	6,2
97	3	O_S	-	-	-	-	250	250	380	Neg.	-287	169,6	+480	-	-	28,5	4,7
98	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	430	Neg.	-287	169,3	+479	58,5	-	28,4	9,1
99	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	370	Neg.	-287	169,3	+479	58,8	-	28,1	8,0
100	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	370	Neg.	-287	169,3	+479	58,5	-	28,5	5,9
101	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	380	Neg.	-287	169,3	+479	58,5	-	27,9	4,9
102	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	380	Neg.	-287	169,6	+480	58,0	-	28,6	2,6
103	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	400	Neg.	-287	170,3	+482	58,3	-	28,7	1,0
105	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	380	Neg.	-287	170,3	+482	58,7	-	28,0	0,4
107	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	400	Neg.	-287	170,3	+482	58,5	-	28,1	0,2

Cont'd

Kawara Trade S.A.

0 and 22, 2015

Oscillogram		Operating sequence	Applied voltage	Making switch delay	Current of the current circuit Making		Breaking	Injected current				Recovery voltage		Closing time	Make time	Opening time	Arcing time
			U_{CB}	t_m	$i_{max\ peak}$	f_{inrush}	i	i_P	t_h	Charge polarity	U_h	U_{CB}	u_C				
No.	Sheets	-	kV	µs	kA	Hz	A	A	µs	Neg./Pos.	kV	kV	kV	ms	ms	ms	ms
108	4	$C_{at\ no\ load}O_S$	-	-	-	-	250	250	400	Neg.	-287	170,3	+482	58,2	-	27,9	0,3
109	4	$C_{at\ no\ load}O_S$	-	-	-	-	250	250	390	Neg.	-287	170,3	+479	58,7	-	28,5	1,3
110	4	$C_{at\ no\ load}O_S$	-	-	-	-	250	250	400	Neg.	-287	170,3	+479	59,0	-	28,2	3,4
111	4	$C_{at\ no\ load}O_S$	-	-	-	-	250	250	400	Neg.	-287	170,3	+479	58,8	-	28,4	4,5
118	4	$C_{at\ no\ load}O_S$	-	-	-	-	250	250	340	Pos.	+285	168,9	-478	58,6	-	28,1	5,3
119	4	$C_{at\ no\ load}O_S$	-	-	-	-	250	250	430	Pos.	+285	170,3	-482	58,5	-	28,5	3,5
120	4	$C_{at\ no\ load}O_S$	-	-	-	-	250	250	480	Pos.	+285	170,3	-482	58,6	-	28,6	1,7
121	4	$C_{at\ no\ load}O_S$	-	-	-	-	250	250	490	Pos.	+285	170,3	-482	59,1	-	28,1	0,6
123	4	$C_{at\ no\ load}O_S$	-	-	-	-	250	250	330	Pos.	+285	170,3	-482	58,6	-	28,0	0,4
124	4	$C_{at\ no\ load}O_S$	-	-	-	-	250	250	280	Pos.	+285	170,3	-482	58,3	-	27,9	0,3

Cont'd

Kawara Trade S.A.

Cont'd

Date: June 22, 2015

Test	Oscillogram		Operating sequence	Applied voltage	Making switch delay	Current of the current circuit Making		Breaking	Injected current				Recovery voltage		Closing time	Make time	Opening time	Arcing time
				U_{CB}	t_m	$i_{max\ peak}$	f_{inrush}	i	i_P	t_h	Charge polarity	U_h	U_{CB}	u_C				
No.	No.	Sheets	-	kV	µs	kA	Hz	A	A	µs	Neg./Pos.	kV	kV	kV	ms	ms	ms	ms
82	125	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	340	Pos.	+285	170,3	-482	58,6	-	28,0	0,2
83	126	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	320	Pos.	+285	168,9	-478	58,5	-	28,9	5,9
84	127	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	320	Pos.	+285	168,9	-478	58,5	-	28,4	8,0
85	128	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	290	Pos.	+285	168,9	-478	58,4	-	28,3	9,7
86	129	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	350	Pos.	+285	168,9	-478	58,5	-	28,7	7,0
87	130	4	$C_{at\ no.load}O_S$	-	-	-	-	250	250	300	Pos.	+285	168,9	-478	58,3	-	28,3	5,9
88	132	3	O_S	-	-	-	-	250	250	300	Pos.	+285	168,9	-478	-	-	28,7	9,2
89	133	3	O_S	-	-	-	-	250	250	360	Pos.	+285	168,9	-478	-	-	28,5	7,7
90	134	3	O_S	-	-	-	-	250	250	330	Pos.	+285	170,3	-482	-	-	28,7	6,0
91	135	3	O_S	-	-	-	-	250	250	360	Pos.	+285	170,3	-482	-	-	28,7	4,5

Cont'd

Kawara Trade S.A.

Cont'd

Date: June 22, 2015

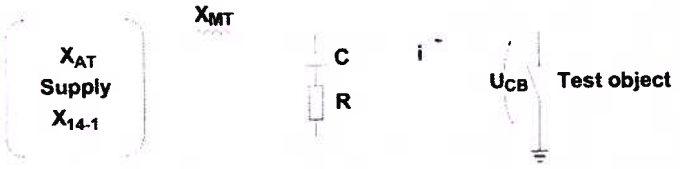
Test	Oscillogram		Operating sequence	Applied voltage	Making switch delay	Current of the current circuit Making		Breaking	Injected current				Recovery voltage		Closing time	Make time	Opening time	Arcing time
				U_{CB}	t_m	$i_{max\ peak}$	f_{inrush}	i	i_P	t_h	Charge polarity	U_h	U_{CB}	u_C				
No.	No.	Sheets	-	kV	µs	kA	Hz	A	A	µs	Neg./Pos.	kV	kV	kV	ms	ms	ms	ms
92	136	3	O_S	-	-	-	-	250	250	370	Pos.	+285	170,3	-482	-	-	28,5	3,0
93	137	3	O_S	-	-	-	-	250	250	380	Pos.	+285	170,3	-482	-	-	28,6	1,4
94	138	3	O_S	-	-	-	-	250	250	380	Pos.	+285	170,3	-482	-	-	28,5	0,2
95	139	3	O_S	-	-	-	-	250	250	420	Pos.	+285	170,3	-482	-	-	28,5	0,2
96	140	3	O_S	-	-	-	-	250	250	440	Pos.	+285	170,3	-482	-	-	28,4	0,2
97	141	3	O_S	-	-	-	-	250	250	350	Pos.	+285	170,3	-482	-	-	28,3	3,4
98	142	3	O_S	-	-	-	-	250	250	370	Pos.	+285	170,3	-482	-	-	28,6	4,5
99	143	3	O_S	-	-	-	-	250	250	370	Pos.	+285	170,3	-482	-	-	28,4	6,3

Condition of the apparatus after the tests:
On the basis of:
- test recordings;
- external and internal conditions of the circuit-breaker (see photos No.2 to 12);
- performance during test-duties,

the sample under test fulfils the requirements of sub-clause 6.102.9 of IEC 62271-100.
The travel measurement during the no-load operations before and after the test-duty did not show any significant changes.
After the tests the circuit-breaker operated properly, see oscillograms No.144 to 151.

Kawara Trade S.

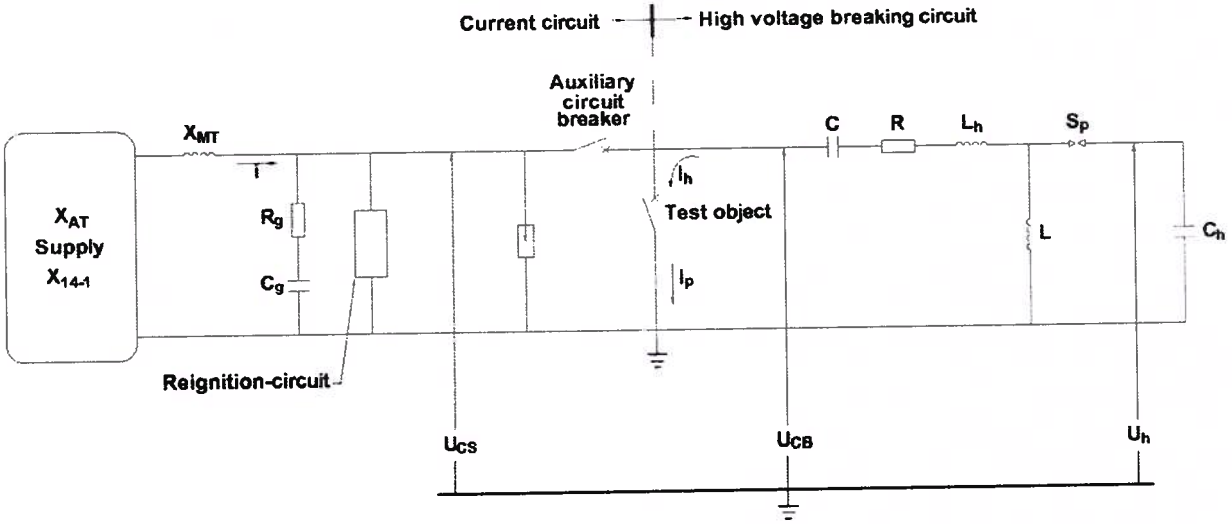
Test circuit S0011



Symbols used in this diagram are the same as those on the oscillograms.

Kawara Trade S.A.

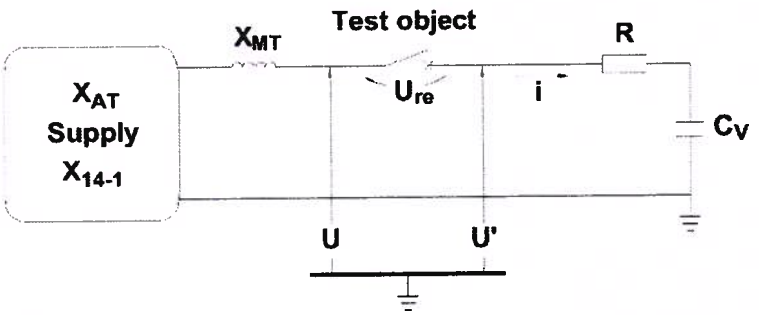
Test circuit S0030



Symbols used in this diagram are the same as those on the oscillograms.

Kawara Trade S.A.

Test circuit S0032



Symbols used in this diagram are the same as those on the oscillograms.

Kawara Trade S.A.

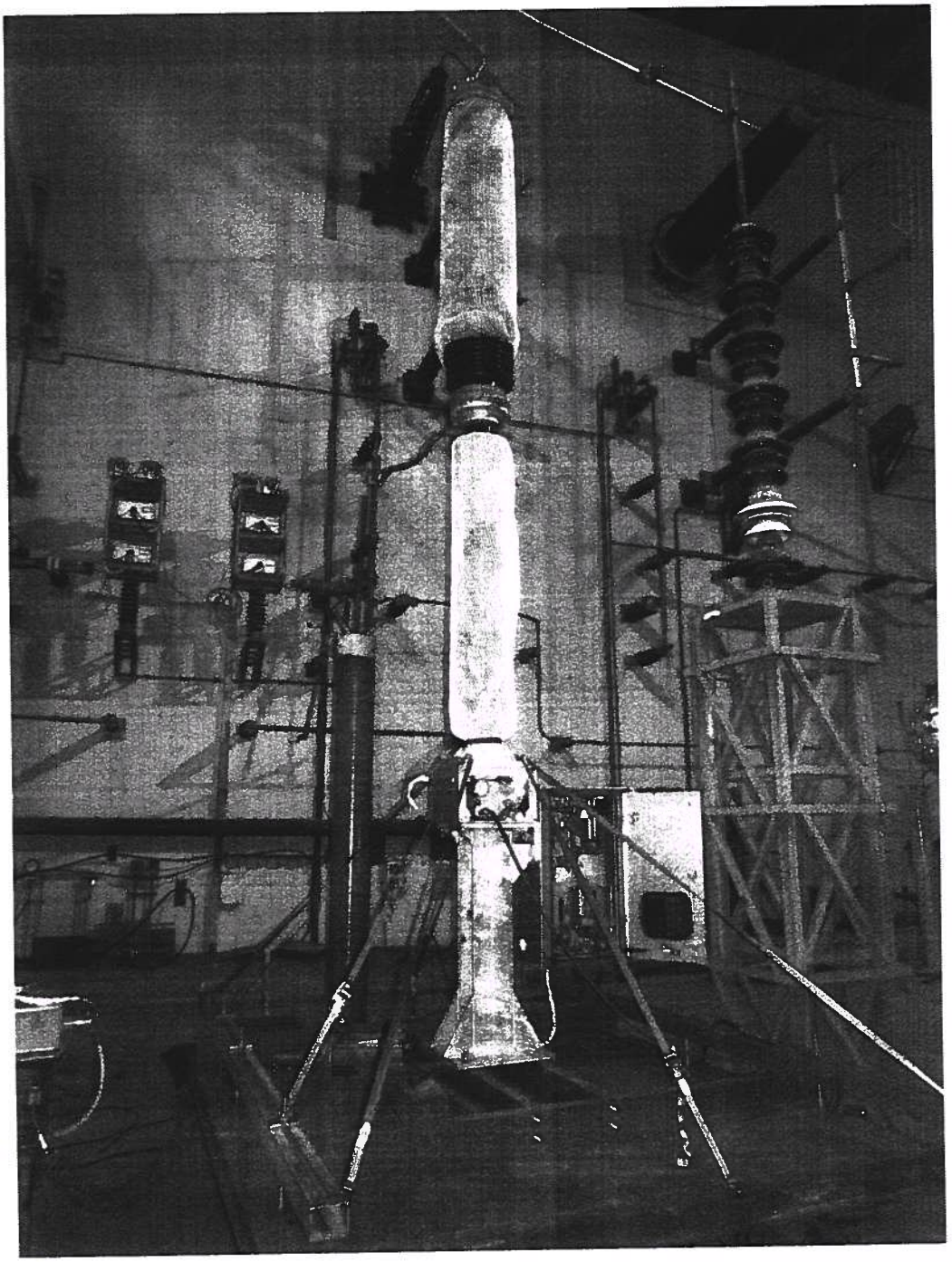


Photo No.1

Kawara Trade S.A.

ILAC-MRA ACCREDIA LAB N° 0030

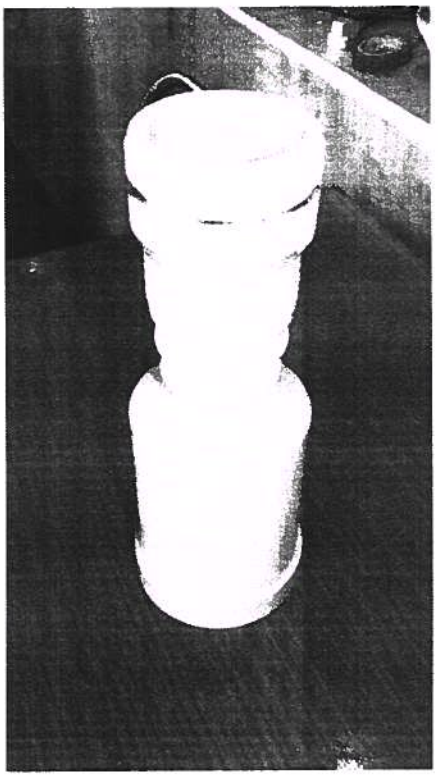


Photo No.2

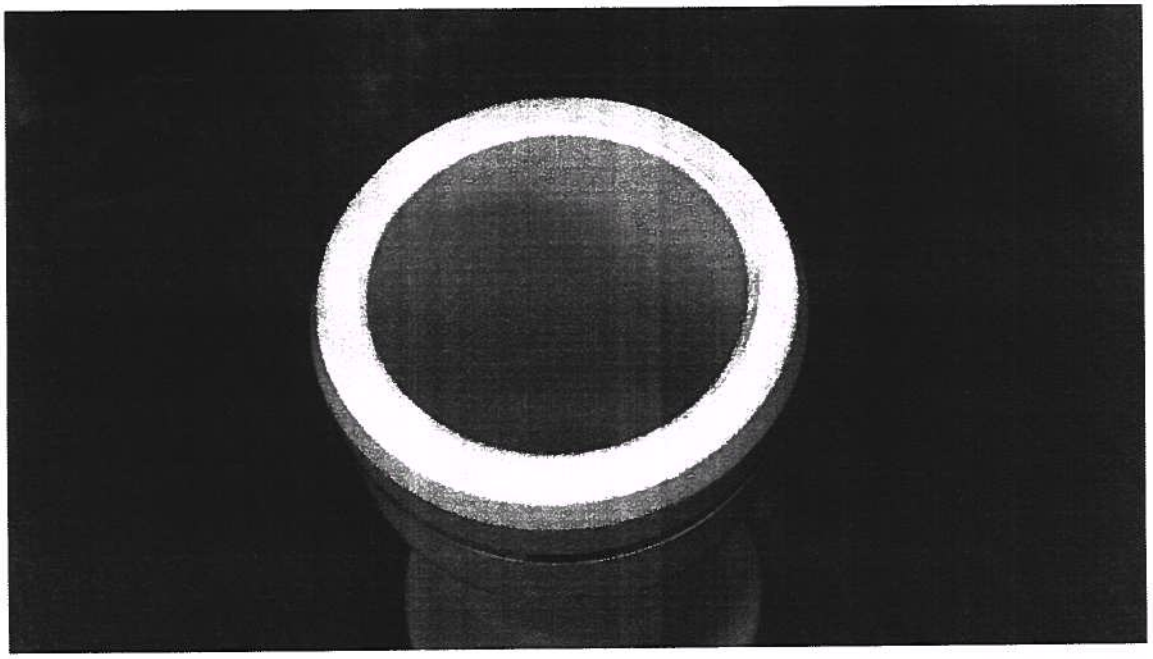


Photo No.3

Kawara Trade S.A.

ILAC-MRA ACCREDIA LABORATORIO DI ACCREDITAMENTO LAB N° 0030

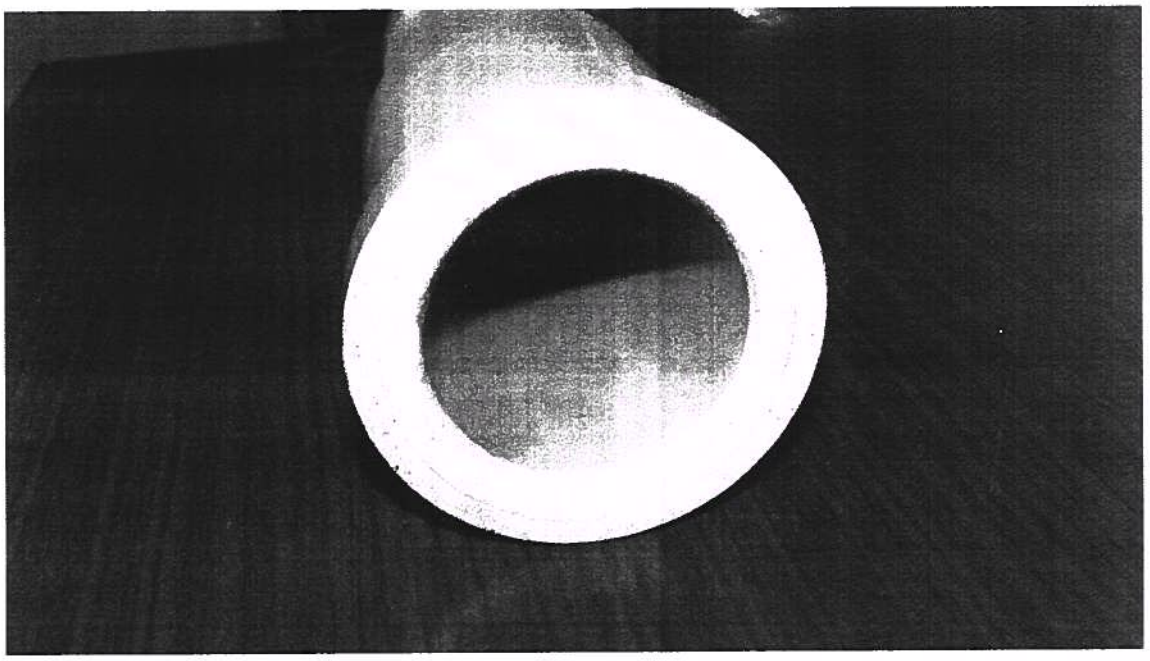


Photo No.4

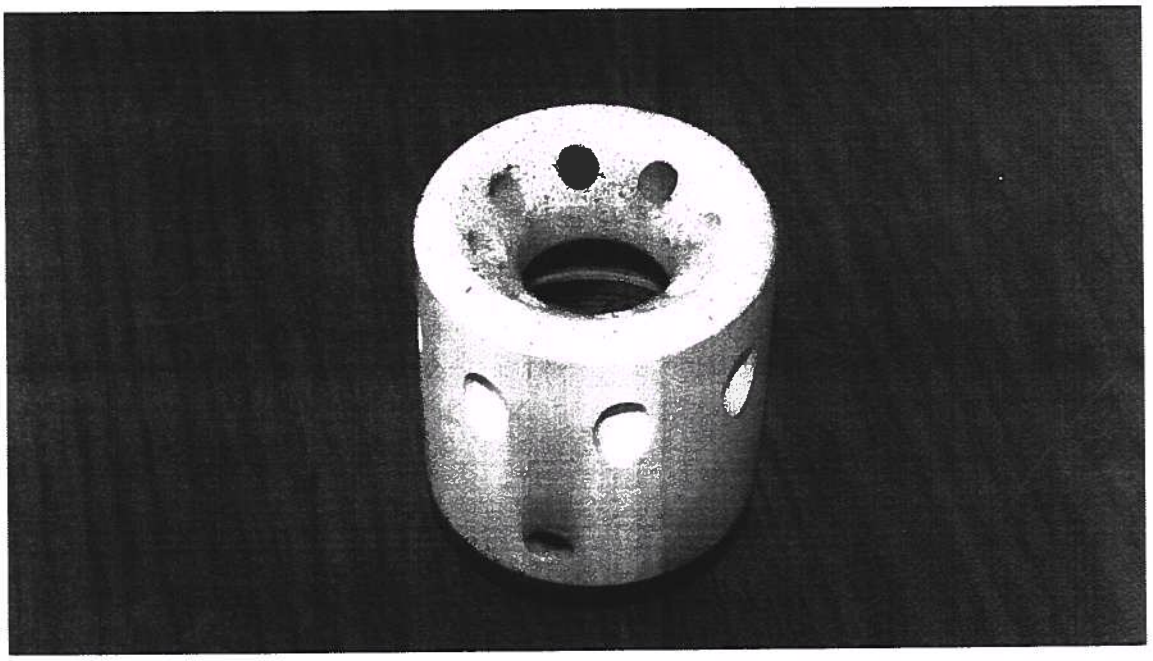
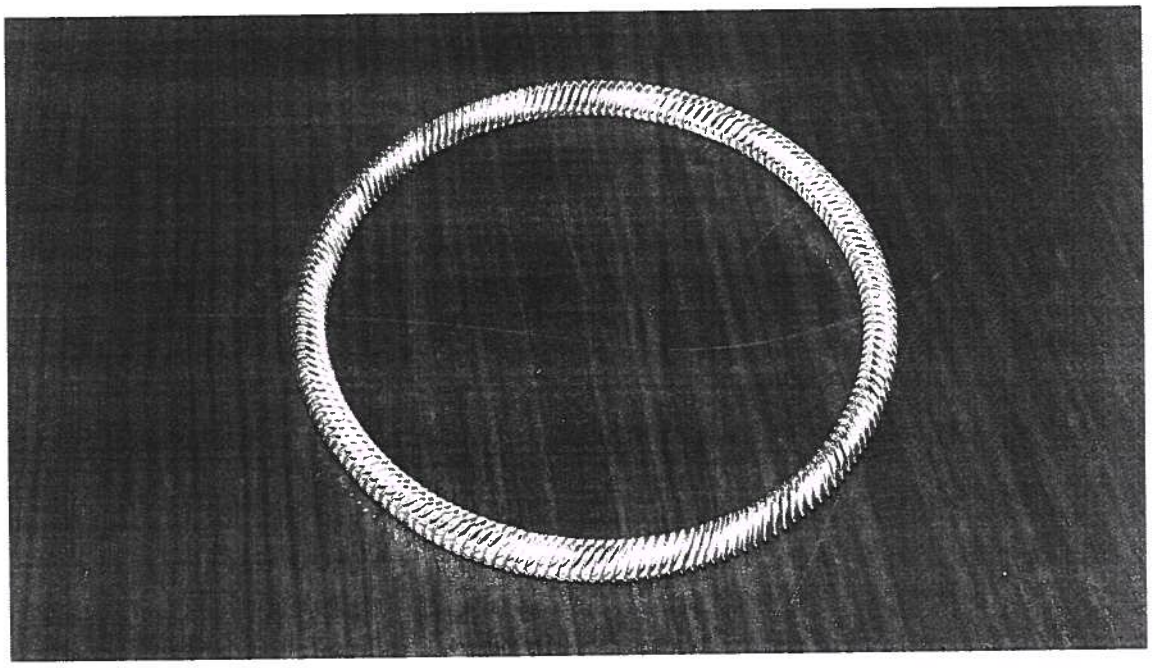


