

ภาคผนวกที่ 2-5  
รายงานการบำรุงรักษาระบบไฟฟ้า



# ELECTRICAL SYSTEM PREVENTIVE MAINTENANCE REPORT

## SMART CONDO RAMA 2

อาคาร A

Date : APRIL 25, 2024

Descriptions : Preventive maintenance LV  
system

**AKS engineering power Co., Ltd.**  
51/8chonchop Villages, soi saimai 10 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



## AKS engineering power Co., Ltd.

51/8chonchop Villages, soi saimai 10,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758

### Conditions status and meaning



อันตราย ต้องทำการแก้ไขอย่างเร่งด่วน



ไม่ปกติ ไม่สามารถแก้ไขได้ทันที จำเป็นต้องรออะไหล่ เพื่อแก้ไข



เริ่มไม่ปกติ เป็นสัญญาณแจ้งเตือน สามารถใช้งานได้ ส่งผลการใช้งานกับอุปกรณ์ระยะยาว ควรพิจารณาทำการแก้ไข



ปกติ การทำงาน และสภาพโดยทั่วไปปกติ ควรตรวจสอบ และดูแลแนวโน้มในครั้งถัดไป

### SUMMARY TEST REPORTS

No.	Equipments name	Descriptions	Status
1	<b>อาคาร A</b>		
1.1	TR.	1 สภาพตู้โดยทั่วไปปกติ	
1.2	ตู้MDB	1. สภาพตู้โดยทั่วไปปกติ	
1.3	ACB	1. Cover Setting ETUไม่มี 2. Status charge sping หัก 3. Function Ground ปิดใช้งาน	
1.4	CAP BANK	1. หน้าจอ PFC เสื่อมสภาพ 2. สาย R didshard ชำรุด	
2	<b>Grounding TR System</b>		
2.1		1. ค่าGround ปกติ	



## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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# ELECTRICAL SYSTEM PREVENTIVE MAINTENANCE REPORT

## SMART CONDO RAMA 2

อาคาร B

Date : APRIL 25, 2024

Descriptions : Preventive maintenance LV  
system

**AKS engineering power Co., Ltd.**  
51/8chonchop Villages, soi saimai 10 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



## AKS engineering power Co., Ltd.

51/8chonchop Villages, soi saimai 10,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758

### Conditions status and meaning



อันตราย ต้องทำการแก้ไขอย่างเร่งด่วน



ไม่ปกติ ไม่สามารถแก้ไขได้ทันที จำเป็นต้องรออะไหล่ เพื่อแก้ไข



เริ่มไม่ปกติ เป็นสัญญาณแจ้งเตือน สามารถใช้งานได้ ส่งผลการใช้งานกับอุปกรณ์ระยะยาว ควรพิจารณาทำการแก้ไข



ปกติ การทำงาน และสภาพโดยทั่วไปปกติ ควรตรวจสอบ และดูแลแนวโน้มในครั้งถัดไป

### SUMMARY TEST REPORTS

No.	Equipments name	Descriptions	Status
1	อาคาร B		
1.1	TR.	1 สภาพตู้โดยทั่วไปปกติ	
1.2	ตู้MDB	1. สภาพตู้โดยทั่วไปปกติ	
1.3	ACB	1. Cover Setting ETUไม่มี	
1.4	CAP BANK	1. หน้าจอ PFCเสื่อมสภาพ	
2	Grounding TR System		
2.1		1. ค่าGround ปกติ	



## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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3 Cover Setting ETUไม่มี



## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 0636538758







## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 0636538758





## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758





# ELECTRICAL SYSTEM PREVENTIVE MAINTENANCE REPORT

## SMART CONDO RAMA 2

อาคาร C

Date : JANUARY 15, 2024

Descriptions : Preventive maintenance LV  
system

**AKS engineering power Co., Ltd.**  
51/8chonchop Villages, soi saimai 10 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758



## AKS engineering power Co., Ltd.

51/8chonchop Villages, soi saimai 10,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

### Conditions status and meaning



อันตราย ต้องทำการแก้ไขอย่างเร่งด่วน



ไม่ปกติ ไม่สามารถแก้ไขได้ทันที จำเป็นต้องรออะไหล่ เพื่อแก้ไข



เริ่มไม่ปกติ เป็นสัญญาณแจ้งเตือน สามารถใช้งานได้ ส่งผลการใช้งานกับอุปกรณ์ระยะยาว ควรพิจารณาทำการแก้ไข