Photo No.5

Kawara Trade S.A.

ilac-MRA ACCREDIA LAB N° 0030



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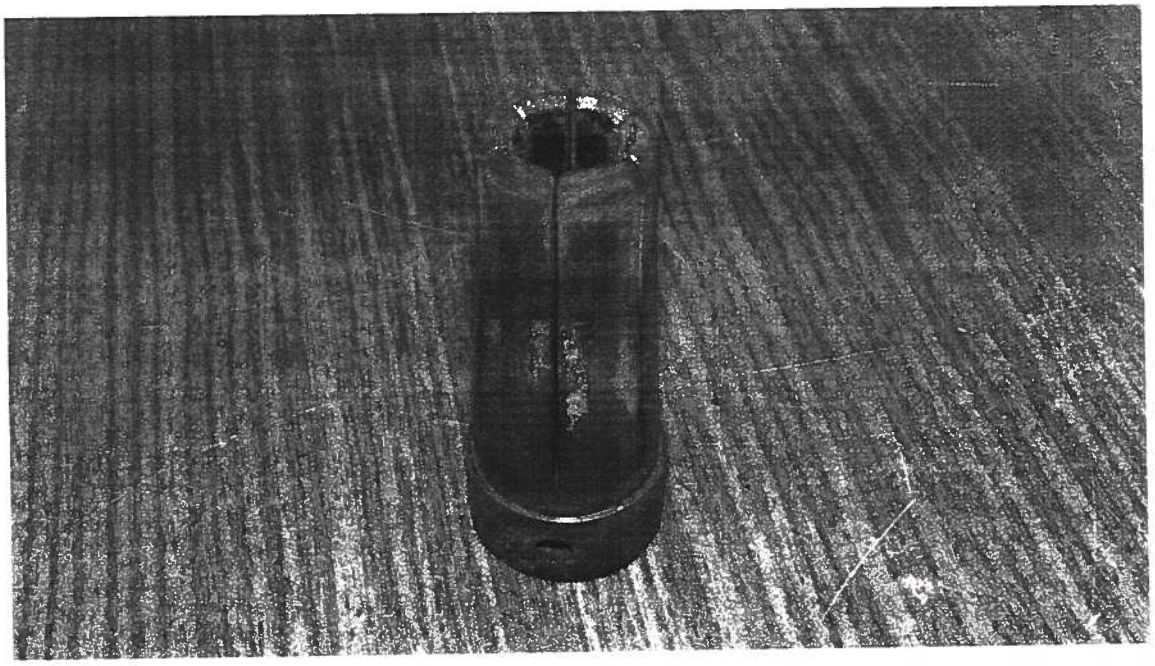

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Kawara Trade S.A.

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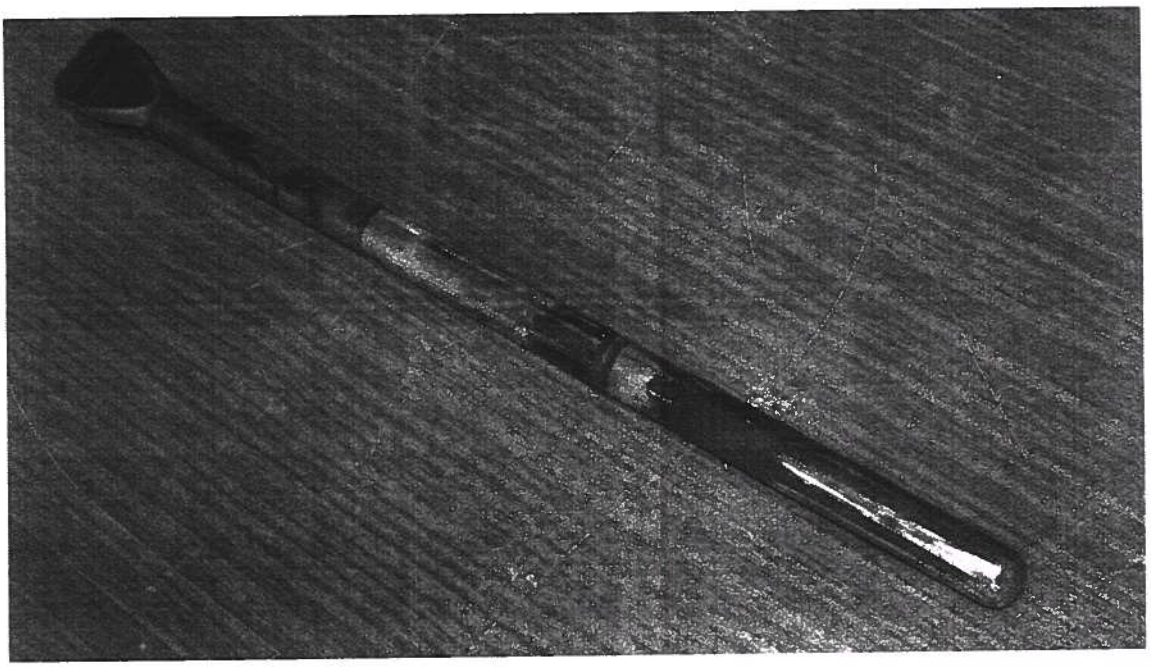

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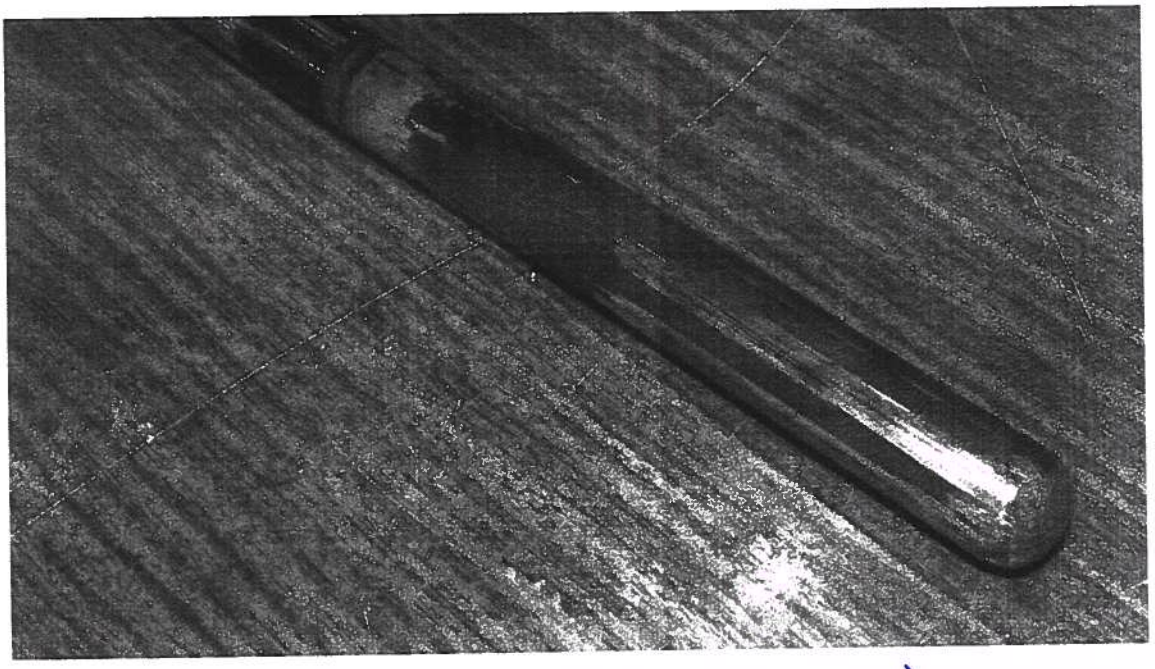

Photo No.9

Kawara Trade S.A.

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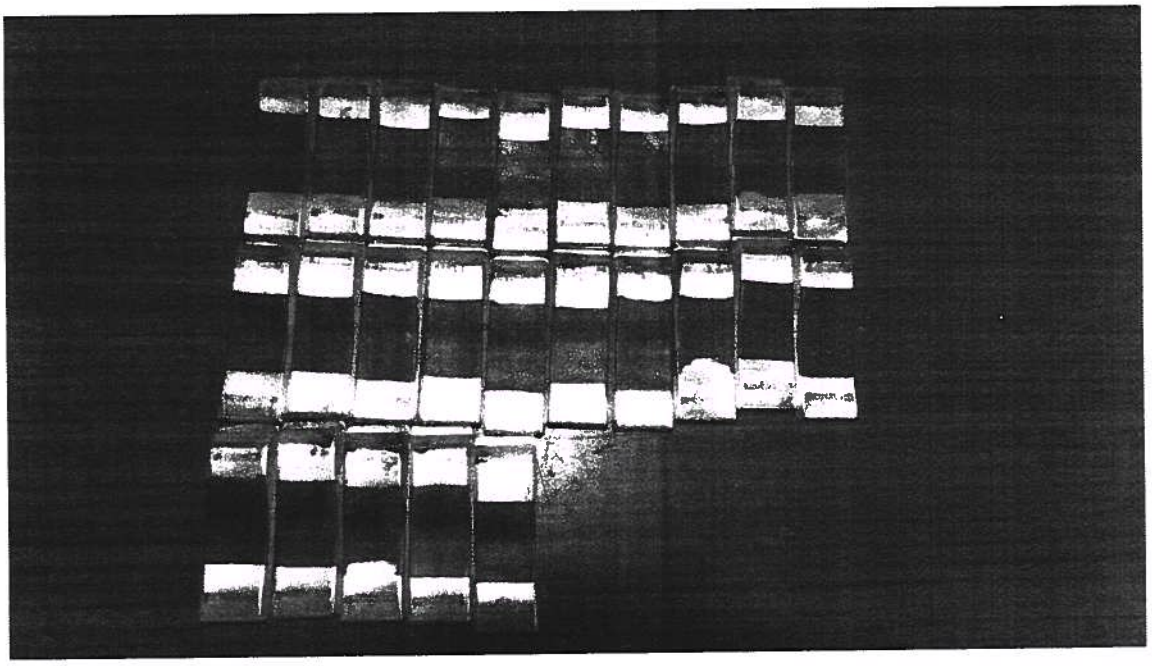

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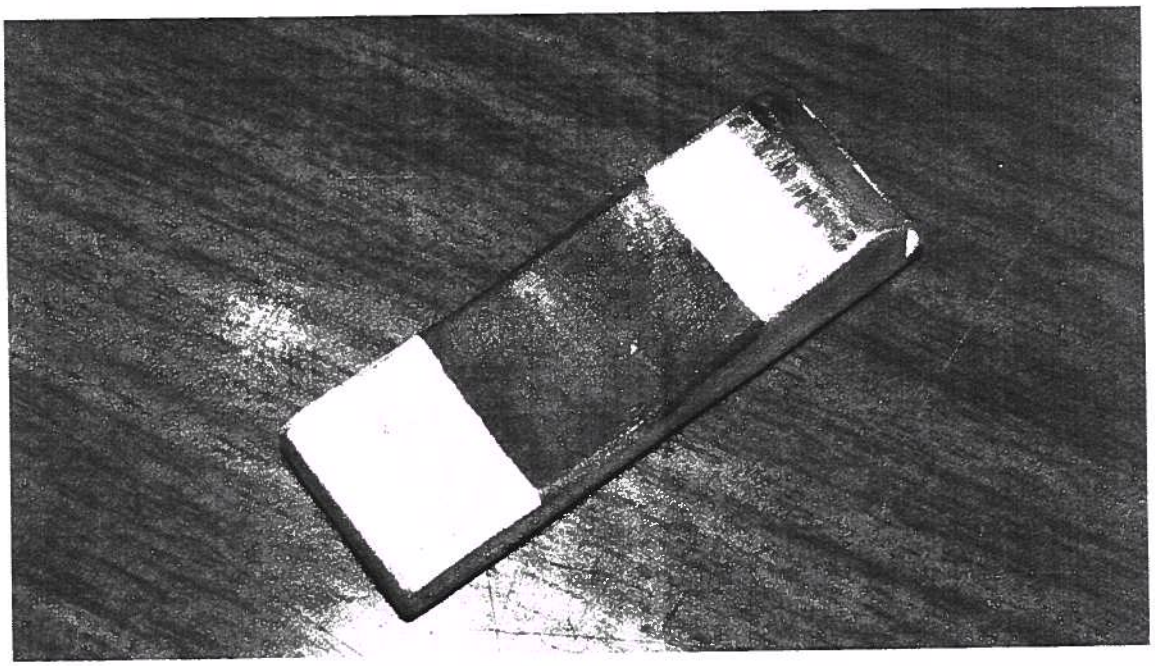

Photo No.11

Kawara Trade S.A.

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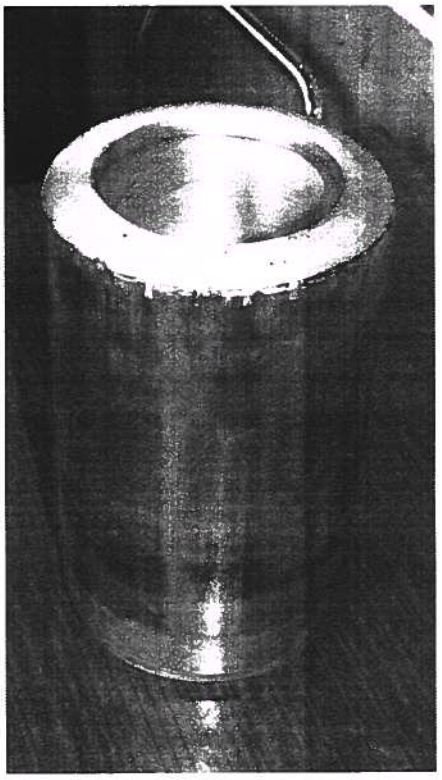

Photo No.12

Kawara Trade S.A.

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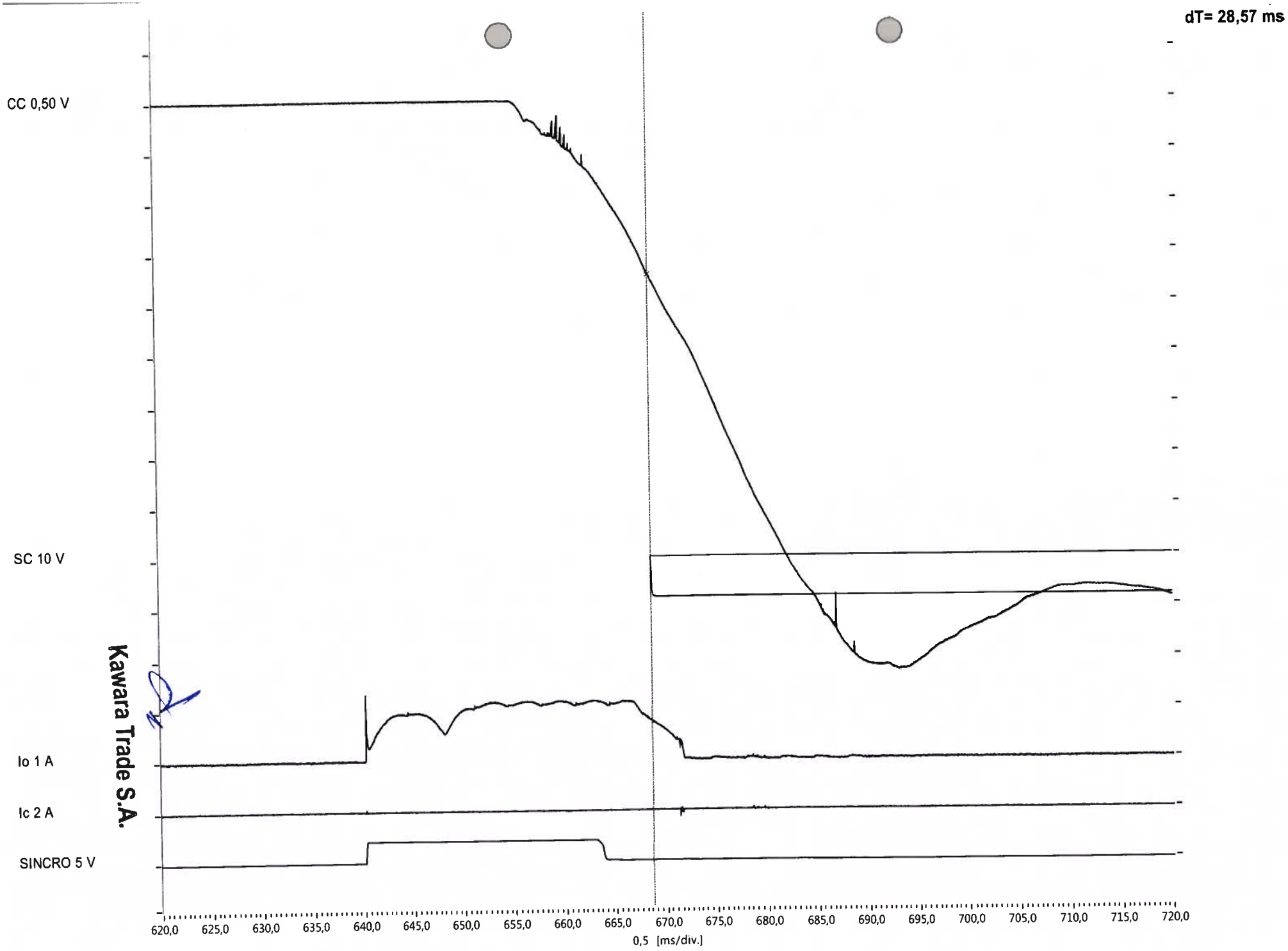
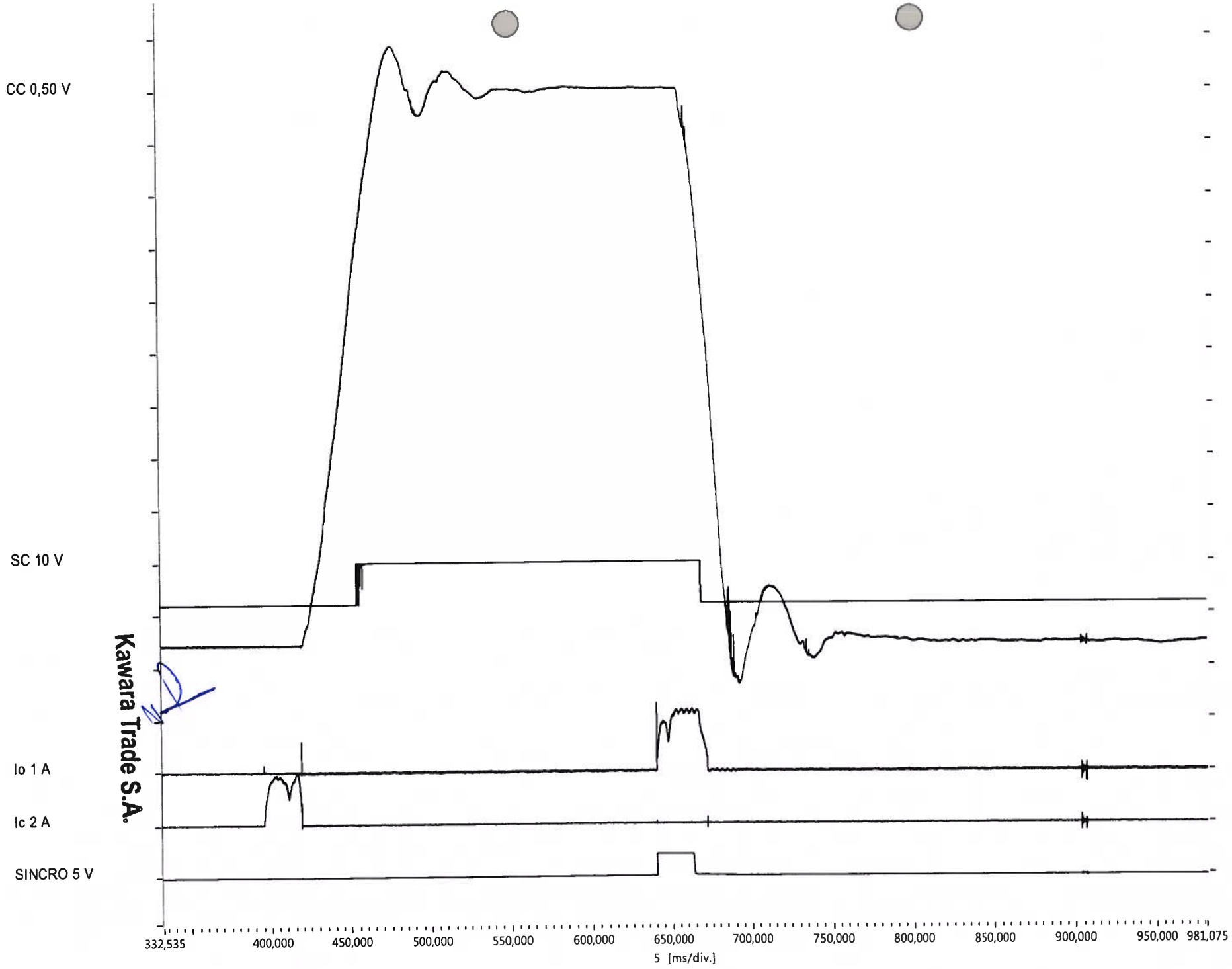


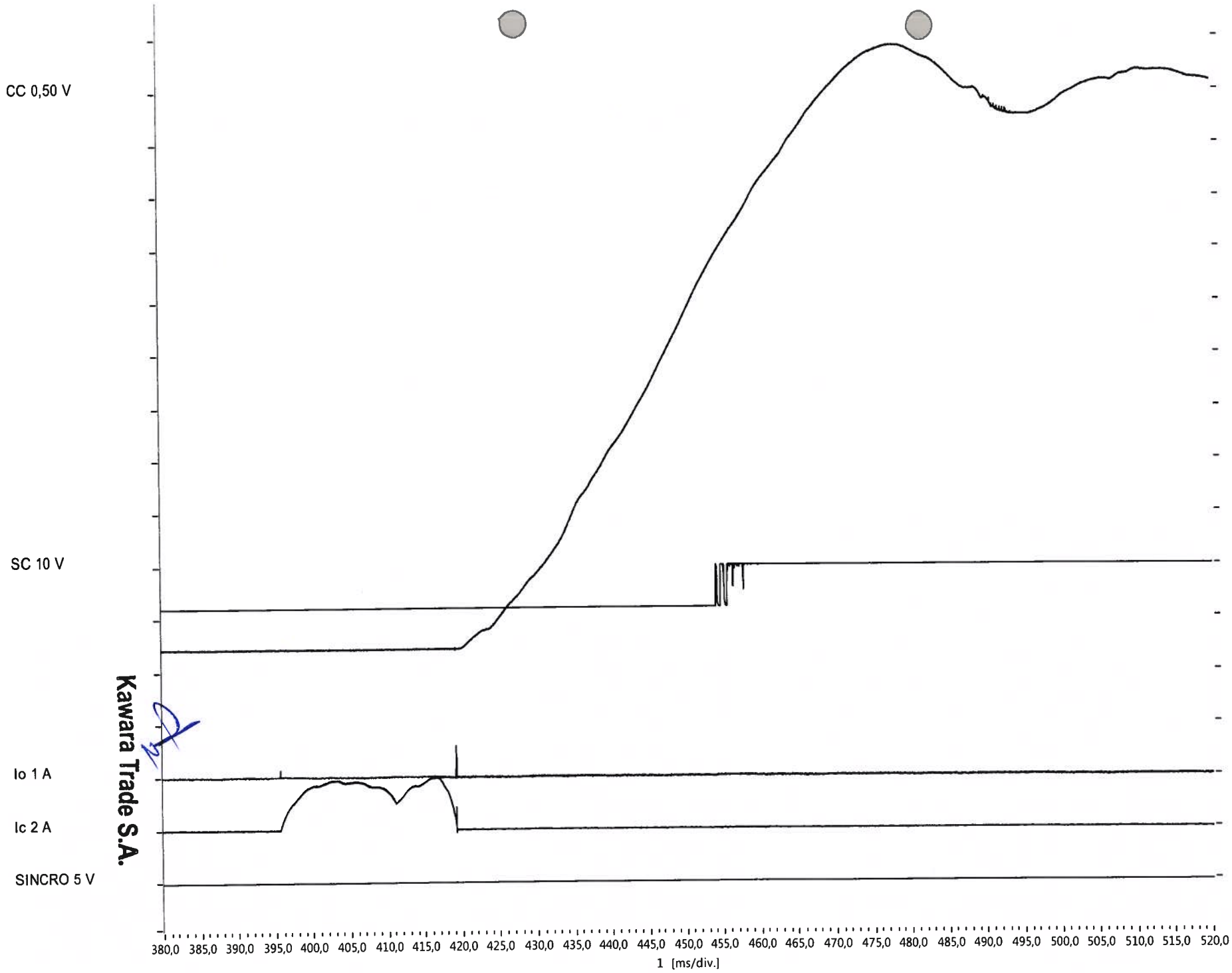
CESI P421 B5012900. Oscill. No. 0002

Sam: MONO, Osc: POS, Cal:



CESI P421 B5012900, Oscill. No. 0003

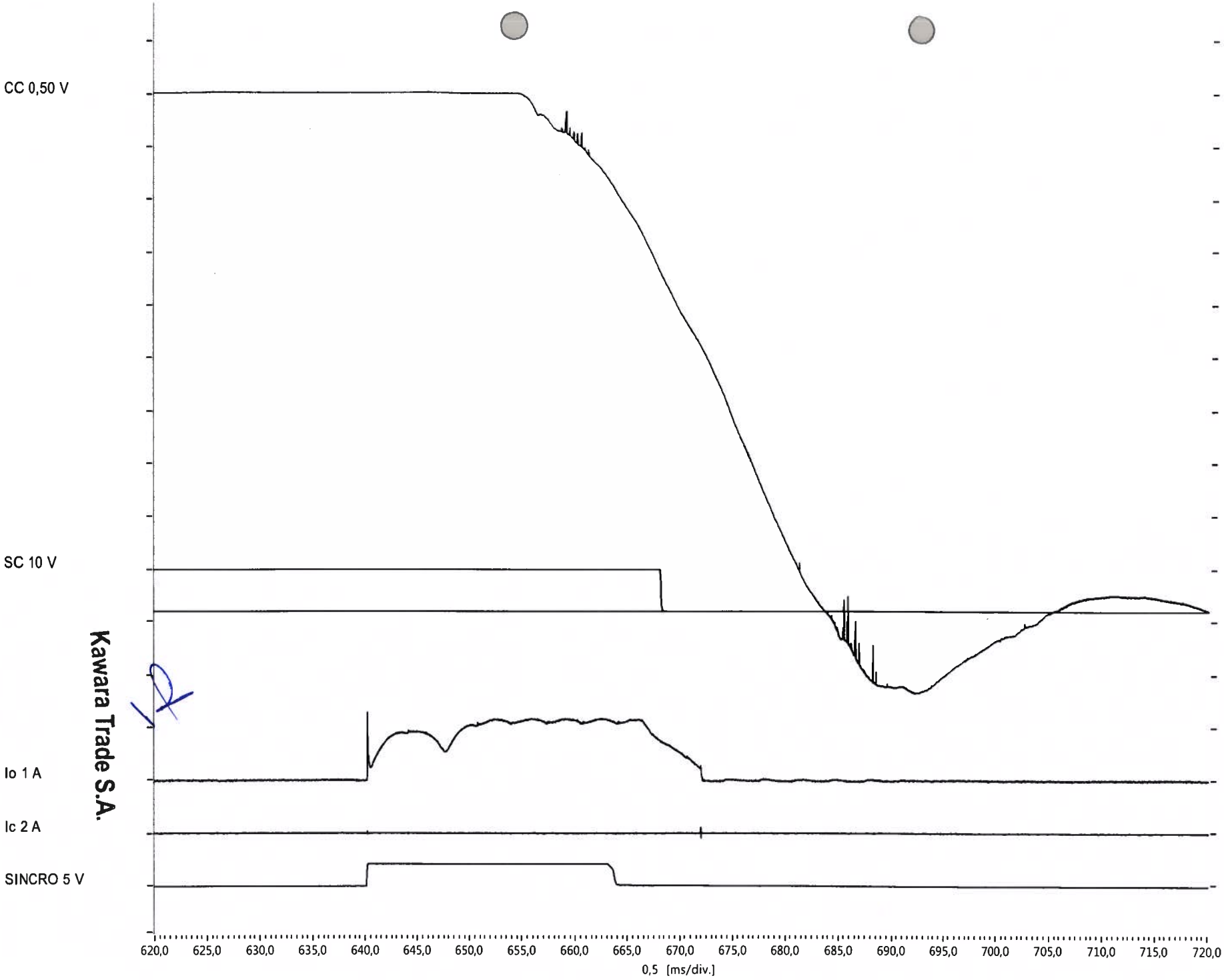
Sam: MONO, Osc: POS, Cal: BD3F



Kawara Trade S.A.

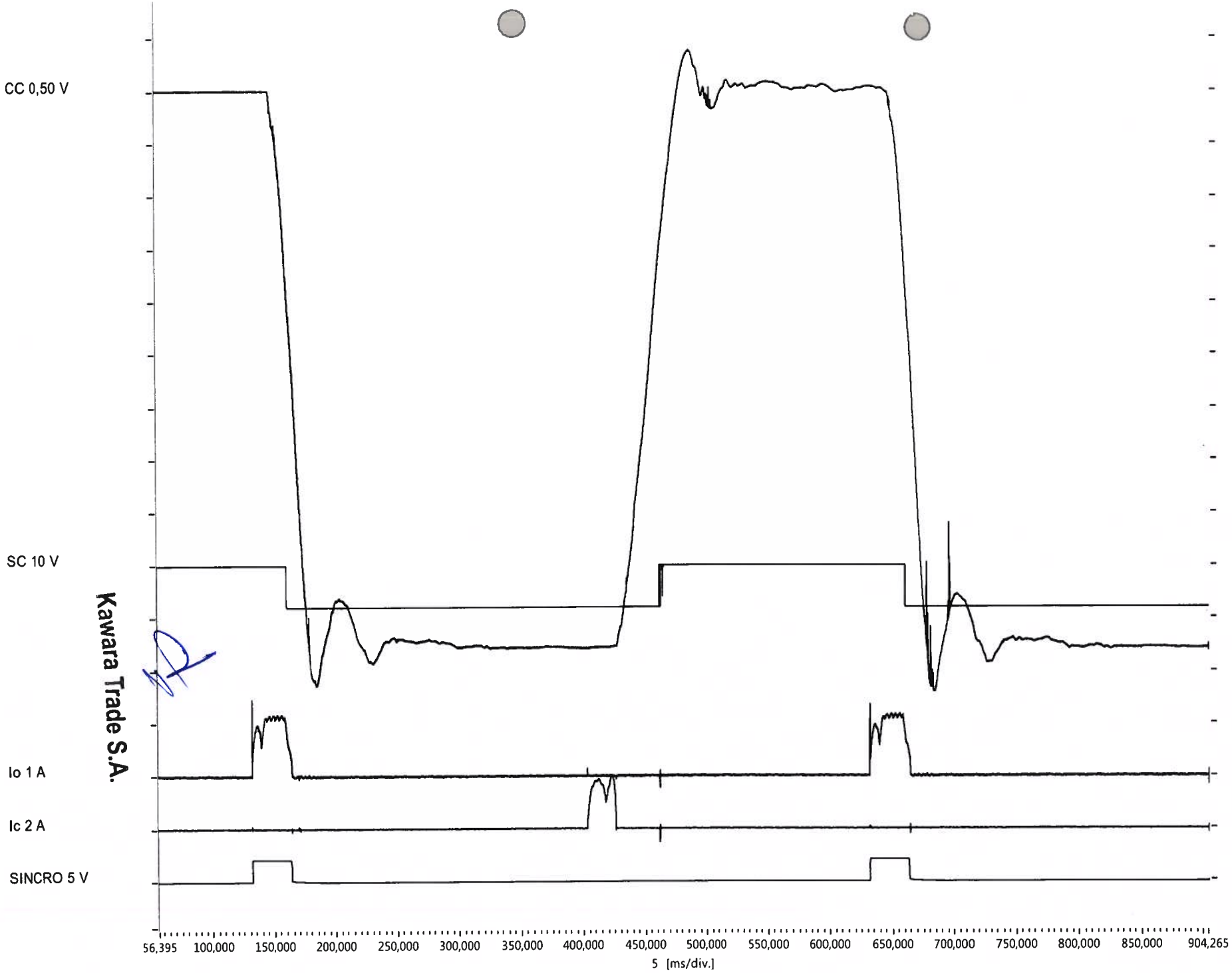
CESI P421 B5012900, Oscill. No. 0003

Sam: MONO, Osc: POS, Cal: BD3F



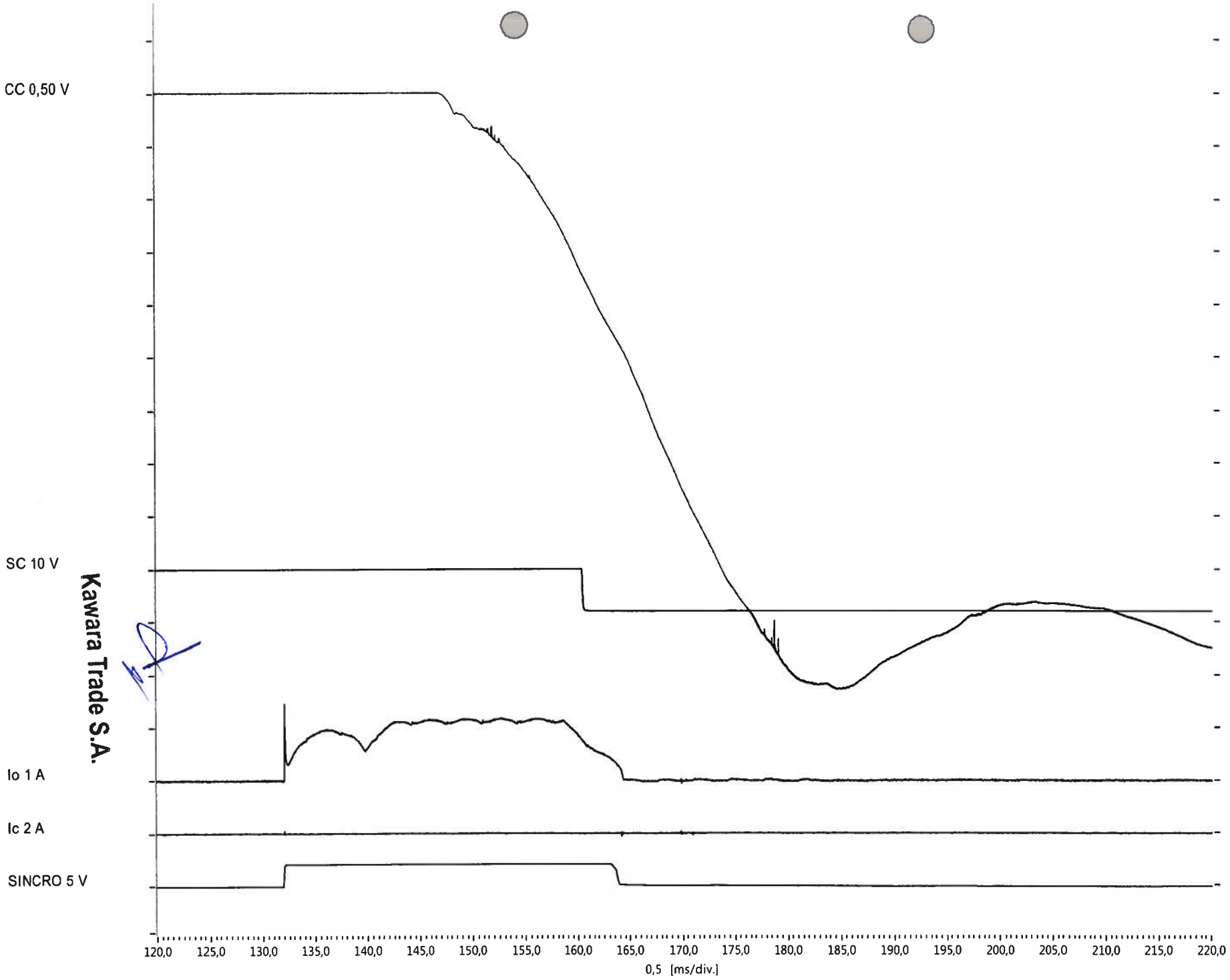
CESI P421 B5012900, Oscill. No. 0003

Sam: MONO, Osc: POS, Cal: BD3F



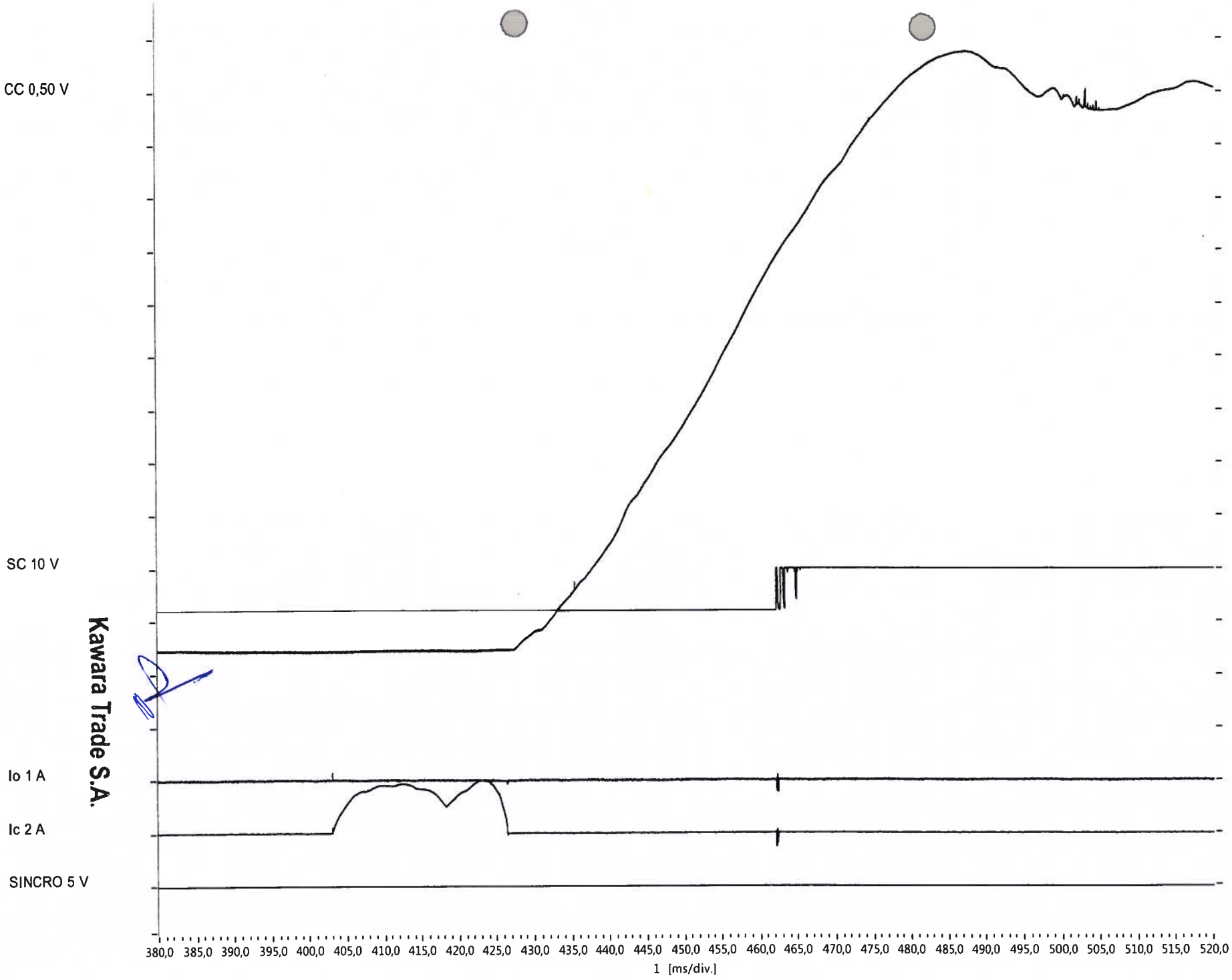
CESI P421 B5012900, Oscill. No. 0004

Sam: MONO, Osc: POS, Cal: BD3F



CESI P421 B5012900, Oscill. No. 0004

Sam: MONO, Osc: POS, Cal: BD3F



Kawara Trade S.A.

CESI P421 B5012900, Oscill. No. 0004

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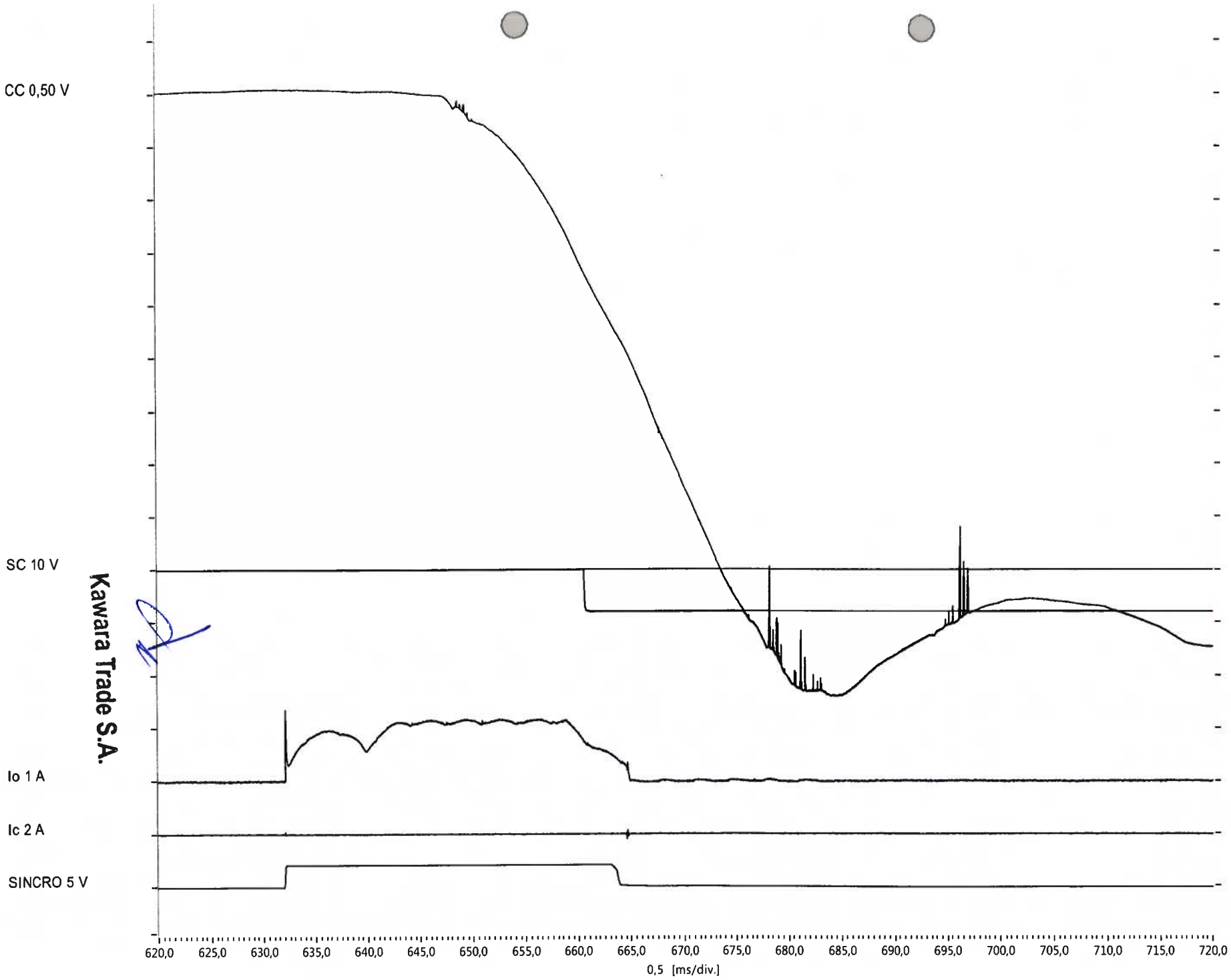

Kawara Trade S.A.