ปกติ การทำงาน และสภาพโดยทั่วไปปกติ ควรตรวจสอบ และดูแลแนวโน้มในครั้งถัดไป

### SUMMARY TEST REPORTS

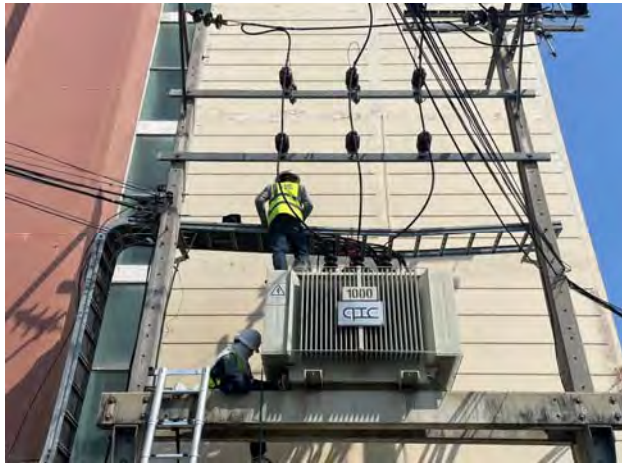
No.	Equipments name	Descriptions	Status
1	อาคาร C		
1.1	TR.	1. รangkaianแรงต่ำชำรุด	
1.2	ตู้MDB	1. สภาพตู้โดยทั่วไปปกติ	
1.3	ACB	1. Cover Setting ETUไม่มี	
1.4	CAP BANK	1. หน้าจอ PFCเสื่อมสภาพ	
2	Grounding TR System		
2.1		1. ค่าGround ปกติ	





# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758



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## AKS engineering power Co., Ltd.

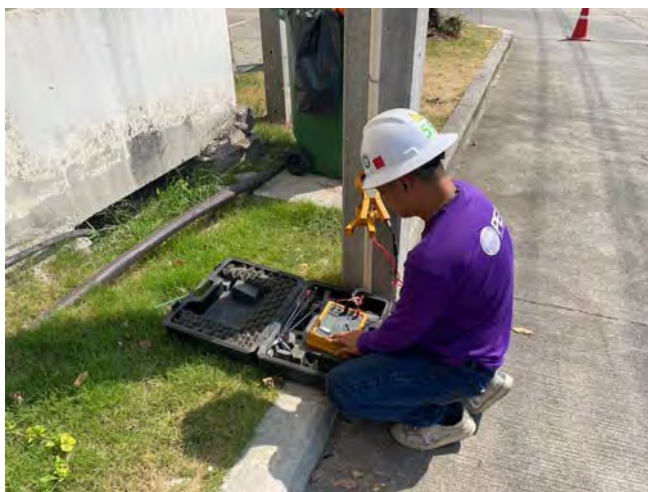
62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758



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## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758



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## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. 063-6538758



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## AKS engineering power Co., Ltd.

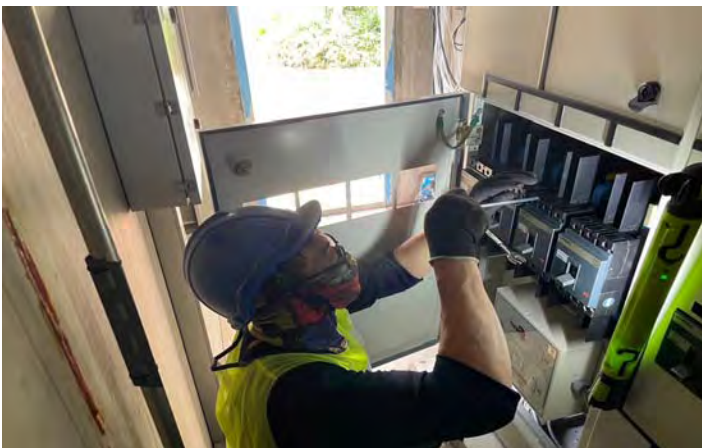
62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758



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## AKS engineering power Co., Ltd.