CESI P421 B5012900, Oscill. No. 0004

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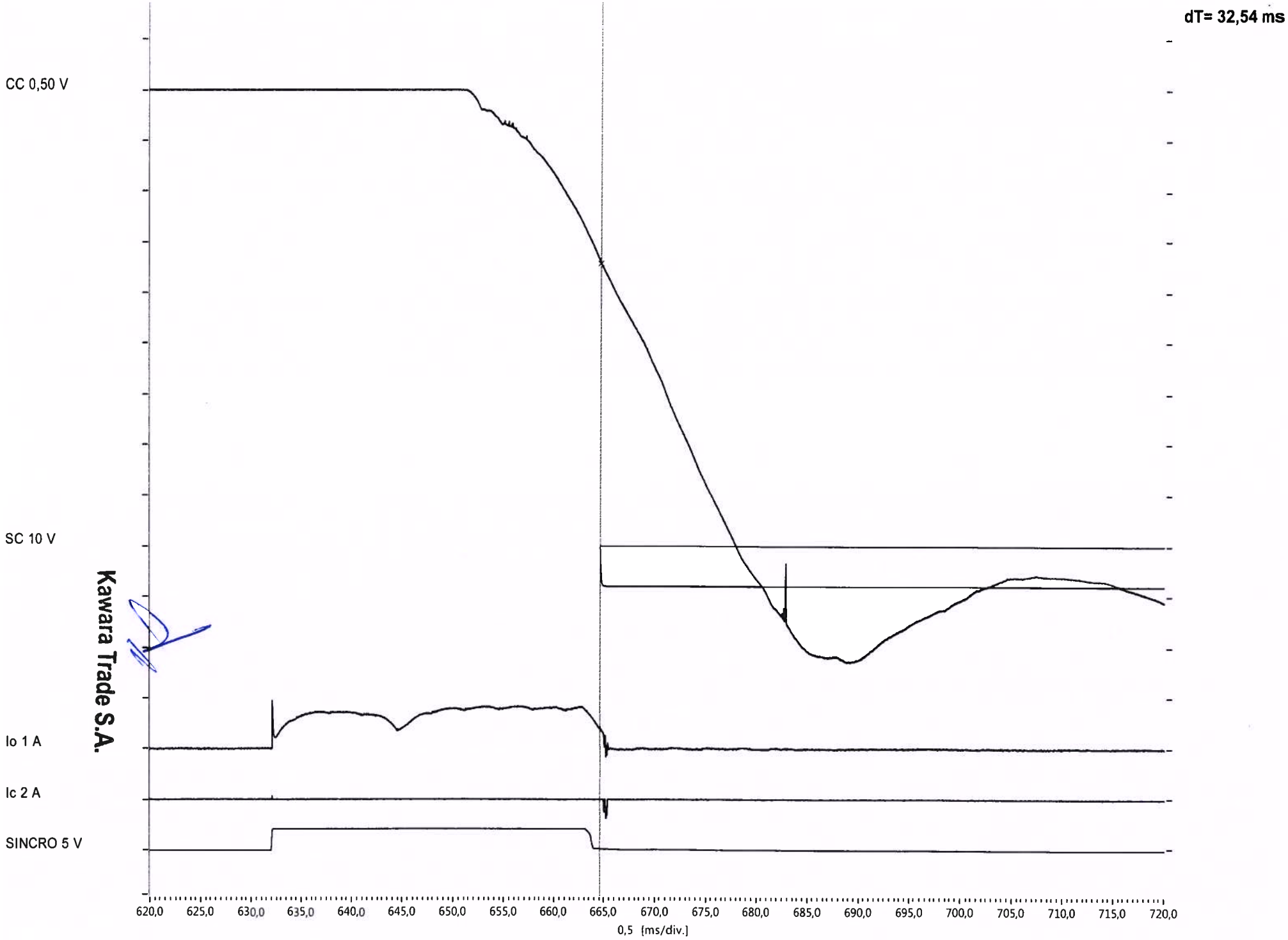
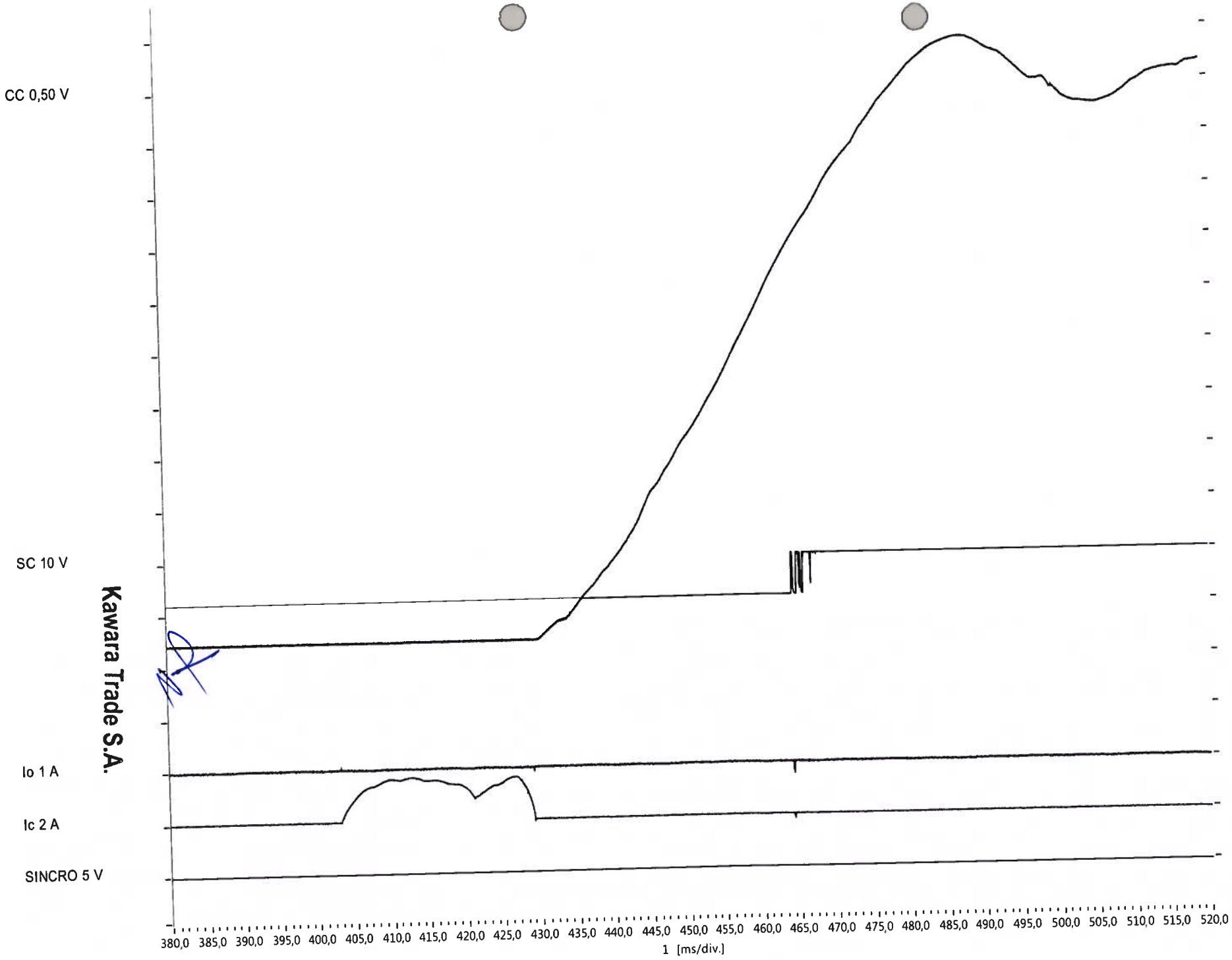


CESI P421 B5012900, Oscill. No. 0005

Sam: MONO, Osc: POS, Cal: BD3F



Sam: MONO, Osc: POS, Cal: BD3F

CESI B5012900, Oscill. No. 0006

PLANILLA DE DATOS GARANTIZADOS

Kawara Trade S.A.

ANDE	PLANILLA DE DATOS GARANTIZADOS Nº 02.03.86.01	8/9

INTERRUPTOR 245 kV

1.	Nombre del fabricante, país donde se fabrica:	Jiangsu Rugao High Voltage Electric Apparatus Co., Ltd. ,China	
2.	Denominación dada por el fabricante, tipo, modelo:	LW58-252	
3.	Dibujos de dimensiones Nros.:	0SR.303.332	
4.	Diagrama de cableados de protección y control Nros.:	0SR.352.233	
5.	Características técnicas:		
5.1	Número de fases:	3	
5.2	Frecuencia nominal (F_r)	50	Hz
5.3	Tensión nominal (U_r):	245	*kV*
5.4	Tensión Nominal Soportable de Impulso Atmosférico:	1050	*kV*
5.5	Tensión Nominal Soportable a corta duración a frecuencia Industrial	460	kV
5.6	Corriente Nominal (I_r):	2000	*A*
5.7	Capacidad Nominal de Cierre (I_p) (*Rated peak withstand current*):	2,5 x Ik	*kA*
5.8	Corriente Nominal Soportable de corta duración (Ik) (Rated short time current):	40	*kA*
5.9	Ciclo de operación	0-0,3s-CO-3 min-CO	
5.10	Tiempo de cierre:	30±5	ms
5.11	Tiempo de apertura:	60	ms
5.12	Tipo de Sistema de mando de cada unidad:	Spring	
5.13	Distancias:		
	a. Libre vertical entre terminales bajo tensión y el coronamiento de la fundación:	~4588	*m*
	b. Mínima entre polos:	3000	*m*
	c. Máxima entre polos:	4000	*m*

Preparado	Aprobado	Fecha	Rev.: B	Fecha: 05/2020
K.A.	R.M.G.	06/2019		

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5.14	Pesos:		
	a. Peso del interruptor con gas:	4600	kg
	b. Peso del polo:	1050*3	kg
	c. Peso del mecanismo de operación:	265*3	kg
	d. Peso de la estructura:	185*3	kg
5.15	Volumen aproximado (embalado):	~8	m^3
	Peso aproximado (embalado):	~7100	kg
5.16	Tipo de terminales A.T.	aluminio	
5.17	a) Potencia requerida por el mecanismo de cierre:	~374	W
	b) Potencia requerida por el mecanismo de apertura:	~202	W
5.18	Potencia requerida por el motor (compresor, resortes u otros)	720	W

6. Normas aplicadas y año de publicación: IEC 62271-100/2021

7. Número de Certificado de aprobación correspondiente al prototipo del equipo ofertado o de características similares: ver documentos en LW58-252 50Hz en 3. INFORME DE PRUEBA TIPO

8. Lista de folletos, planos y catálogos necesarios para describir con claridad el equipo ofertado (deben acompañarse): ver INTERRUPTORES en 5. CATALOGO

9. Diferencias con la Especificación: No.

10. Observaciones: NO

Se deberá presentar una PDG por cada tipo de interruptor ofertado

PLANOS

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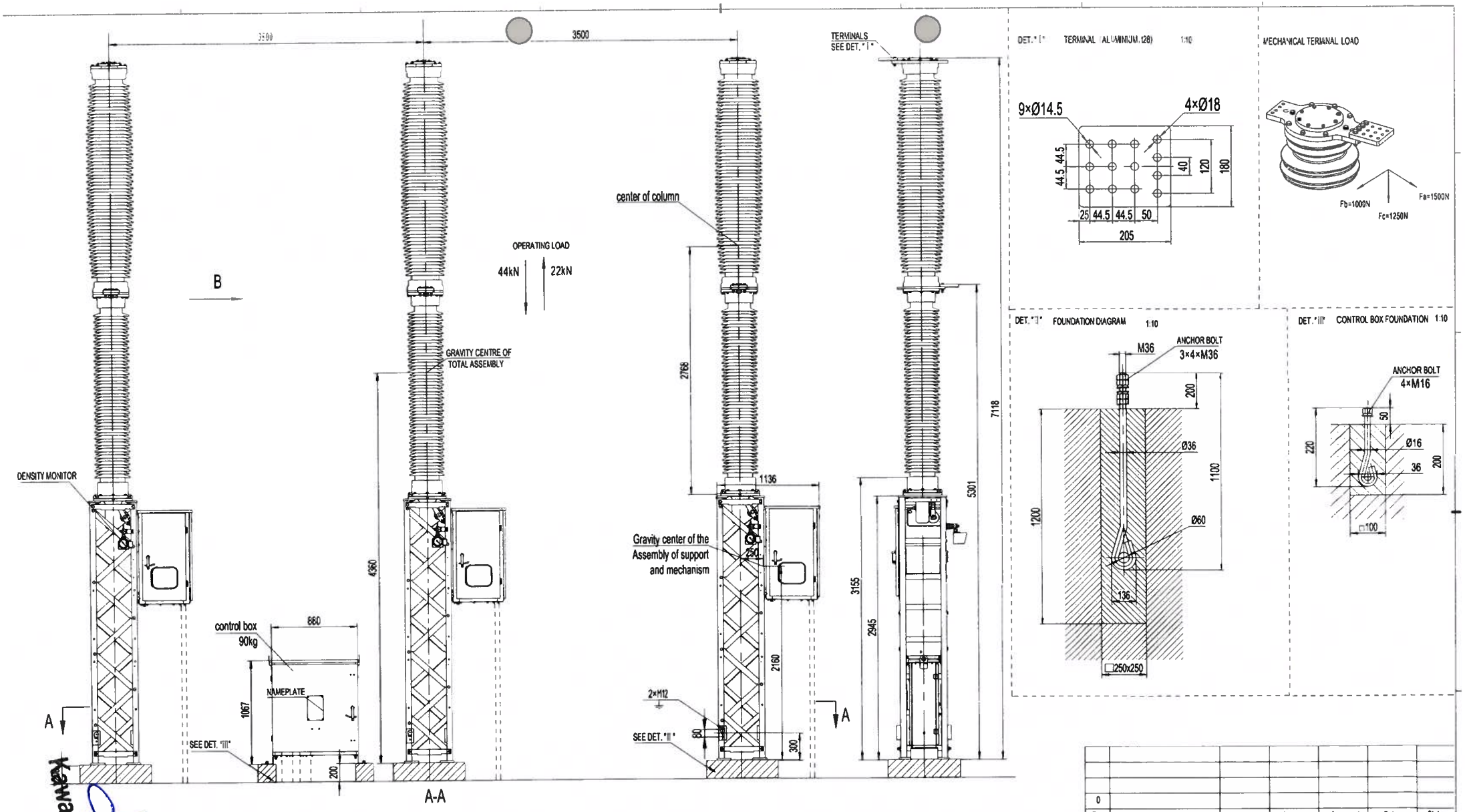


POLLUTION LEVEL	E
UPPER /SUPPORT INSULATOR	8660/7812mm
WINDWARD AREA(1-PHASE)	4.3m²
VIBRATION FREGUENCY	3.7Hz
WEIGHT OF TOTAL ASSEMBLY	4750kg

Rev.	Description	Drawn	Checked	Approved	Date	Status
0						

Project :

Designed		Date	
Checked		Date	
Approved		Date	

Sieyuan

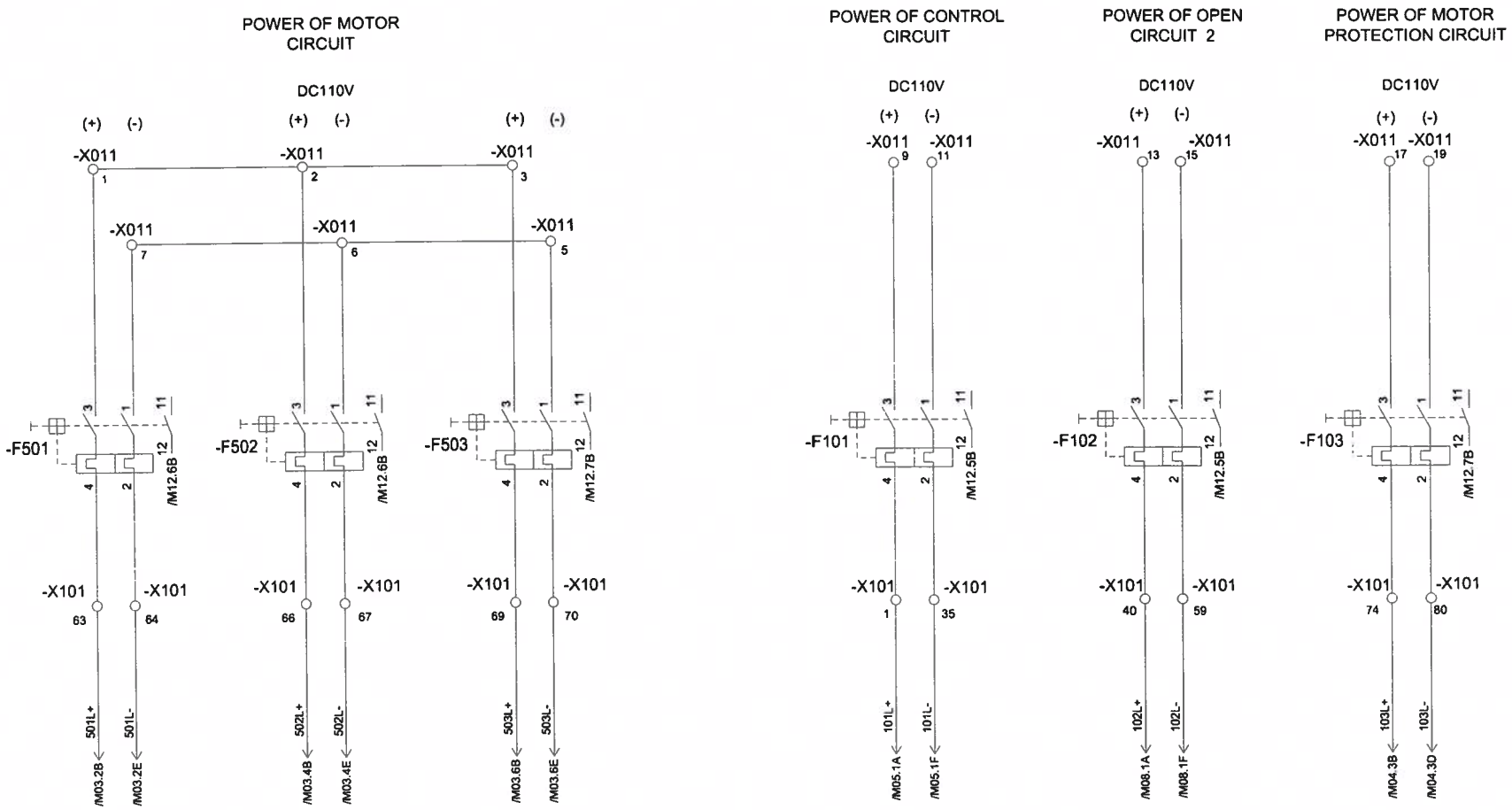
Scale: 1:40

Size: A3 Sheet: A00

Drawing No. : 0SR.303.332 LW58-252(W)T4000-50 SINGLE-POLE

Manufacturer JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

Kawara Trade S.A.



Kawara Trade S.A.

3									
2									
1									

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: DC Power circuit

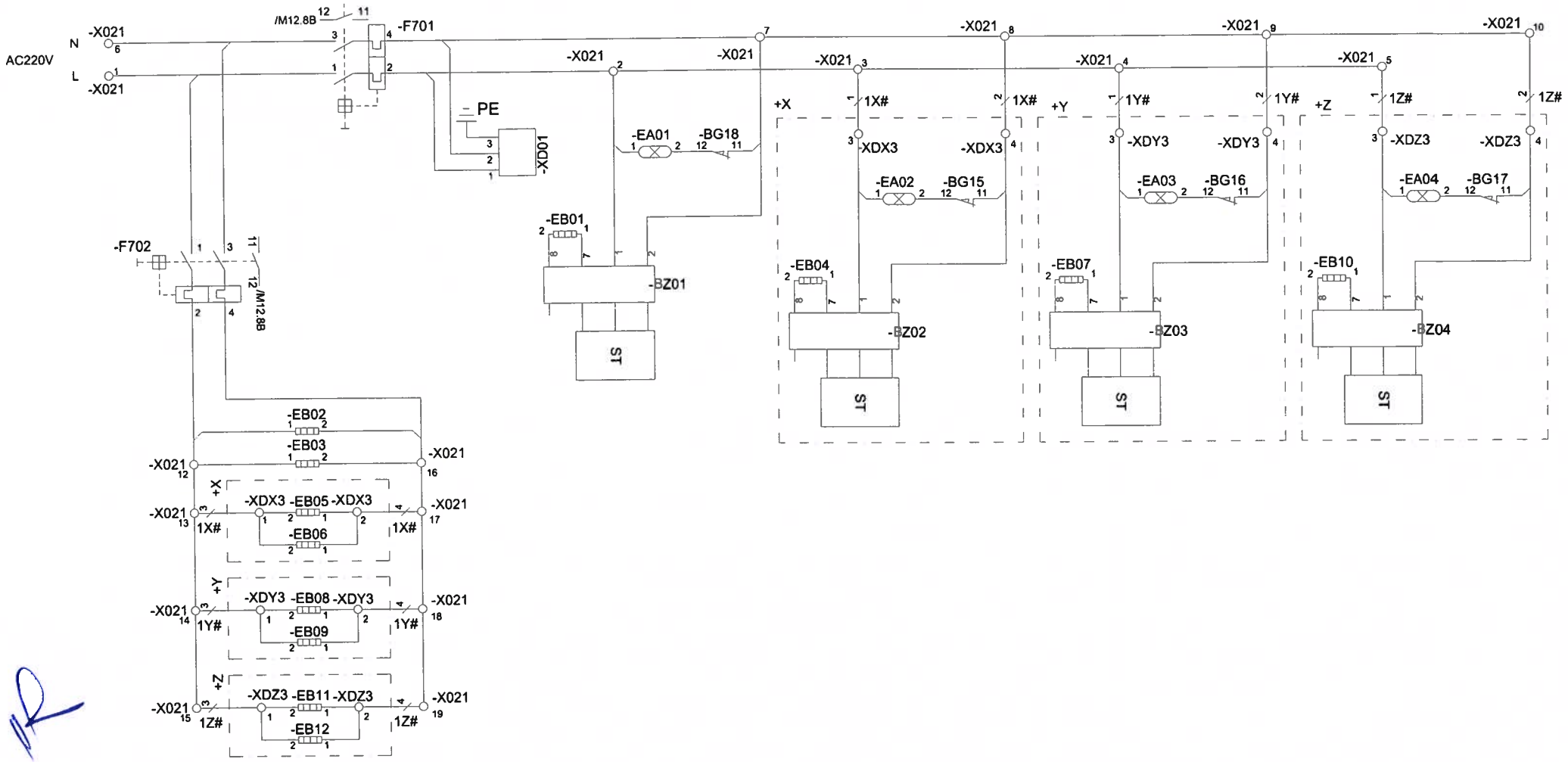
DRAWING NO. 0SR.352.233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	
DATE		

REV.

SHT. M01

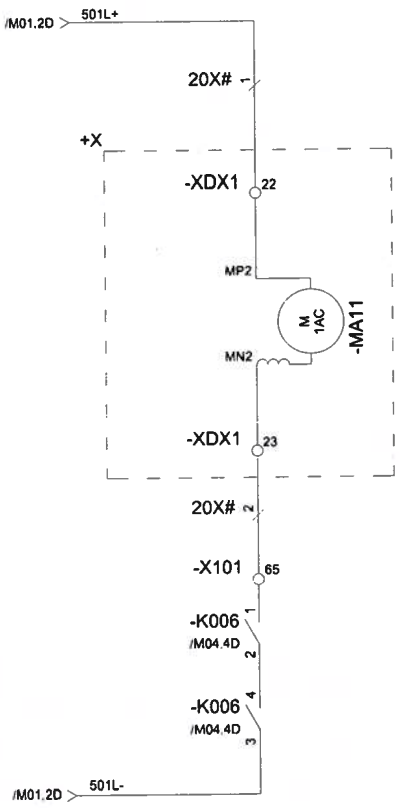
LIGHTING AND HEATER CIRCUIT



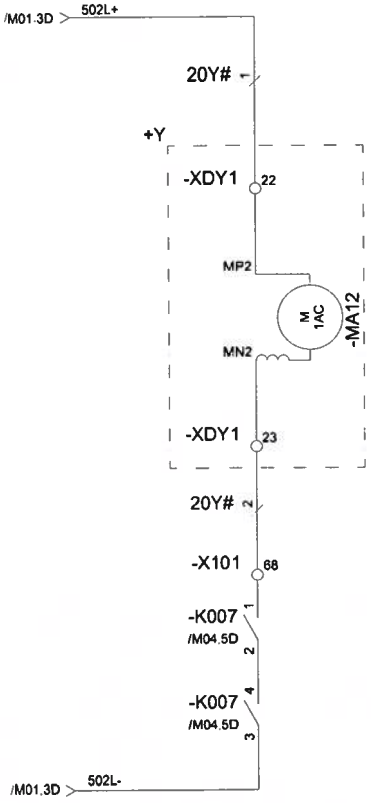
Kawara Trade S.A.

3				Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Heater and lighting	APRROVED CHR	REV.
2							CHECKED ZY	
1						DRAWING NO. 0SR.352.233	DRAWN LT	SHT: M02
							DATE	

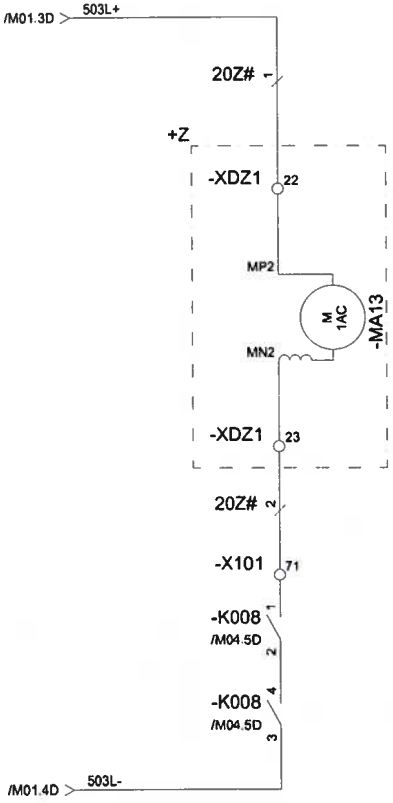
XP MOTOR CIRCUIT



YP MOTOR CIRCUIT



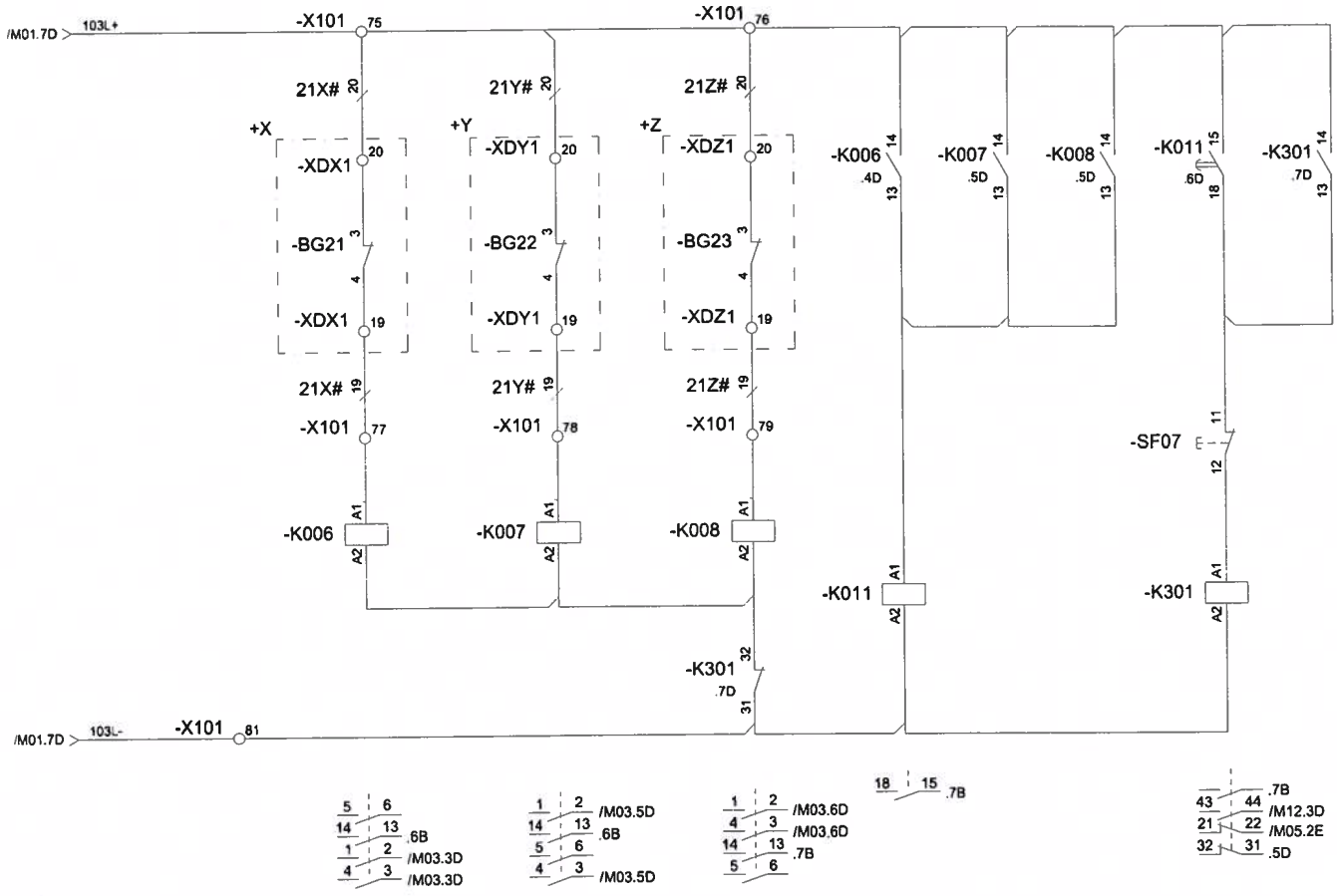
ZP MOTOR CIRCUIT



Kawari Trade S.A.

3					Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Motor circuit	APRROVED	CHR		REV.
2								CHECKED	ZY		
1							DRAWING NO: 0SR.352.233	DRAWN	LT		SHT: M03
								DATE			

MOTOR PROTECTION CIRCUIT

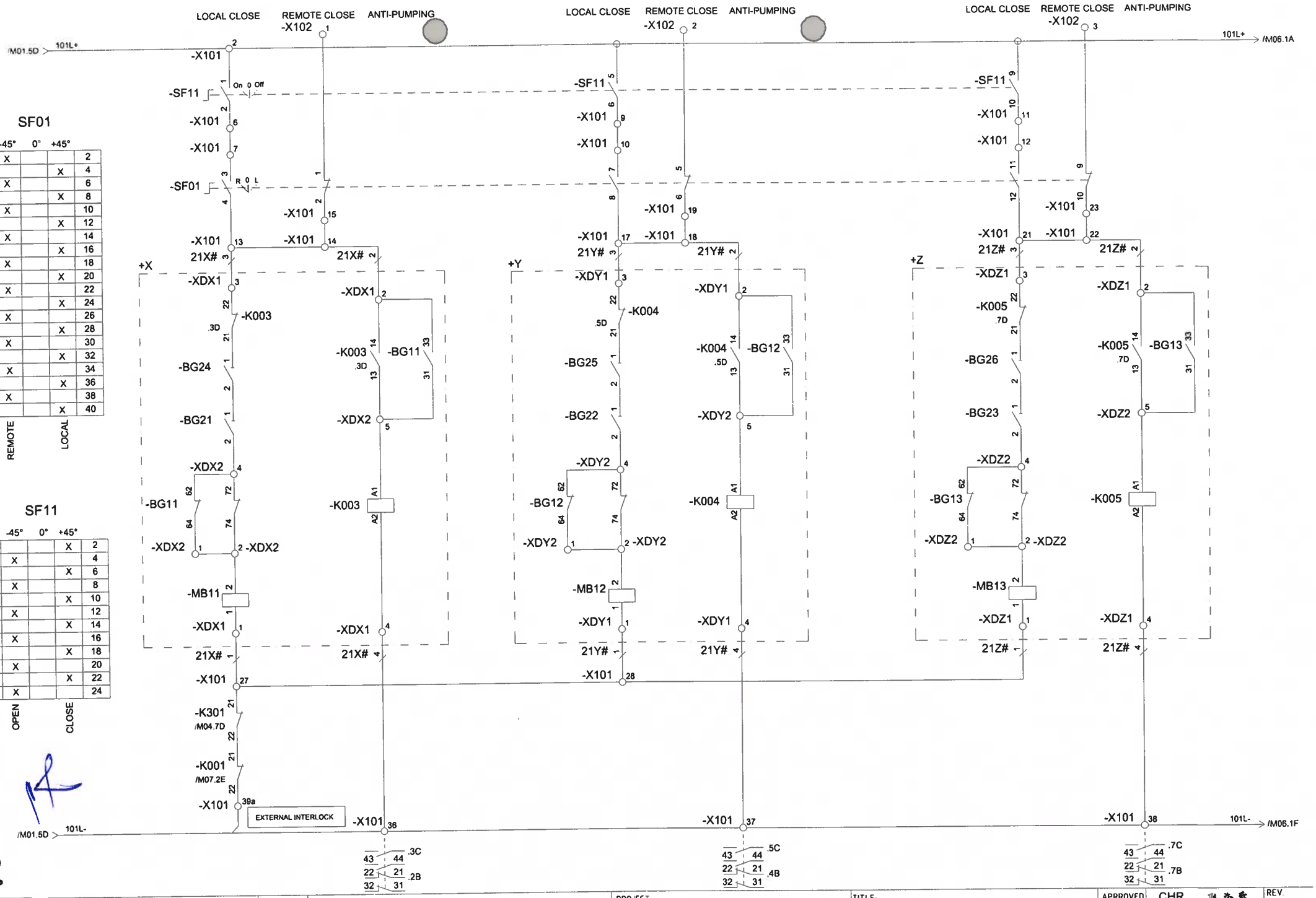


Kawara Trade S.A.

3									
2									
1									

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252	TITLE: Motor protection circuit	APRROVED	CHR	REV
		CHECKED	ZY	
	DRAWING NO: 0SR.352.233	DRAWN	LT	SHT: M04
		DATE		



SF01

	-45°	0°	+45°	
1	X			2
3			X	4
5	X			6
7			X	8
9	X			10
11			X	12
13	X			14
15			X	16
17	X			18
19			X	20
21	X			22
23			X	24
25	X			26
27			X	28
29	X			30
31			X	32
33	X			34
35			X	36
37	X			38
39			X	40

REMOTE LOCAL

SF11

	-45°	0°	+45°	
1			X	2
3	X			4
5			X	6
7	X			8
9			X	10
11	X			12
13			X	14
15	X			16
17			X	18
19	X			20
21			X	22
23	X			24

OPEN CLOSE

Kawara Trade S.A.

3								
2								
1								

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

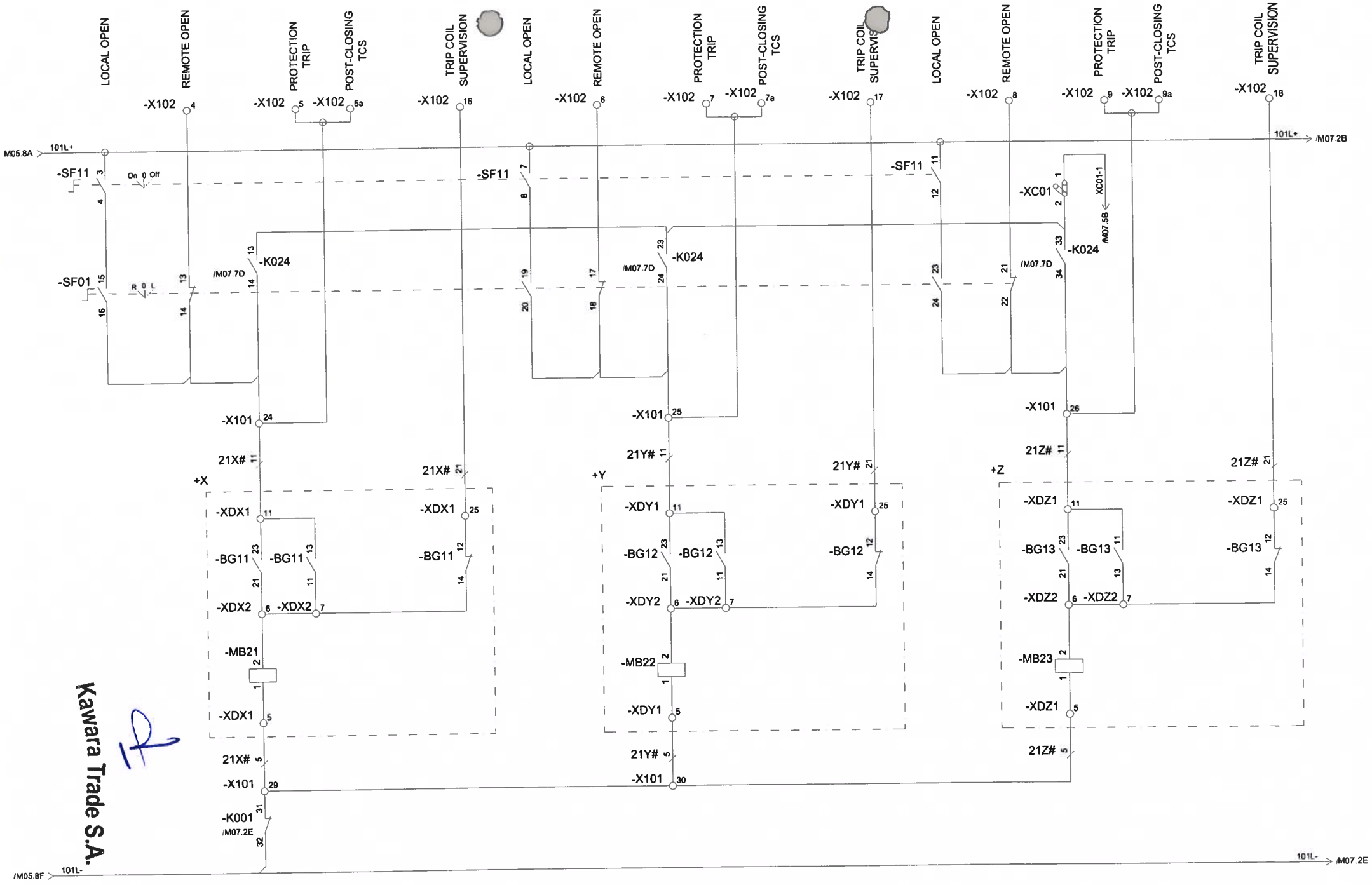
TITLE: Closing circuit

DRAWING NO: 0SR.352.233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	
DATE		

REV.

SHT: M05



Kawara Trade S.A.

3				Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Tripping Circuit 1	APRROVED	CHR	REV.
2							CHECKED	ZY	
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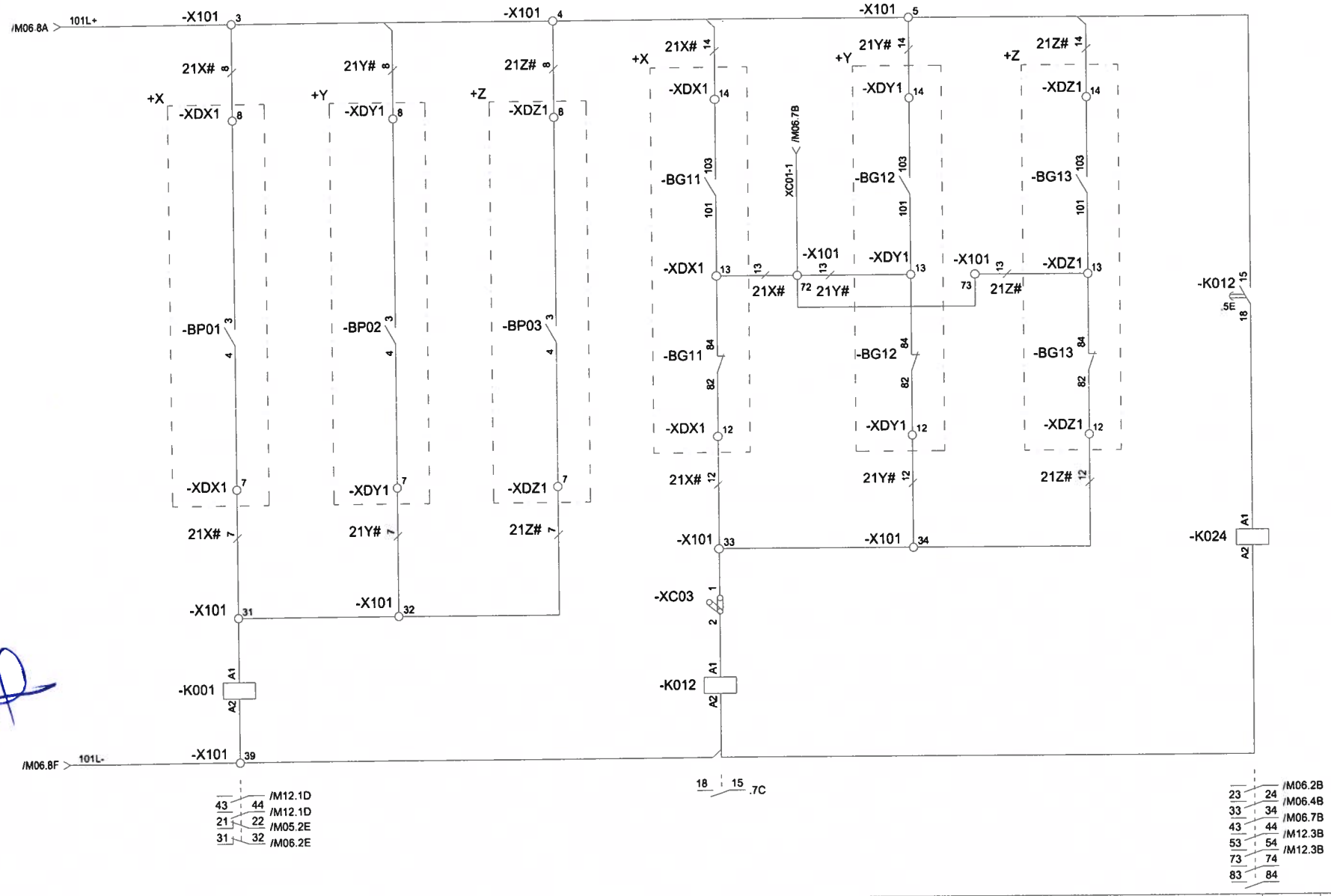
							DATE		

SF6 LOW PRESSURE LOCKING
CIRCUIT 1

POLE DISCREPANCY I



Kawara Trade S.A.