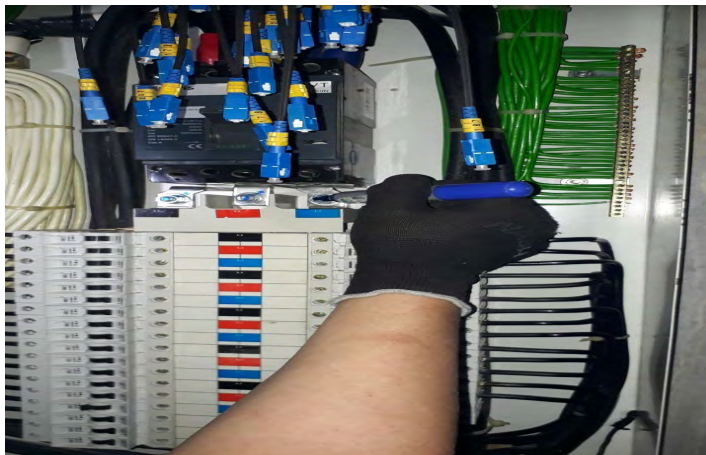
62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758



16



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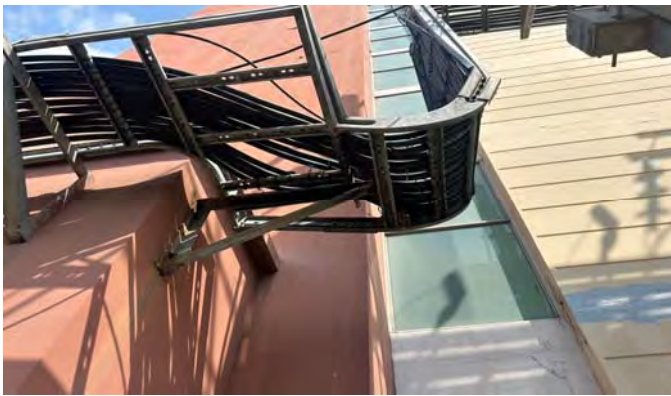


## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758



19 หน้าจอ PFC เสื่อมสภาพ



20 รางสายต้านแรงต่ำชำรุด



21 Cover Setting ETUไม่มี

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## **Infrared Report**

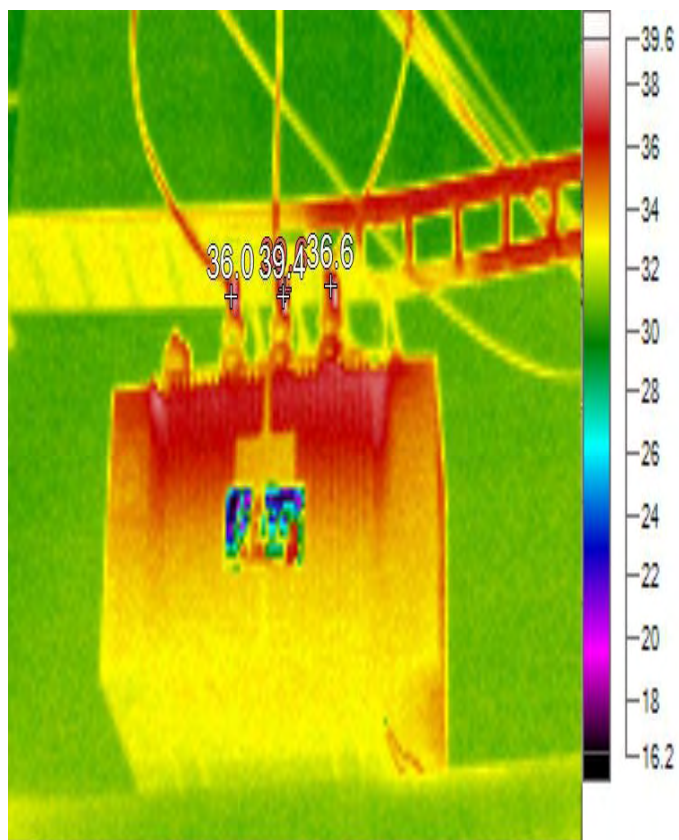
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Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร C smart condo
Equipment	TR	Equipment Name:	TR อาคาร C
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000616.IS2