3				Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Low pressure locking & pole discrepancy I	APRROVED	CHR	REV.
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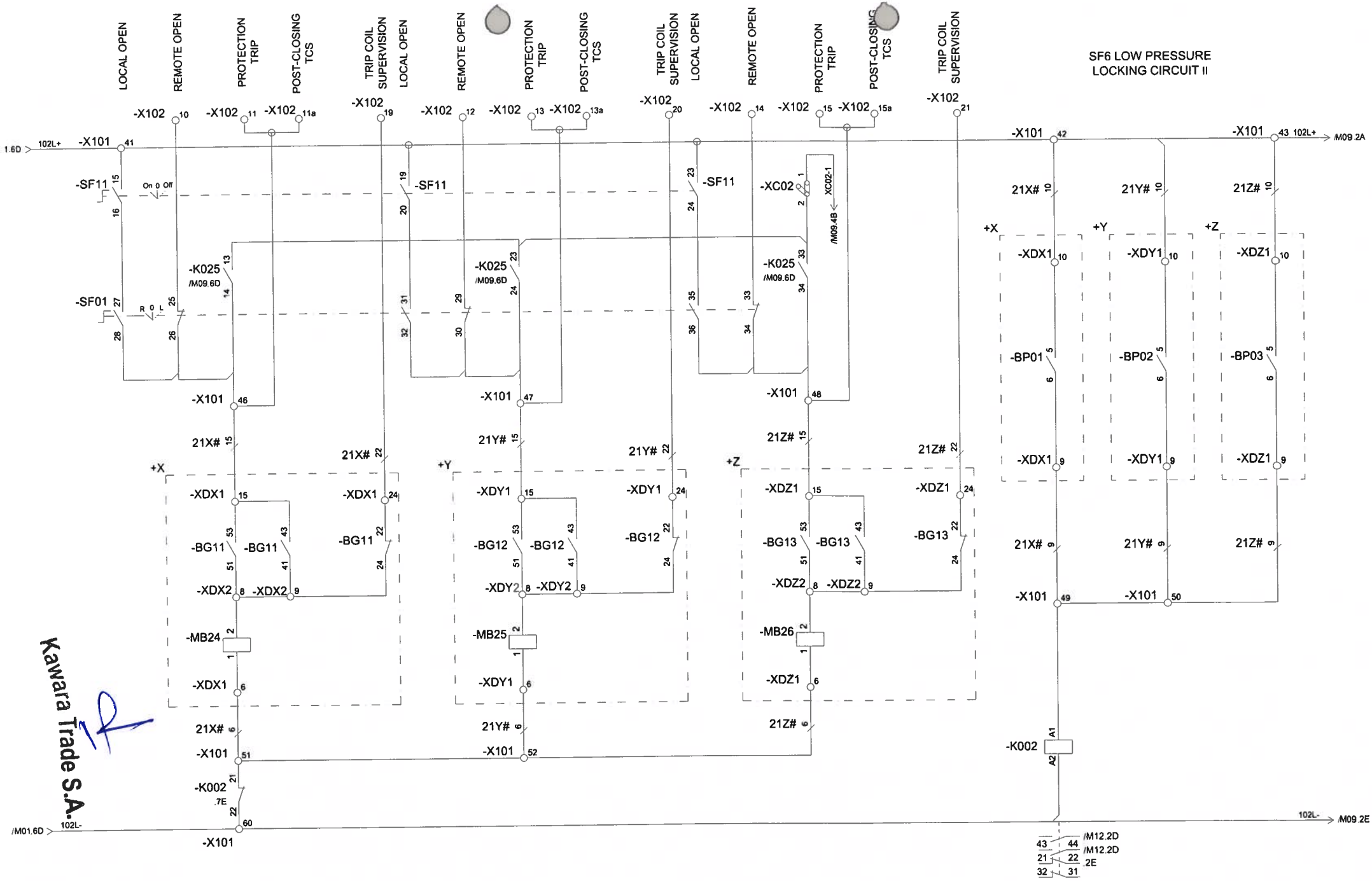
							DATE		



Kawara Trade S.A.

3				Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Tripping circuit 2	APRROVED	CHR	REV.
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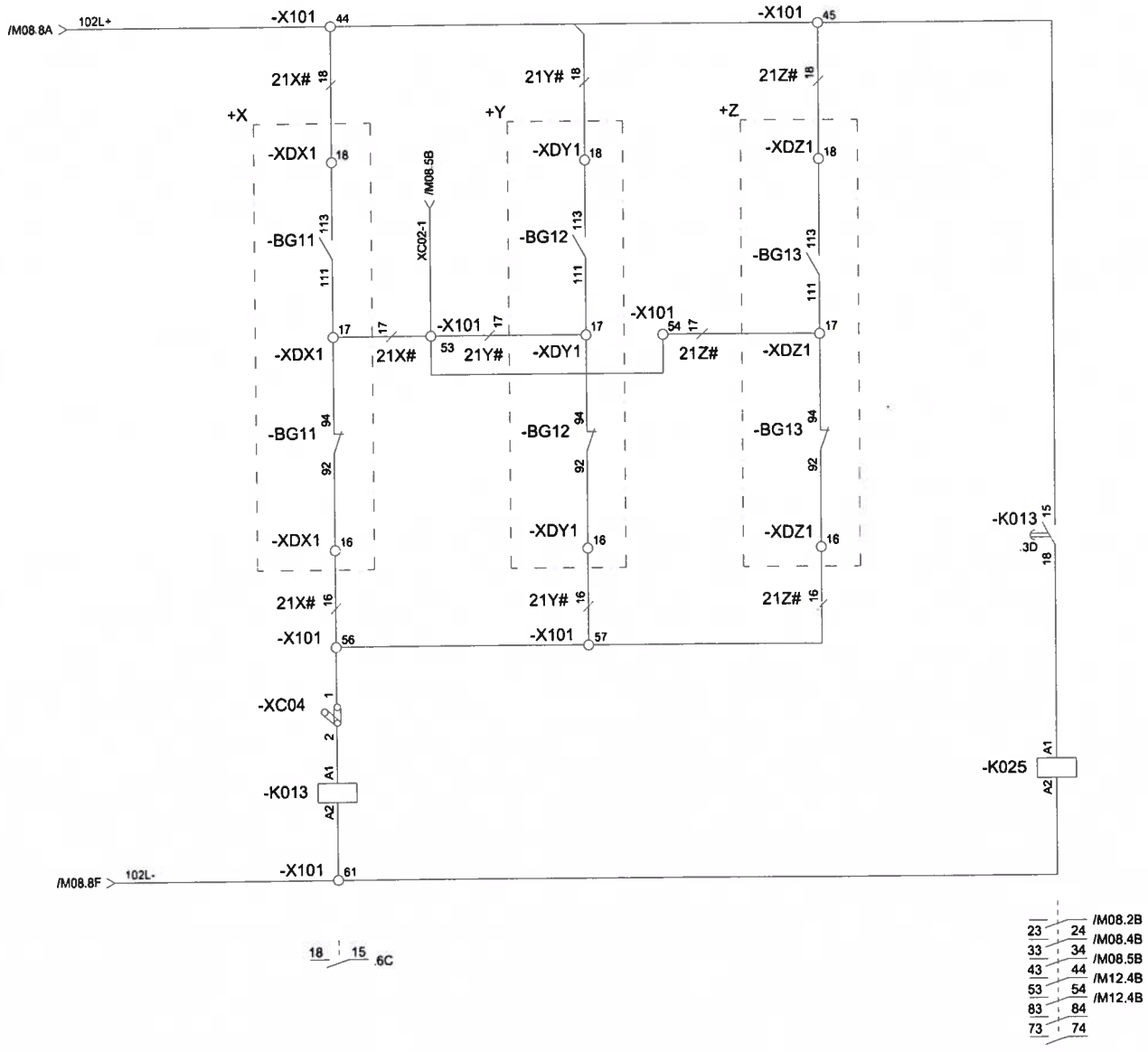
							DATE		

POLE DISCREPANCY II



Kawara Trade S.A.

3					Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Pole discrepancy 2	APRROVED CHR	REV
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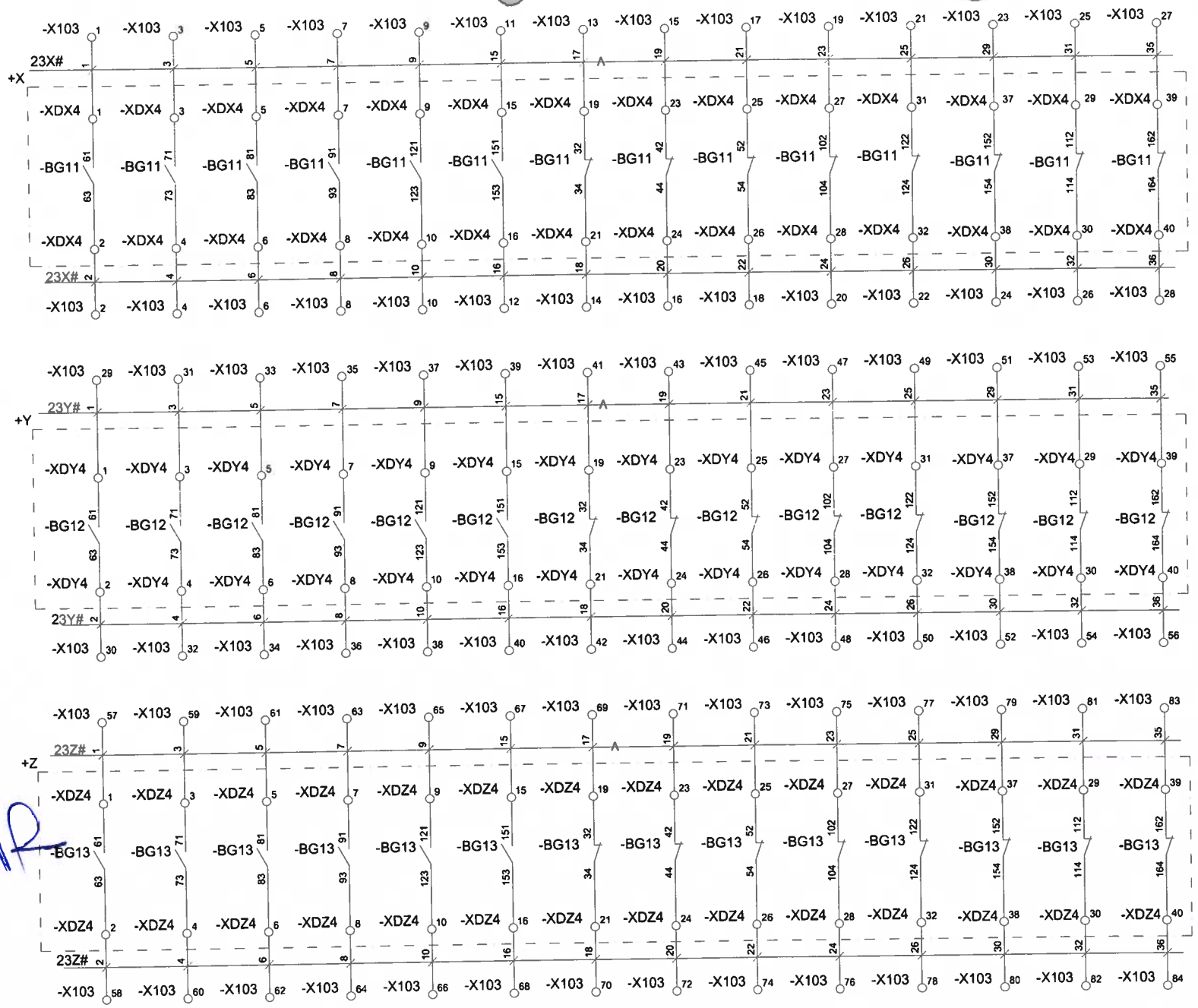
1							DRAWING NO: 0SR.352.233	DRAWN LT	SHT M09
								DATE	

SPARE AUXILIARY CONTACTS



Kawara Trade S.A.

3				Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Spare auxiliary contacts	APRROVED	CHR		REV	
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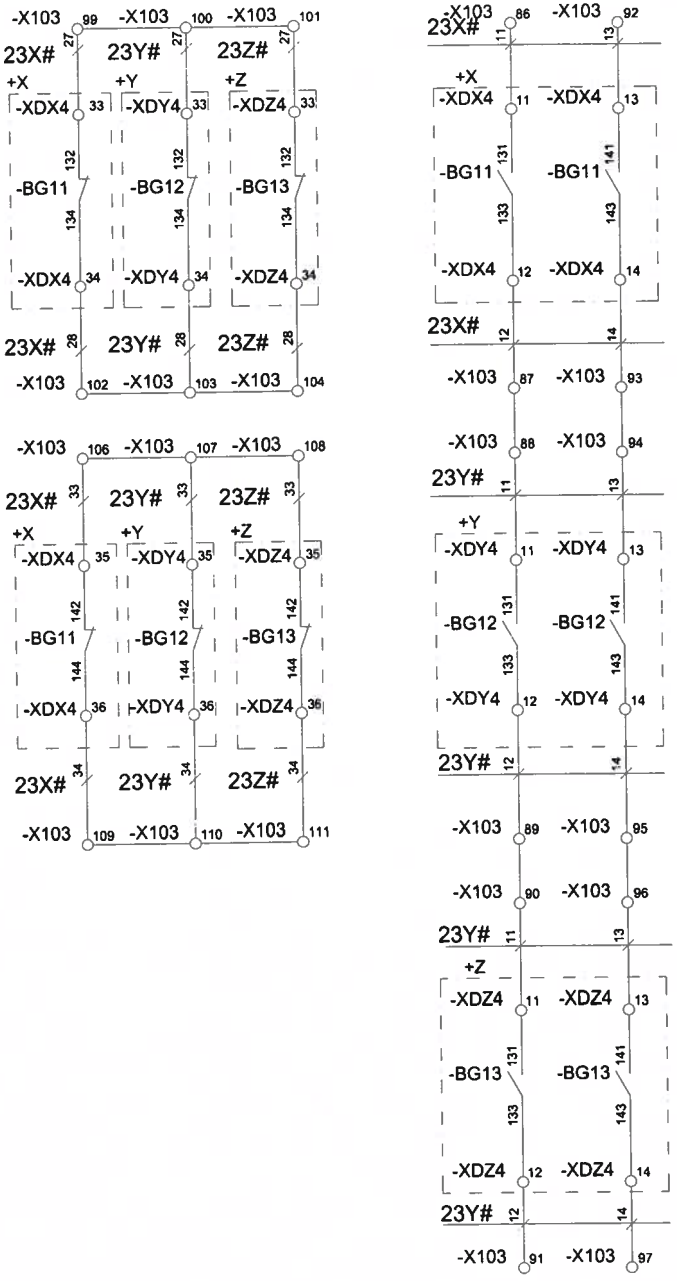
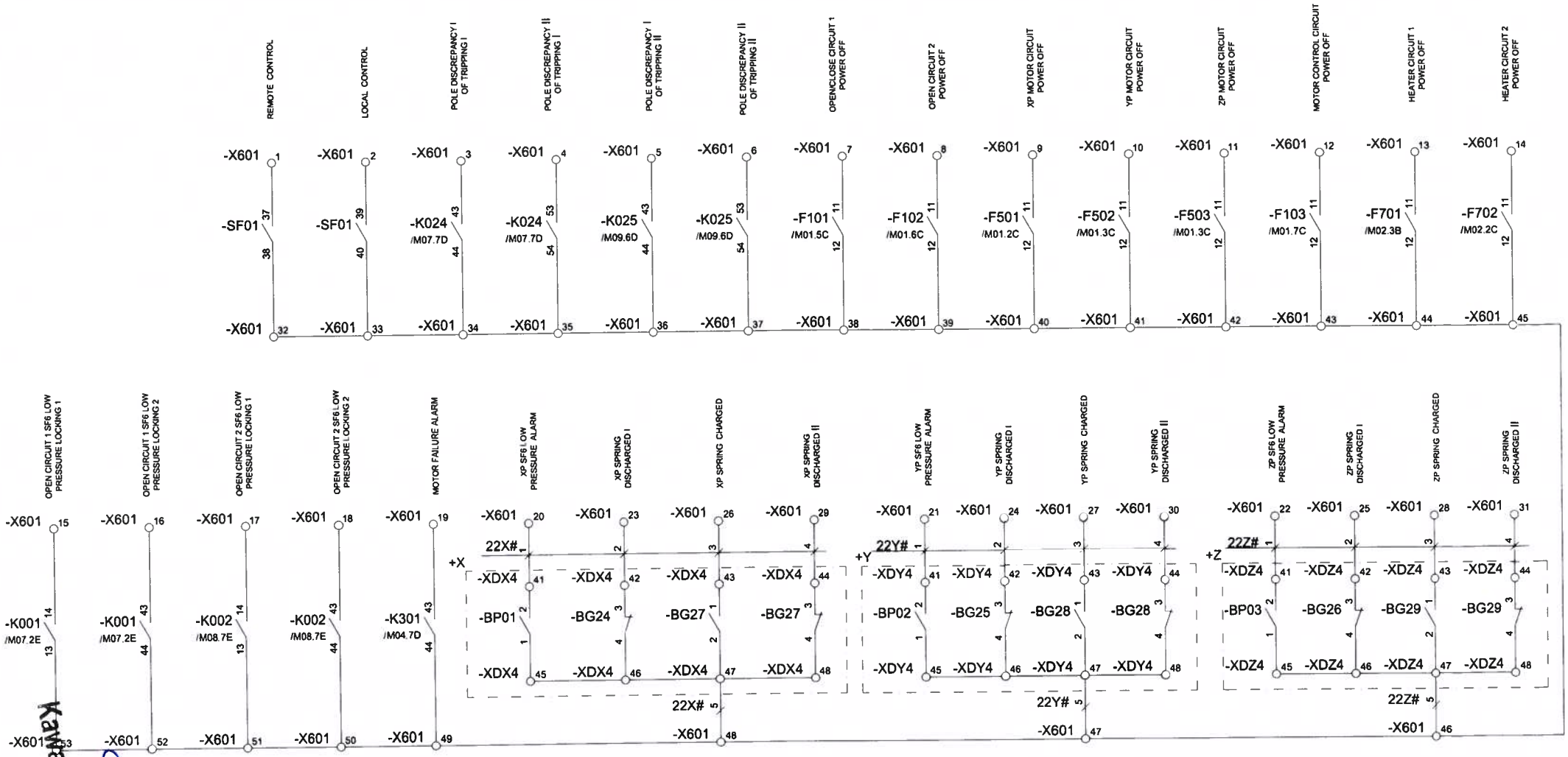
			STATUS				DATE				



Kawara Trade S.A.

3					Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Spare auxiliary contacts	APRROVED	CHR	陈海泰	REV.
2								CHECKED	ZY	张义	
1							DRAWING NO: 0SR.352.233	DRAWN	LT	吕婷	SHT: M11
								DATE			



Kawara Trade S.A.

3											
2											
1											
		DESCRIPTION	STATUS	Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Signal circuit	APRROVED	CHR	REV.		
							CHECKED	ZY			
						DRAWING NO. 0SR.352.233	DRAWN	LT	SHT M12		
							DATE				

External Cable									External Destination				Terminal Block							Internal Destination										Internal Cable
							20X#	21X#					Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation												
Device Comment									Function	Unit	Device	Pin		Terminal Block:-XDX1 Number of Terminals:25						Function	Unit	Device	Pin							Device Comment
								1			-X101	27		1				M05.2D				-MB11	1							Closing electromagnet
								2			-X101	14		2				M05.3B				-BG11	33							
																						-K003	14							
								3			-X101	13		3				M05.2B				-K003	22							
								4			-X101	36		4				M05.3D				-K003	A2							Anti-pumping Relay
								5			-X101	29		5				M06.2E				-MB21	1							Opening electromagnet
								6			-X101	51		6				M08.2E				-MB24	1							Opening electromagnet
								7			-X101	31		7				M07.2D				-BP01	4							
								8			-X101	3		8				M07.2B				-BP01	3							
								9			-X101	49		9				M08.7C				-BP01	6							
								10			-X101	42		10				M08.7B				-BP01	5							
								11			-X101	24		11				M06.2D				-BG11	13							
																						-BG11	23							
								12			-X101	33		12				M07.5D				-BG11	82							
								13			-X101	72		13				M07.5C				-BG11	84							
																						-BG11	101							
								14			-X101	4		14				M07.5B				-BG11	103							
								15			-X101	46		15				M08.2D				-BG11	43							
																						-BG11	53							
								16			-X101	56		16				M09.3D				-BG11	92							
								17			-X101	53		17				M09.3C				-BG11	94							
																						-BG11	111							
								18			-X101	44		18				M09.3B				-BG11	113							
								19			-X101	77		19				M04.4C				-BG21	4							
								20			-X101	75		20				M04.4B				-BG21	3							
														21																
							1				-X101	63		22				M03.3C				-MA11	MP2							Motor
							2				-X101	65		23				M03.3D				-MA11	MN2							Motor
								22			-X102	19		24				M08.3D				-BG11	22							
								21			-X102	16		25				M06.3D				-BG11	12							

General Remarks

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Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO: 0SR.352.233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	
DATE		

REV.

SHT: M13

External Cable	External Destination				Terminal Block						General Remarks				Internal Cable
					Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation					
Device Comment	Function	Unit	Device	Pin		Terminal Block:-XDX2 Number of Terminals:10					Function	Unit	Device	Pin	Device Comment
						1				M05.2D			-BG11	64	
Closing electromagnet			-MB11	2		2				M05.2D			-BG11	74	
						3									
			-BG11	72		4				M05.2C			-BG21	2	Limit switch
													-BG11	62	
			-K003	13		5				M05.3C			-BG11	31	
													-K003	A1	Anti-pumping Relay
Opening electromagnet			-MB21	2		6				M06.2D			-BG11	21	
			-BG11	14		7				M06.2D			-BG11	11	
Opening electromagnet			-MB24	2		8				M08.2D			-BG11	51	
			-BG11	41		9				M08.2D			-BG11	24	
						10									

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0	DATE	BY	DESCRIPTION	STATUS

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO: 0SR.352.233

APPROVED	CHR	
CHECKED	ZY	
DRAWN	LT	
DATE		

REV

SHT: M14

External Cable	1X#	External Destination				Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation	Internal Destination				Internal Cable
Device Comment		Function	Unit	Device	Pin		Terminal Block:-XDX3 Number of Terminals:10					Function	Unit	Device	Pin	Device Comment
	3			-X021	13		1				M02.2D			-EB05	2	Heater
														-EB06	2	Heater
							1a									
	4			-X021	17		2				M02.3D			-EB05	1	Heater
														-EB06	1	Heater
							2a									
	1			-X021	3		3				M02.5B			-BZ02	1	Temperature humidity controller
														-EA02	1	Lamp
	2			-X021	8		4				M02.6B			-BG15	11	Limit switch
														-BZ02	2	Temperature humidity controller
							5									
							6									
							7									
							8									

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Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO: 0SR.352.233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	
DATE		

REV:

SHT: M15

Terminal Block:-XDX4
Number of Terminals:48

External Cable	22X#	23X#	External Destination Function	Unit	Device	Pin	Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation	Internal Destination Function	Unit	Device	Pin	Internal Cable	Device Comment
		1			-X103	1		1				M10.1A			-BG11	61		
		2			-X103	2		2				M10.1B			-BG11	63		
		3			-X103	3		3				M10.2A			-BG11	71		
		4			-X103	4		4				M10.2B			-BG11	73		
		5			-X103	5		5				M10.2A			-BG11	81		
		6			-X103	6		6				M10.2B			-BG11	83		
		7			-X103	7		7				M10.3A			-BG11	91		
		8			-X103	8		8				M10.3B			-BG11	93		
		9			-X103	9		9				M10.3A			-BG11	121		
		10			-X103	10		10				M10.3B			-BG11	123		
		11			-X103	86		11				M11.5A			-BG11	131		
		12			-X103	87		12				M11.5B			-BG11	133		
		13			-X103	92		13				M11.5A			-BG11	141		
		14			-X103	93		14				M11.5B			-BG11	143		
		15			-X103	11		15				M10.3A			-BG11	151		
		16			-X103	12		16				M10.3B			-BG11	153		
								17										
								18										
		17			-X103	13		19				M10.4A			-BG11	32		
								20										
		18			-X103	14		21				M10.4B			-BG11	34		
								22										
		19			-X103	15		23				M10.4A			-BG11	42		
		20			-X103	16		24				M10.4B			-BG11	44		
		21			-X103	17		25				M10.5A			-BG11	52		
		22			-X103	18		26				M10.5B			-BG11	54		
		23			-X103	19		27				M10.5A			-BG11	102		
		24			-X103	20		28				M10.5B			-BG11	104		
		31			-X103	25		29				M10.6A			-BG11	112		
		32			-X103	26		30				M10.6B			-BG11	114		
		25			-X103	21		31				M10.5A			-BG11	122		
		26			-X103	22		32				M10.5B			-BG11	124		
		27			-X103	99		33				M11.3A			-BG11	132		
		28			-X103	102		34				M11.3B			-BG11	134		
		33			-X103	106		35				M11.3C			-BG11	142		
		34			-X103	109		36				M11.3D			-BG11	144		
		29			-X103	23		37				M10.6A			-BG11	152		
		30			-X103	24		38				M10.6B			-BG11	154		
		35			-X103	27		39				M10.6A			-BG11	162		
		36			-X103	28		40				M10.6B			-BG11	164		
	1				-X601	20		41				M12.3D			-BP01	2		
	2				-X601	23		42				M12.4D			-BG24	3		
	3				-X601	26		43				M12.4D			-BG27	1		
	4				-X601	29		44				M12.5D			-BG27	3		
								45		⊖		M12.3E			-BP01	1		
								46		⊖		M12.4E			-BG24	4		
	5				-X601	48		47		⊖		M12.4E			-BG27	2		
								48		⊖		M12.5E			-BG27	4		

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Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO. 0SR.352.233

APRROVED	CHR	陈海泰
CHECKED	ZY	张玉
DRAWN	LT	兰婷
DATE		

REV.

SHT: M16

External Cable	20Y#	21Y#	External Destination				Terminal Block							Internal Destination				Internal Cable
Device Comment			Function	Unit	Device	Pin	Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation		Function	Unit	Device	Pin	Device Comment
								Terminal Block:-XDY1 Number of Terminals:25										
		1			-X101	28		1				M05.4D				-MB12	1	Closing electromagnet
		2			-X101	18		2				M05.5B				-BG12	33	
																-K004	14	
		3			-X101	17		3				M05.4B				-K004	22	
		4			-X101	37		4				M05.5D				-K004	A2	Anti-pumping Relay
		5			-X101	30		5				M06.4E				-MB22	1	Opening electromagnet
		6			-X101	52		6				M08.4E				-MB25	1	Opening electromagnet
		7			-X101	32		7				M07.3D				-BP02	4	
		8			-X101	3		8				M07.3B				-BP02	3	
		9			-X101	50		9				M08.7C				-BP02	6	
		10			-X101	42		10				M08.7B				-BP02	5	
		11			-X101	25		11				M06.4D				-BG12	13	
																-BG12	23	
		12			-X101	34		12				M07.6D				-BG12	82	
		13			-X101	72		13				M07.6C				-BG12	84	
																-BG12	101	
		14			-X101	5		14				M07.6B				-BG12	103	
		15			-X101	47		15				M08.4D				-BG12	43	
																-BG12	53	
		16			-X101	57		16				M09.4D				-BG12	92	
		17			-X101	53		17				M09.4C				-BG12	94	
																-BG12	111	
		18			-X101	44		18				M09.4B				-BG12	113	
		19			-X101	78		19				M04.5C				-BG22	4	
		20			-X101	75		20				M04.5B				-BG22	3	
								21										
	1				-X101	66		22				M03.5C				-MA12	MP2	Motor
	2				-X101	68		23				M03.5D				-MA12	MN2	Motor
		22			-X102	20		24				M08.4D				-BG12	22	
		21			-X102	17		25				M06.6D				-BG12	12	

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Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.LTD

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO:

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV:

SHT:

| External Cable | | |

External Cable		External Destination				Terminal Block							Internal Destination				Internal Cable
	1Y#					Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation						
Device Comment		Function	Unit	Device	Pin		Terminal Block:-XDY3 Number of Terminals:6					Function	Unit	Device	Pin		Device Comment
	3			-X021	14		1				M02.2D			-EB08	2		Heater
														-EB09	2		Heater
							1a										
	4			-X021	18		2				M02.3D			-EB08	1		Heater
														-EB09	1		Heater
							2a										
	1			-X021	4		3				M02.6B			-BZ03	1		Temperature humidity controller
														-EA03	1		Lamp
	2			-X021	9		4				M02.7B			-BG16	11		Limit switch
														-BZ03	2		Temperature humidity controller

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3				Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Terminal Block Diagram	APRROVED	CHR	REV
2							CHECKED	ZY	
						DRAWING NO:	DRAWN	LT	SHT

Terminal Block:-XDY4
Number of Terminals:48

External Cable	22Y#	23Y#	External Destination Function	External Destination Unit	External Destination Device	External Destination Pin	Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation	Internal Destination Function	Internal Destination Unit	Internal Destination Device	Internal Destination Pin	Internal Cable
Device Comment																	Device Comment
		1			-X103	29		1				M10.1C			-BG12	61	
		2			-X103	30		2				M10.1D			-BG12	63	
		3			-X103	31		3				M10.2C			-BG12	71	
		4			-X103	32		4				M10.2D			-BG12	73	
		5			-X103	33		5				M10.2C			-BG12	81	
		6			-X103	34		6				M10.2D			-BG12	83	
		7			-X103	35		7				M10.3C			-BG12	91	
		8			-X103	36		8				M10.3D			-BG12	93	
		9			-X103	37		9				M10.3C			-BG12	121	
		10			-X103	38		10				M10.3D			-BG12	123	
		11			-X103	88		11				M11.5C			-BG12	131	
		12			-X103	89		12				M11.5D			-BG12	133	
		13			-X103	94		13				M11.5C			-BG12	141	
		14			-X103	95		14				M11.5D			-BG12	143	
		15			-X103	39		15				M10.3C			-BG12	151	
		16			-X103	40		16				M10.3D			-BG12	153	
								17									
								18									
		17			-X103	41		19				M10.4C			-BG12	32	
								20									
		18			-X103	42		21				M10.4D			-BG12	34	
								22									
		19			-X103	43		23				M10.4C			-BG12	42	
		20			-X103	44		24				M10.4D			-BG12	44	
		21			-X103	45		25				M10.5C			-BG12	52	
		22			-X103	46		26				M10.5D			-BG12	54	
		23			-X103	47		27				M10.5C			-BG12	102	
		24			-X103	48		28				M10.5D			-BG12	104	
		31			-X103	53		29				M10.6C			-BG12	112	
		32			-X103	54		30				M10.6D			-BG12	114	
		25			-X103	49		31				M10.5C			-BG12	122	
		26			-X103	50		32				M10.5D			-BG12	124	
		27			-X103	100		33				M11.4A			-BG12	132	
		28			-X103	103		34				M11.4B			-BG12	134	
		33			-X103	107		35				M11.4C			-BG12	142	
		34			-X103	110		36				M11.4D			-BG12	144	
		29			-X103	51		37				M10.6C			-BG12	152	
		30			-X103	52		38				M10.6D			-BG12	154	
		35			-X103	55		39				M10.6C			-BG12	162	
		36			-X103	56		40				M10.6D			-BG12	164	
	1				-X601	21		41				M12.5D			-BP02	2	
	2				-X601	24		42				M12.6D			-BG25	3	
	3				-X601	27		43				M12.6D			-BG28	1	
	4				-X601	30		44				M12.6D			-BG28	3	
								45				M12.5E			-BP02	1	
								46				M12.6E			-BG25	4	
	5				-X601	47		47				M12.6E			-BG28	2	
								48				M12.6E			-BG28	4	

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Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO:

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV:

SHT:

External Cable									External Destination				Terminal Block																		Internal Destination												Internal Cable
							20Z#	21Z#					Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation																									
Device Comment									Function	Unit	Device	Pin		Terminal Block:-XDZ1 Number of Terminals:25					Function	Unit	Device	Pin									Device Comment
								1			-X101	28		1				M05.7D			-MB13	1									Closing electromagnet
								2			-X101	22		2				M05.7B			-BG13	33									
																					-K005	14									
								3			-X101	21		3				M05.7B			-K005	22									
								4			-X101	38		4				M05.7D			-K005	A2									Anti-pumping Relay
								5			-X101	30		5				M06.7E			-MB23	1									Opening electromagnet
								6			-X101	52		6				M08.5E			-MB26	1									Opening electromagnet
								7			-X101	32		7				M07.4D			-BP03	4									
								8			-X101	4		8				M07.4B			-BP03	3									
								9			-X101	50		9				M08.8C			-BP03	6									
								10			-X101	43		10				M08.8B			-BP03	5									
								11			-X101	26		11				M06.7D			-BG13	11									
																					-BG13	23									
								12			-X101	34		12				M07.6D			-BG13	82									
								13			-X101	73		13				M07.6C			-BG13	84									
																					-BG13	101									
								14			-X101	5		14				M07.6B			-BG13	103									
								15			-X101	48		15				M08.5D			-BG13	43									
																					-BG13	53									
								16			-X101	57		16				M09.5D			-BG13	92									
								17			-X101	54		17				M09.5C			-BG13	94									
																					-BG13	111									
								18			-X101	45		18				M09.5B			-BG13	113									
								19			-X101	79		19				M04.5C			-BG23	4									
								20			-X101	76		20				M04.5B			-BG23	3									
														21																	
							1				-X101	69		22				M03.6C			-MA13	MP2									Motor
							2				-X101	71		23				M03.6D			-MA13	MN2									Motor
								22			-X102	21		24				M08.6D			-BG13	22									
								21			-X102	18		25				M06.8D			-BG13	12									

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3													
2													

Sieyuan JIANGSU RUGAO HIGH VOLTAGE

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO.

APRROVED	CHR		REV
CHECKED	ZY		
DRAWN	LT		SHT:

External Cable	External Destination				Terminal Block						Internal Destination				Internal Cable
Device Comment	Function	Unit	Device	Pin	Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation	Function	Unit	Device	Pin	Device Comment
						Terminal Block:-XDZ2 Number of Terminals:10									
						1				M05.6D			-BG13	64	
Closing electromagnet			-MB13	2		2				M05.7D			-BG13	74	
						3									
			-BG13	72		4				M05.7C			-BG23	2	Limit switch
													-BG13	62	
			-K005	13		5				M05.7C			-BG13	31	
													-K005	A1	Anti-pumping Relay
Opening electromagnet			-MB23	2		6				M06.7D			-BG13	21	
			-BG13	14		7				M06.7D			-BG13	13	
Opening electromagnet			-MB26	2		8				M08.5D			-BG13	51	
			-BG13	41		9				M08.5D			-BG13	24	
						10									

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3				Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO. LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Terminal Block Diagram	APRROVED CHR	REV
2							CHECKED ZY	
1						DRAWING NO:	DRAWN LT	SHT

External Cable	1Z#	External Destination				Terminal Block							Internal Destination				Internal Cable
Device Comment		Function	Unit	Device	Pin	Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation		Function	Unit	Device	Pin	Device Comment
							Terminal Block:-XDZ3 Number of Terminals:6										
	3			-X021	15		1				M02.2E				-EB11	2	Heater
															-EB12	2	Heater
							1a										
	4			-X021	19		2				M02.3E				-EB11	1	Heater
															-EB12	1	Heater
							2a										
	1			-X021	5		3				M02.8B				-BZ04	1	Temperature humidity controller
															-EA04	1	Lamp
	2			-X021	10		4				M02.8B				-BG17	11	Limit switch
															-BZ04	2	Temperature humidity controller

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3								
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Sievuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO:

APRROVED	CHR		REV:
CHECKED	ZY		
DRAWN	LT		SHT:

Terminal Block:-XDZ4
Number of Terminals:48

External Cable	222#	232#	External Destination				Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation	Internal Destination				Internal Cable
Device Comment			Function	Unit	Device	Pin							Function	Unit	Device	Pin	Device Comment
		1			-X103	57		1				M10.1E			-BG13	61	
		2			-X103	58		2				M10.1E			-BG13	63	
		3			-X103	59		3				M10.2E			-BG13	71	
		4			-X103	60		4				M10.2E			-BG13	73	
		5			-X103	61		5				M10.2E			-BG13	81	
		6			-X103	62		6				M10.2E			-BG13	83	
		7			-X103	63		7				M10.3E			-BG13	91	
		8			-X103	64		8				M10.3E			-BG13	93	
		9			-X103	65		9				M10.3E			-BG13	121	
		10			-X103	66		10				M10.3E			-BG13	123	
		11			-X103	90		11				M11.5E			-BG13	131	
		12			-X103	91		12				M11.5E			-BG13	133	
		13			-X103	96		13				M11.5E			-BG13	141	
		14			-X103	97		14				M11.5E			-BG13	143	
		15			-X103	67		15				M10.3E			-BG13	151	
		16			-X103	68		16				M10.3E			-BG13	153	
								17									
								18									
		17			-X103	69		19				M10.4E			-BG13	32	
								20									
		18			-X103	70		21				M10.4E			-BG13	34	
								22									
		19			-X103	71		23				M10.4E			-BG13	42	
		20			-X103	72		24				M10.4E			-BG13	44	
		21			-X103	73		25				M10.5E			-BG13	52	
		22			-X103	74		26				M10.5E			-BG13	54	
		23			-X103	75		27				M10.5E			-BG13	102	
		24			-X103	76		28				M10.5E			-BG13	104	
		31			-X103	81		29				M10.6E			-BG13	112	
		32			-X103	82		30				M10.6E			-BG13	114	
		25			-X103	77		31				M10.5E			-BG13	122	
		26			-X103	78		32				M10.5E			-BG13	124	
		27			-X103	101		33				M11.4A			-BG13	132	
		28			-X103	104		34				M11.4B			-BG13	134	
		33			-X103	108		35				M11.4C			-BG13	142	
		34			-X103	111		36				M11.4D			-BG13	144	
		29			-X103	79		37				M10.6E			-BG13	152	
		30			-X103	80		38				M10.6E			-BG13	154	
		35			-X103	83		39				M10.6E			-BG13	162	
		36			-X103	84		40				M10.6E			-BG13	164	
	1				-X601	22		41				M12.7D			-BP03	2	
	2				-X601	25		42				M12.7D			-BG26	3	
	3				-X601	28		43				M12.8D			-BG29	1	
	4				-X601	31		44				M12.8D			-BG29	3	
								45				M12.7E			-BP03	1	
								46				M12.7E			-BG26	4	
	5				-X601	46		47				M12.8E			-BG29	2	
								48				M12.8E			-BG29	4	

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Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO:

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV

SHT: M24

External Cable	External Destination				Terminal Block							Internal Destination				Internal Cable
Device Comment	Function	Unit	Device	Pin	Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation		Function	Unit	Device	Pin	Device Comment
						Terminal Block:-X011 Number of Terminals:20										
						1				M01.2B				-F501	3	MCB
						2				M01.3B				-F502	3	MCB
						3				M01.3B				-F503	3	MCB
						4										
						5				M01.4B				-F503	1	MCB
						6				M01.3B				-F502	1	MCB
						7				M01.2B				-F501	1	MCB
						8										
						9				M01.5B				-F101	3	MCB
						10										
						11				M01.5B				-F101	1	MCB
						12										
						13				M01.6B				-F102	3	MCB
						14										
						15				M01.6B				-F102	1	MCB
						16										
						17				M01.7B				-F103	3	MCB
						18										
						19				M01.7B				-F103	1	MCB
						20										

Kawara Trade S.A.

3	Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Terminal Block Diagram	APRROVED	CHR	REV
2				CHECKED	ZY	
1			DRAWING NO.	DRAWN	LT	SHT:

External Cable	1Z#	1Y#	1X#	External Destination				Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation	Internal Destination				Internal Cable
Device Comment				Function	Unit	Device	Pin		Terminal Block:-X021 Number of Terminals:20					Function	Unit	Device	Pin	Device Comment
									1				M02.2B			-F701	1	MCB
MCB						-F701	2		2				M02.4B			-BZ01	1	Temperature humidity controller
																-EA01	1	Lamp
			1		+X	-XDX3	3		3				M02.5B					
		1			+Y	-XDY3	3		4				M02.6B					
	1				+Z	-XDZ3	3		5				M02.8B					
									6				M02.2B			-F701	3	MCB
MCB						-F701	4		7				M02.5B			-BG18	11	Limit switch
																-BZ01	2	Temperature humidity controller
			2		+X	-XDX3	4		8				M02.6B					
		2			+Y	-XDY3	4		9				M02.7B					
	2				+Z	-XDZ3	4		10				M02.8B					
									11									
MCB						-F702	2		12				M02.2D			-EB02	1	Heater
																-EB03	1	Heater
			3		+X	-XDX3	1		13				M02.2D					
		3			+Y	-XDY3	1		14				M02.2D					
	3				+Z	-XDZ3	1		15				M02.2E					
MCB						-F702	4		16				M02.3D			-EB02	2	Heater
																-EB03	2	Heater
			4		+X	-XDX3	2		17				M02.3D					
		4			+Y	-XDY3	2		18				M02.3D					
	4				+Z	-XDZ3	2		19				M02.3E					
									20									

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Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO:

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV:

SHT:

External Cable	21X#	21Z#	21Y#	External Destination				Terminal Block							General Remarks				21X#	21Y#	Internal Cable
								Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation		Internal Destination						
Device Comment				Function	Unit	Device	Pin		Terminal Block:-X101 Number of Terminals:82						Function	Unit	Device	Pin			Device Comment
									1				M01.5D				-F101	4			MCB
						-SF11	11		2				M05.2A				-SF11	1			
		8			+Y	-XDY1	8		3				M07.2B			+X	-XDX1	8	8		
	8				+Z	-XDZ1	8		4				M07.4B			+X	-XDX1	14	14		
		14			+Y	-XDY1	14		5				M07.6B				-K012	15			
	14				+Z	-XDZ1	14														
									6				M05.2A				-SF11	2			
									7				M05.2A				-SF01	3			
									8												
									9				M05.4A				-SF11	6			
									10				M05.4A				-SF01	7			
									11				M05.7A				-SF11	10			
									12				M05.7A				-SF01	11			
	3				+X	-XDX1	3		13				M05.2B				-SF01	4			
	2				+X	-XDX1	2		14				M05.3B								
									15				M05.3B				-SF01	2			
									16												
			3		+Y	-XDY1	3		17				M05.4B				-SF01	8			
			2		+Y	-XDY1	2		18				M05.5B								
									19				M05.5B				-SF01	6			
									20												
		3			+Z	-XDZ1	3		21				M05.7B				-SF01	12			
		2			+Z	-XDZ1	2		22				M05.7B								
									23				M05.7B				-SF01	10			
	11				+X	-XDX1	11		24				M06.2C				-K024	14			
																	-X102	5			
			11		+Y	-XDY1	11		25				M06.4C				-K024	24			
																	-X102	7			
		11			+Z	-XDZ1	11		26				M06.7C				-K024	34			
																	-X102	9			
	1				+X	-XDX1	1		27				M05.2E				-K301	21			
		1			+Z	-XDZ1	1		28				M05.4E			+Y	-XDY1	1		1	
	5				+X	-XDX1	5		29				M06.2E				-K001	31			
		5			+Z	-XDZ1	5		30				M06.4E			+Y	-XDY1	5		5	
	7				+X	-XDX1	7		31				M07.2E				-K001	A1			Low pressure block relay
		7			+Z	-XDZ1	7		32				M07.3E			+Y	-XDY1	7		7	
	12				+X	-XDX1	12		33				M07.5D				-XC03	1			Switching piece
		12			+Z	-XDZ1	12		34				M07.6D			+Y	-XDY1	12		12	
									35				M01.5D				-F101	2			MCB
	4				+X	-XDX1	4		36				M05.3F								
			4		+Y	-XDY1	4		37				M05.5F								
		4			+Z	-XDZ1	4		38				M05.7F				-K001	32			
Relay relay						-K012	A2		39				M07.2E				-K001	A2			Low pressure block relay
									39a				M05.2E				-K001	22			
									40				M01.6D				-F102	4			MCB
						-SF11	23		41				M08.1A				-SF11	15			
			10		+Y	-XDY1	10		42				M08.7A			+X	-XDX1	10	10		
		10			+Z	-XDZ1	10		43				M08.8A								
			18		+Y	-XDY1	18		44				M09.3A			+X	-XDX1	18	18		

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	DATE	DESCRIPTION	STATUS

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO: QSP-252-222

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV

SHT: M07-1

External Cable									External Destination				Terminal Block							Internal Destination								Internal Cable
			20Z#	20Y#	20X#	21Y#	21X#	21Z#					Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation						21Y#	21X#			
Device Comment									Function	Unit	Device	Pin		Terminal Block:-X101 Number of Terminals:82						Function	Unit	Device	Pin					Device Comment
								18		+Z	-XDZ1	18		45				M09.5A				-K013	15					
							15			+X	-XDX1	15		46				M08.2C				-K025	14					
																						-X102	11					
						15				+Y	-XDY1	15		47				M08.4C				-K025	24					
																						-X102	13					
								15		+Z	-XDZ1	15		48				M08.5C				-K025	34					
																						-X102	15					
							9			+X	-XDX1	9		49				M08.7D				-K002	A1					Low pressure block relay
								9		+Z	-XDZ1	9		50				M08.7D			+Y	-XDY1	9	9				
							6			+X	-XDX1	6		51				M08.2E				-K002	21					
								6		+Z	-XDZ1	6		52				M08.4E			+Y	-XDY1	6	6				
							17			+X	-XDX1	17		53				M09.4C				-XC02	1					Switching piece
						17				+Y	-XDY1	17																
								17		+Z	-XDZ1	17		54				M09.4C										
														55														
							16			+X	-XDX1	16		56				M09.3D				-XC04	1					Switching piece
								16		+Z	-XDZ1	16		57				M09.4D			+Y	-XDY1	16	16				
														58														
														59				M01.6D				-F102	2					MCB
											-K002	22		60				M08.2F				-K002	A2					Low pressure block relay
Pole discrepancy relay											-K025	A2		61				M09.3E				-K013	A2					Delay relay
														62														
					1					+X	-XDX1	22		63				M01.2D				-F501	4					MCB
											-K006	3		64				M01.2D				-F501	2					MCB
					2					+X	-XDX1	23		65				M03.3D				-K006	1					
				1						+Y	-XDY1	22		66				M01.3D				-F502	4					MCB
											-K007	3		67				M01.3D				-F502	2					MCB
				2						+Y	-XDY1	23		68				M03.5D				-K007	1					
			1							+Z	-XDZ1	22		69				M01.3D				-F503	4					MCB
											-K008	3		70				M01.4D				-F503	2					MCB
			2							+Z	-XDZ1	23		71				M03.6D				-K008	1					
							13			+X	-XDX1	13		72				M07.5C				-XC01	1					Switching piece
						13				+Y	-XDY1	13																
								13		+Z	-XDZ1	13		73				M07.6C										
														74				M01.7D				-F103	4					MCB
						20				+Y	-XDY1	20		75				M04.4B			+X	-XDX1	20		20			
								20		+Z	-XDZ1	20		76				M04.5B				-K006	14					
							19			+X	-XDX1	19		77				M04.4C				-K006	A1					Contactor
						19				+Y	-XDY1	19		78				M04.5C				-K007	A1					Contactor
								19		+Z	-XDZ1	19		79				M04.5C				-K008	A1					Contactor
														80				M01.7D				-F103	2					MCB
														81				M04.3D				-K301	31					

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DATE	BY	DESCRIPTION	STATUS

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO: QSR 352.233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV

SHT: M27-2

External Cable									External Destination				Terminal Block							Internal Destination								Internal Cable
						21Z#	21Y#	21X#					Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation										
Device Comment									Function	Unit	Device	Pin		Terminal Block:-X102 Number of Terminals:35						Function	Unit	Device	Pin					Device Comment
														1				M05.3A				-SF01	1					
														2				M05.5A				-SF01	5					
														3				M05.7A				-SF01	9					
														4				M06.2A				-SF01	13					
														5				M06.2A				-X101	24					
														5a				M06.3A										
														6				M06.4A				-SF01	17					
														7				M06.5A				-X101	25					
														7a				M06.5A										
														8				M06.6A				-SF01	21					
														9				M06.7A				-X101	26					
														9a				M06.7A										
														10				M08.2A				-SF01	25					
														11				M08.2A				-X101	46					
														11a				M08.2A										
														12				M08.3A				-SF01	29					
														13				M08.4A				-X101	47					
														13a				M08.4A										
														14				M08.5A				-SF01	33					
														15				M08.5A				-X101	48					
														15a				M08.6A										
								21		+X	-XDX1	25		16				M06.3A										
							21			+Y	-XDY1	25		17				M06.6A										
						21				+Z	-XDZ1	25		18				M06.8A										
								22		+X	-XDX1	24		19				M08.3A										
							22			+Y	-XDY1	24		20				M08.4A										
						22				+Z	-XDZ1	24		21				M08.6A										
														22														
														23														
														24														
														25														
														26														
														27														
														28														
														29														

Kawara Trade S.A.