1/12/2024 10:05:28 AM

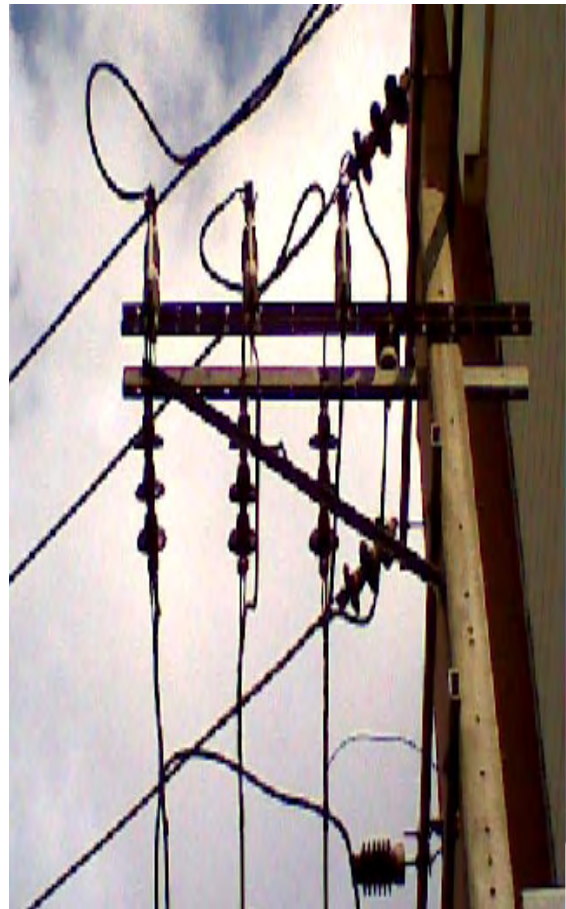
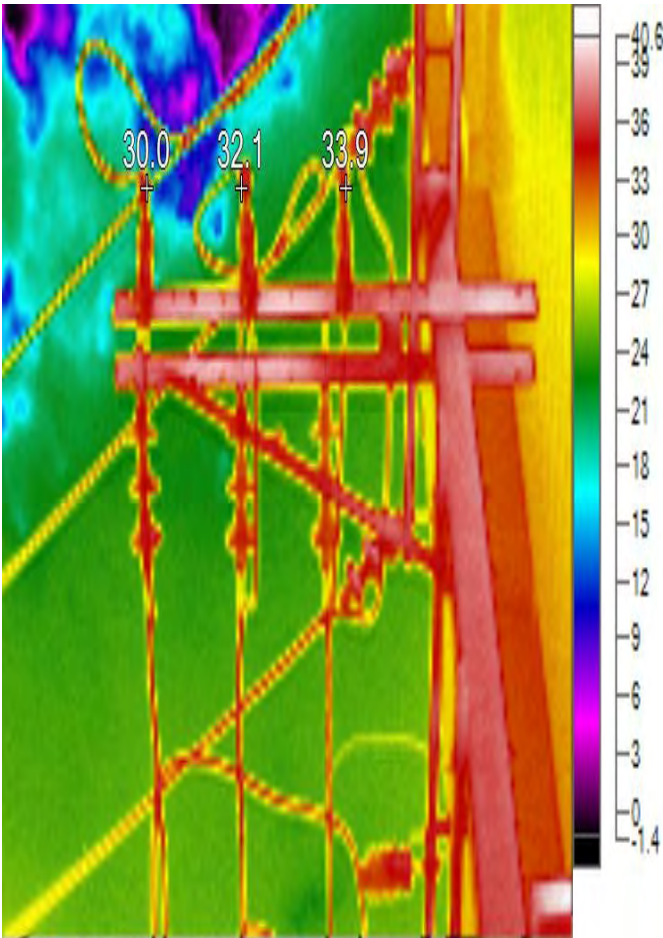


### Main Image Markers

Name	Temperature	Emissivity
Hot	39.6°C	0.95
P0	36.0°C	0.95
P1	39.4°C	0.95
P2	36.6°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร C Smart condo
Equipment	DROP FUSE	Equipment Name:	TR อาคาร C
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000617.IS2

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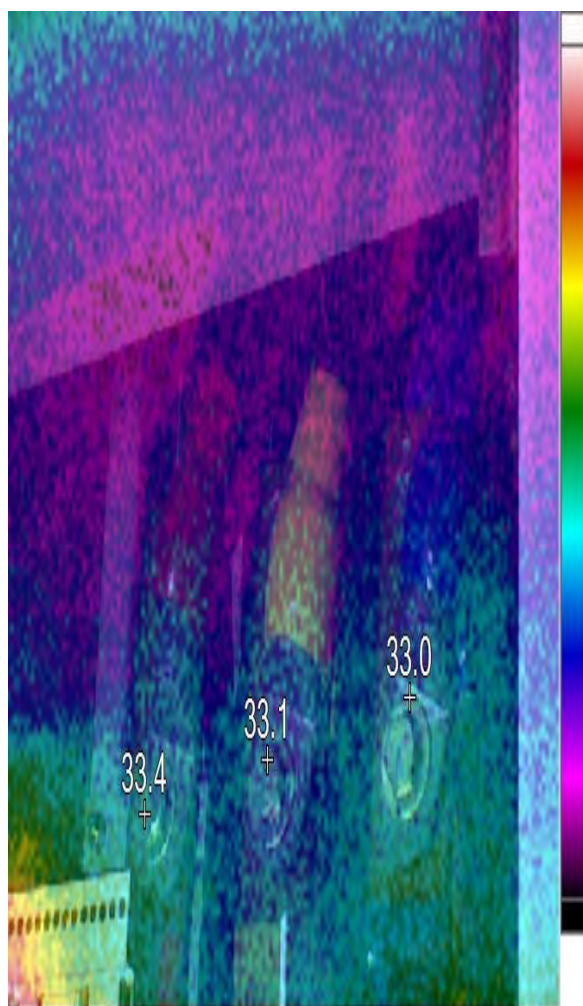
### Main Image Markers

Name	Temperature	Emissivity
P0	30.0°C	0.95
P1	32.1°C	0.95
P2	33.9°C	0.95



Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร C smart condo
Equipment	ACB	Equipment Name:	MAIN ACB
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000618.IS2

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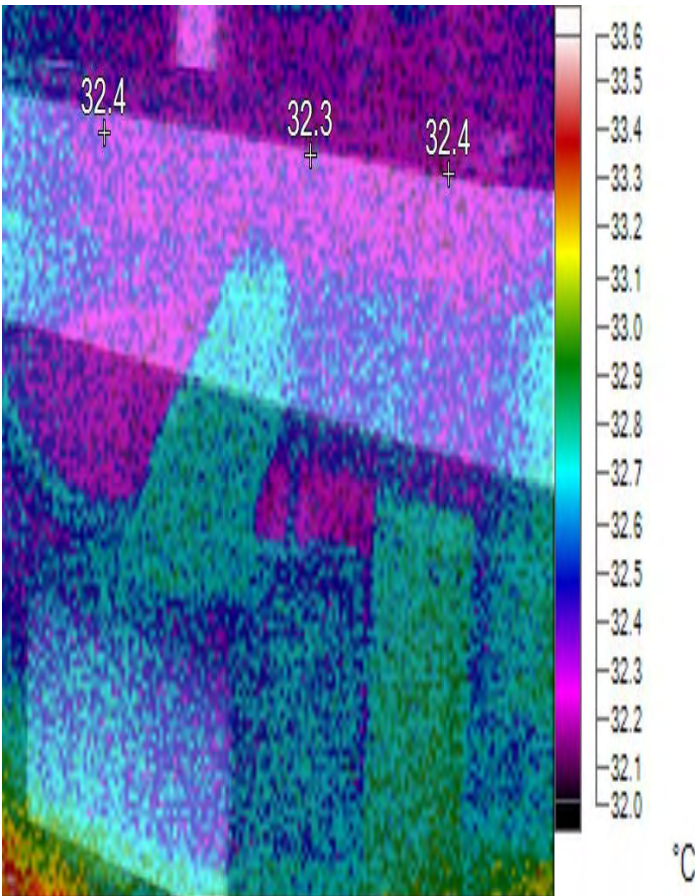


### Main Image Markers

Name	Temperature	Emissivity
P0	33.4°C	0.95
P1	33.1°C	0.95
P2	33.0°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร C smart condo
Equipment	ACB	Equipment Name:	MAIN ACB
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000619.IS2

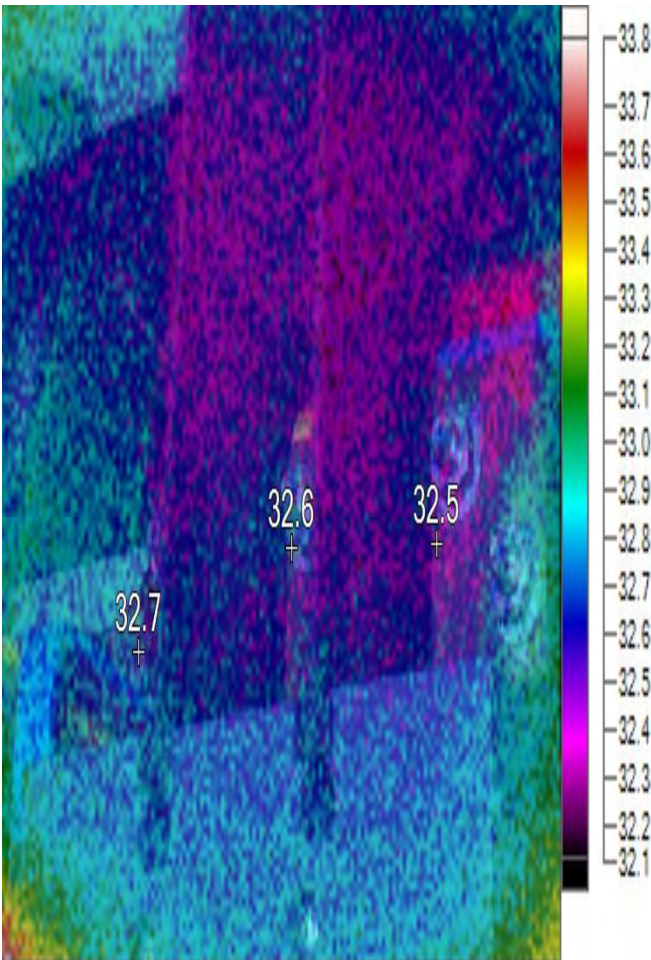
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#### Main Image Markers

Name	Temperature	Emissivity
P0	32.4°C	0.95
P1	32.3°C	0.95
P2	32.4°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร C smart condo
Equipment	MCCB	Equipment Name:	MAIN CAP
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000620.IS2

1/12/2024 10:09:46 AM



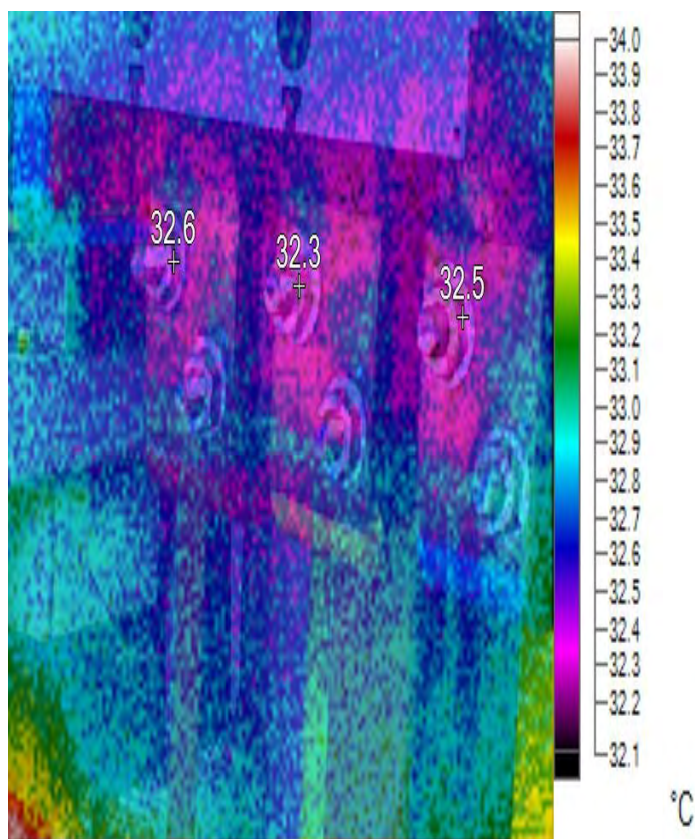
#### Main Image Markers

Name	Temperature	Emissivity
P0	32.7°C	0.95
P1	32.6°C	0.95
P2	32.5°C	0.95



Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร Csmart condo
Equipment	MCCB	Equipment Name:	MAIN CAP
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000621.IS2

1/12/2024 10:09:56 AM

### Main Image Markers

Name	Temperature	Emissivity
P0	32.6°C	0.95
P1	32.3°C	0.95
P2	32.5°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร C smart condo
Equipment	CAPBANK	Equipment Name:	Step1,2
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000622.IS2

1/12/2024 10:10:51 AM