3			
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1			
DATE	BY	DESCRIPTION	STATUS

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO: QSR 352.233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV

SHT: M28

External Cable	23Y#	23X#	External Destination				Terminal Block							Internal Destination				Internal Cable
Device Comment			Function	Unit	Device	Pin	Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation		Function	Unit	Device	Pin	Device Comment
							Terminal Block:-X103 Number of Terminals:120											
		1		+X	-XDX4	1		1				M10.1A						
		2		+X	-XDX4	2		2				M10.1B						
		3		+X	-XDX4	3		3				M10.2A						
		4		+X	-XDX4	4		4				M10.2B						
		5		+X	-XDX4	5		5				M10.2A						
		6		+X	-XDX4	6		6				M10.2B						
		7		+X	-XDX4	7		7				M10.3A						
		8		+X	-XDX4	8		8				M10.3B						
		9		+X	-XDX4	9		9				M10.3A						
		10		+X	-XDX4	10		10				M10.3B						
		15		+X	-XDX4	15		11				M10.3A						
		16		+X	-XDX4	16		12				M10.3B						
		17		+X	-XDX4	19		13				M10.4A						
		18		+X	-XDX4	21		14				M10.4B						
		19		+X	-XDX4	23		15				M10.4A						
		20		+X	-XDX4	24		16				M10.4B						
		21		+X	-XDX4	25		17				M10.5A						
		22		+X	-XDX4	26		18				M10.5B						
		23		+X	-XDX4	27		19				M10.5A						
		24		+X	-XDX4	28		20				M10.5B						
		25		+X	-XDX4	31		21				M10.5A						
		26		+X	-XDX4	32		22				M10.5B						
		29		+X	-XDX4	37		23				M10.6A						
		30		+X	-XDX4	38		24				M10.6B						
		31		+X	-XDX4	29		25				M10.6A						
		32		+X	-XDX4	30		26				M10.6B						
		35		+X	-XDX4	39		27				M10.6A						
		36		+X	-XDX4	40		28				M10.6B						
	1			+Y	-XDY4	1		29				M10.1C						
	2			+Y	-XDY4	2		30				M10.1D						
	3			+Y	-XDY4	3		31				M10.2C						
	4			+Y	-XDY4	4		32				M10.2D						
	5			+Y	-XDY4	5		33				M10.2C						
	6			+Y	-XDY4	6		34				M10.2D						
	7			+Y	-XDY4	7		35				M10.3C						
	8			+Y	-XDY4	8		36				M10.3D						
	9			+Y	-XDY4	9		37				M10.3C						
	10			+Y	-XDY4	10		38				M10.3D						
	15			+Y	-XDY4	15		39				M10.3C						
	16			+Y	-XDY4	16		40				M10.3D						
	17			+Y	-XDY4	19		41				M10.4C						
	18			+Y	-XDY4	21		42				M10.4D						
	19			+Y	-XDY4	23		43				M10.4C						
	20			+Y	-XDY4	24		44				M10.4D						
	21			+Y	-XDY4	25		45				M10.5C						
	22			+Y	-XDY4	26		46				M10.5D						
	23			+Y	-XDY4	27		47				M10.5C						
	24			+Y	-XDY4	28		48				M10.5D						
	25			+Y	-XDY4	31		49				M10.5C						

Kawara Trade S.A.

V	DATE	BY	DESCRIPTION	STATUS

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO. OSR 352 233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV.

SHT.

External Cable	23X#	23Z#	23Y#	External Destination				Terminal Block							Internal Destination				Internal Cable
Device Comment				Function	Unit	Device	Pin	Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation		Function	Unit	Device	Pin	Device Comment
									Terminal Block:-X103 Number of Terminals:120										
		26			+Y	-XDY4	32		50				M10.5D						
		29			+Y	-XDY4	37		51				M10.6C						
		30			+Y	-XDY4	38		52				M10.6D						
		31			+Y	-XDY4	29		53				M10.6C						
		32			+Y	-XDY4	30		54				M10.6D						
		35			+Y	-XDY4	39		55				M10.6C						
		36			+Y	-XDY4	40		56				M10.6D						
	1				+Z	-XDZ4	1		57				M10.1D						
	2				+Z	-XDZ4	2		58				M10.1F						
	3				+Z	-XDZ4	3		59				M10.2D						
	4				+Z	-XDZ4	4		60				M10.2F						
	5				+Z	-XDZ4	5		61				M10.2D						
	6				+Z	-XDZ4	6		62				M10.2F						
	7				+Z	-XDZ4	7		63				M10.3D						
	8				+Z	-XDZ4	8		64				M10.3F						
	9				+Z	-XDZ4	9		65				M10.3D						
	10				+Z	-XDZ4	10		66				M10.3F						
	15				+Z	-XDZ4	15		67				M10.3D						
	16				+Z	-XDZ4	16		68				M10.3F						
	17				+Z	-XDZ4	19		69				M10.4D						
	18				+Z	-XDZ4	21		70				M10.4F						
	19				+Z	-XDZ4	23		71				M10.4D						
	20				+Z	-XDZ4	24		72				M10.4F						
	21				+Z	-XDZ4	25		73				M10.5D						
	22				+Z	-XDZ4	26		74				M10.5F						
	23				+Z	-XDZ4	27		75				M10.5D						
	24				+Z	-XDZ4	28		76				M10.5F						
	25				+Z	-XDZ4	31		77				M10.5D						
	26				+Z	-XDZ4	32		78				M10.5F						
	29				+Z	-XDZ4	37		79				M10.6D						
	30				+Z	-XDZ4	38		80				M10.6F						
	31				+Z	-XDZ4	29		81				M10.6D						
	32				+Z	-XDZ4	30		82				M10.6F						
	35				+Z	-XDZ4	39		83				M10.6D						
	36				+Z	-XDZ4	40		84				M10.6F						
									85										
	11				+X	-XDX4	11		86				M11.5A						
	12				+X	-XDX4	12		87				M11.5B						
		11			+Y	-XDY4	11		88				M11.5C						
		12			+Y	-XDY4	12		89				M11.5D						
	11				+Z	-XDZ4	11		90				M11.5D						
	12				+Z	-XDZ4	12		91				M11.5F						
	13				+X	-XDX4	13		92				M11.5A						
	14				+X	-XDX4	14		93				M11.5B						
		13			+Y	-XDY4	13		94				M11.5C						
		14			+Y	-XDY4	14		95				M11.5D						
	13				+Z	-XDZ4	13		96				M11.5D						
	14				+Z	-XDZ4	14		97				M11.5F						
									98										

Kawara Trade S.A.

3			
2			
1			
DATE	BY	DESCRIPTION	STATUS

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO: OSR 352 233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV

SHT: M29-2

External Cable	23Z#	23Y#	23X#	External Destination				Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation	Internal Destination				Internal Cable
Device Comment				Function	Unit	Device	Pin		Terminal Block:-X103 Number of Terminals:120					Function	Unit	Device	Pin	Device Comment
			27		+X	-XDX4	33		99				M11.3A					
		27			+Y	-XDY4	33		100				M11.4A					
	27				+Z	-XDZ4	33		101				M11.4A					
			28		+X	-XDX4	34		102				M11.3B					
		28			+Y	-XDY4	34		103				M11.4B					
	28				+Z	-XDZ4	34		104				M11.4B					
									105									
			33		+X	-XDX4	35		106				M11.3C					
		33			+Y	-XDY4	35		107				M11.4C					
	33				+Z	-XDZ4	35		108				M11.4C					
			34		+X	-XDX4	36		109				M11.3D					
		34			+Y	-XDY4	36		110				M11.4D					
	34				+Z	-XDZ4	36		111				M11.4D					
									112									
									113									
									114									
									115									
									116									
									117									
									118									
									119									
									120									

Kawara Trade S.A.

3			
2			
1			

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO: OSR 352 233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV:

SHT: M29-3

External Cable	External Destination				Terminal Block						Internal Destination				Internal Cable
					Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation					
Device Comment	Function	Unit	Device	Pin		Terminal Block:-X401 Number of Terminals:12					Function	Unit	Device	Pin	Device Comment
						1									
						2									
						3									
						4									
						5									
						6									
						7									
						8									
						9									
						10									
						11									
						12									

Kawara Trade S.A.

3							
2							
1							

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO. OSR 352 233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV

SHT. M30

External Cable	22Z#	22Y#	22X#	External Destination				Terminal Block							Internal Destination				Internal Cable
								Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation						
Device Comment				Function	Unit	Device	Pin		Terminal Block:-X601 Number of Terminals:54						Function	Unit	Device	Pin	Device Comment
									1				M12.2B				-SF01	37	
									2				M12.3B				-SF01	39	
									3				M12.3B				-K024	43	
									4				M12.3B				-K024	53	
									5				M12.4B				-K025	43	
									6				M12.4B				-K025	53	
									7				M12.5B				-F101	11	
									8				M12.5B				-F102	11	
									9				M12.6B				-F501	11	
									10				M12.6B				-F502	11	
									11				M12.7B				-F503	11	
									12				M12.7B				-F103	11	
									13				M12.8B				-F701	11	
									14				M12.8B				-F702	11	
									15				M12.1D				-K001	14	
									16				M12.1D				-K001	43	
									17				M12.2D				-K002	14	
									18				M12.2D				-K002	43	
									19				M12.3D				-K301	43	
			1		+X	-XDX4	41		20				M12.3D						
		1			+Y	-XDY4	41		21				M12.5D						
	1				+Z	-XDZ4	41		22				M12.7D						
			2		+X	-XDX4	42		23				M12.4D						
		2			+Y	-XDY4	42		24				M12.6D						
	2				+Z	-XDZ4	42		25				M12.7D						
			3		+X	-XDX4	43		26				M12.4D						
		3			+Y	-XDY4	43		27				M12.6D						
	3				+Z	-XDZ4	43		28				M12.8D						
			4		+X	-XDX4	44		29				M12.5D						
		4			+Y	-XDY4	44		30				M12.6D						
	4				+Z	-XDZ4	44		31				M12.8D						
									32				M12.2C				-SF01	38	
									33				M12.3C				-SF01	40	
									34				M12.3C				-K024	44	
									35				M12.3C				-K024	54	
									36				M12.4C				-K025	44	
									37				M12.4C				-K025	54	
									38				M12.5C				-F101	12	
									39				M12.5C				-F102	12	
									40				M12.6C				-F501	12	
									41				M12.6C				-F502	12	
									42				M12.7C				-F503	12	
									43				M12.7C				-F103	12	
									44				M12.8C				-F701	12	
									45				M12.8C				-F702	12	
	5				+Z	-XDZ4	47		46				M12.8E						
		5			+Y	-XDY4	47		47				M12.6E						
			5		+X	-XDX4	47		48				M12.4E						
									49				M12.3E				-K301	44	

Kawara Trade S.A.

3			
2			
1			

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO: 0SR 252 223

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV.

SHT: M31-1

External Cable	External Destination				Terminal Block						Internal Destination				Internal Cable
Device Comment	Function	Unit	Device	Pin	Terminal Segment	Terminal Number	Type	Jumper Wire	Comment	Representation	Function	Unit	Device	Pin	Device Comment
						Terminal Block:-X601 Number of Terminals:54									
						50		○		M12.2E			-K002	44	
						51		○		M12.2E			-K002	13	
						52		○		M12.1E			-K001	44	
						53		○		M12.1E			-K001	13	
						54									

Kawara Trade S.A.

3							
2							
1							

Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.

PROJECT: Electrical schematic drawing of LW58-252

TITLE: Terminal Block Diagram

DRAWING NO: QSR-252-233

APRROVED	CHR	
CHECKED	ZY	
DRAWN	LT	

REV:

SHT: M31-2

Row	Code	Name	Type	Manufacturer	Remarks
1	-BG11	Auxiliary switch	F10-32Ⅱ/W2（16NO16NC）	Shenyang Longdi	
2	-BG15	Limit switch	LWX18-11Z	Shanghai Feili	
3	-BG21	Limit switch	LX-44 CSK2-Za-10C	Zhejiang Gangben	
4	-BG24	Limit switch	LX-44 CSK2-Za-10C	Zhejiang Gangben	
5	-BG27	Limit switch	LX-44 CSK2-Za-10C	Zhejiang Gangben	
6	-BP01	SF6 density meter	MKZ-I	Huawei	
7	-BZ02	Temperature humidity controller	DWS-11DX-3W	Jiangsu Lide	
8	-EA02	Lamp	LED	Rugao Yuquan	
9	-EB04	Heater	PTC-150W3	Jiangsu Lide	
10	-EB05	Heater	PTC-50W3	Jiangsu Lide	
11	-EB06	Heater	PTC-50W3	Jiangsu Lide	
12	-K003	Anti-pumping Relay	MBC6-9/22 DC	Meile	
13	-MA11	Motor	720W	Jiangnan Yifan	
14	-MB11	Closing electromagnet	DC110V	KENDRION	
15	-MB21	Opening electromagnet	DC110V	KENDRION	
16	-MB24	Opening electromagnet	DC110V	KENDRION	
17	-XDX1	Terminals XDR1	RUK5N	Shanghai Hangtong	
18	-XDX2	Terminals XDR2	RUK5N	Shanghai Hangtong	
19	-XDX3	Terminals XER3	RUK5N	Shanghai Hangtong	
20	-XDX4	Terminals XDR4	RUK5N	Shanghai Hangtong	

Kawara Trade S.A.

3				Sieyuan	JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Material list	APRROVED	CHR	REV
2								CHECKED	ZY	
1							DRAWING NO: Material list	DRAWN	LT	SHT:

No.	Code	Name	Type	Manufacturer	Remarks
1	-BG12	Auxiliary switch	F10-32 II /W2（16NO16N	Shenyang Longdi	
2	-BG16	Limit switch	LWX18-11Z	Shanghai Feili	
3	-BG22	Limit switch	LX-44 CSK2-Za-10C	Zhejiang Gangben	
4	-BG25	Limit switch	LX-44 CSK2-Za-10C	Zhejiang Gangben	
5	-BG28	Limit switch	LX-44 CSK2-Za-10C	Zhejiang Gangben	
6	-BP02	SF6 density meter	MKZ-I	Huawei	
7	-BZ03	Temperature humidity controller	DWS-11DX-3W	Jiangsu Lide	
8	-EA03	Lamp	LED	Rugao Yuquan	
9	-EB07	Heater	PTC-150W3	Jiangsu Lide	
10	-EB08	Heater	PTC-50W3	Jiangsu Lide	
11	-EB09	Heater	PTC-50W3	Jiangsu Lide	
12	-K004	Anti-pumping Relay	MBC6-9/22 DC	Meile	
13	-MA12	Motor	720W	Jiangnan Yifan	
14	-MB12	Closing electromagnet	DC110V	KENDRION	
15	-MB22	Opening electromagnet	DC110V	KENDRION	
16	-MB25	Opening electromagnet	DC110V	KENDRION	
17	-XDY1	Terminals XDY1	RUK5N	Shanghai Hangtong	
18	-XDY2	Terminals XDY2	RUK5N	Shanghai Hangtong	
19	-XDY3	Terminals XEY3	RUK5N	Shanghai Hangtong	
20	-XDY4	Terminals XDY4	RUK5N	Shanghai Hangtong	

Kawara Trade S.A.

3				Sieyuan	JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Material list 2	APRROVED	CHR	REV
2								CHECKED	ZY	
1							DRAWING NO: Material list 2	DRAWN	LT	SHT:

No.	Code	Name	Type	Manufacturer	Remarks
1	-BG13	Auxiliary switch	F10-32 II /W2（16NO16NC	Shenyang Longdi	
2	-BG17	Limit switch	LWX18-11Z	Shanghai Feili	
3	-BG23	Limit switch	LX-44 CSK2-Za-10C	Zhejiang Gangben	
4	-BG26	Limit switch	LX-44 CSK2-Za-10C	Zhejiang Gangben	
5	-BG29	Limit switch	LX-44 CSK2-Za-10C	Zhejiang Gangben	
6	-BP03	SF6 density meter	MKZ-I	Huawei	
7	-BZ04	Temperature humidity controller	DWS-11DX-3W	Jiangsu Lide	
8	-EA04	Lamp	LED	Rugao Yuquan	
9	-EB10	Heater	PTC-150W3	Jiangsu Lide	
10	-EB11	Heater	PTC-50W3	Jiangsu Lide	
11	-EB12	Heater	PTC-50W3	Jiangsu Lide	
12	-K005	Anti-pumping Relay	MBC6-9/22 DC	Meile	
13	-MA13	Motor	720W	Jiangnan Yifan	
14	-MB13	Closing electromagnet	DC110V	KENDRION	
15	-MB23	Opening electromagnet	DC110V	KENDRION	
16	-MB26	Opening electromagnet	DC110V	KENDRION	
17	-XDZ1	Terminals XDB1	RUK5N	Shanghai Hangtong	
18	-XDZ2	Terminals XDB2	RUK5N	Shanghai Hangtong	
19	-XDZ3	Terminals XEB3	RUK5N	Shanghai Hangtong	
20	-XDZ4	Terminals XDB4	RUK5N	Shanghai Hangtong	

Kawara Trade S.A.

3					Sieyuan JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Material list 3	APRROVED	CHR	REV
2								CHECKED	ZY	
1							DRAWING NO: Material list 3	DRAWN	LT	SHT:

No.	Code	Name	Tpye	Manufacturer	Remarks
1	-BG18	Limit switch	LWX18-11Z	Shanghai Feili	
2	-BZ01	Temperature humidity controller	DWS-11DX-3W	Jiangsu Lide	
3	-EA01	Lamp	LED	Rugao Yuquan	
4	-EB01	Heater	PTC-100W3	Jiangsu Lide	
5	-EB02	Heater	PTC-50W3	Jiangsu Lide	
6	-EB03	Heater	PTC-50W3	Jiangsu Lide	
7	-F101	MCB	NDB2Z-63 B10/2	Liangxin	
8	-F102	MCB	NDB2Z-63 B10/2	Liangxin	
9	-F103	MCB	NDB2Z-63 B10/2	Liangxin	
10	-F501	MCB	NDB2Z-63 C16/2	Liangxin	
11	-F502	MCB	NDB2Z-63 C16/2	Liangxin	
12	-F503	MCB	NDB2Z-63 C16/2	Liangxin	
13	-F701	MCB	NDB1A-63 C10/2	Liangxin	
14	-F702	MCB	NDB1A-63 C10/2	Liangxin	
15	-K001	Low pressure block relay	MBC6-9/22 DC	Meile	
16	-K002	Low pressure block relay	MBC6-9/22 DC	Meile	
17	-K006	Contactor	CJX4-329Z	Tianshui	
18	-K007	Contactor	CJX4-329Z	Tianshui	
19	-K008	Contactor	CJX4-329Z	Tianshui	
20	-K011	Delay relay	YSDT4S-D22	Hanguo Longshen	
21	-K012	Delay relay	YSDT4S-D22	Hanguo Longshen	
22	-K013	Delay relay	YSDT4S-D22	Hanguo Longshen	
23	-K024	Pole discrepancy relay	UEG/F-8H	ODES	
24	-K025	Pole discrepancy relay	UEG/F-8H	ODES	
25	-K301	Anti-pumping Relay	MBC6-9/22 DC	Meile	
26	-SF01	Local remote transfer switch	LW38A-164D7902/10 TH	Jiangyin Changjiang	
27	-SF07	Reset switch	LA38-01/206B	Jiangyin Changjiang	
28	-SF11	Close open transfer switch	LW38A-164B6610/6 TH	Jiangyin Changjiang	
29	-X011	Terminals X011	RUK5N	Shanghai Hangtong	
30	-X021	Terminals X021	RUK5N	Shanghai Hangtong	
31	-X101	Terminals X101	RUK5N	Shanghai Hangtong	
32	-X102	Terminals X102	RUK5N	Shanghai Hangtong	
33	-X103	Terminals X103	RUK5N	Shanghai Hangtong	
34	-X401	Terminals X401	RUK5N	Shanghai Hangtong	
35	-X601	Terminals X601	RUK5N	Shanghai Hangtong	
36	-XC01	Switching piece	RHW2.5-2B RD	Shanghai Hangtong	
37	-XC02	Switching piece	RHW2.5-2B RD	Shanghai Hangtong	
38	-XC03	Switching piece	RHW2.5-2B RD	Shanghai Hangtong	
39	-XC04	Switching piece	RHW2.5-2B RD	Shanghai Hangtong	
40	-XD01	Socket	220V AC 10A		

Kawara Trade S.A.

3				Sieyuan	JIANGSU RUGAO HIGH VOLTAGE ELECTRIC APPARATUS CO.,LTD.	PROJECT: Electrical schematic drawing of LW58-252	TITLE: Material list 4	APRROVED	CHR	REV.
2								CHECKED	ZY	
1							DRAWING NO: Material list 4	DRAWN	LT	SHT: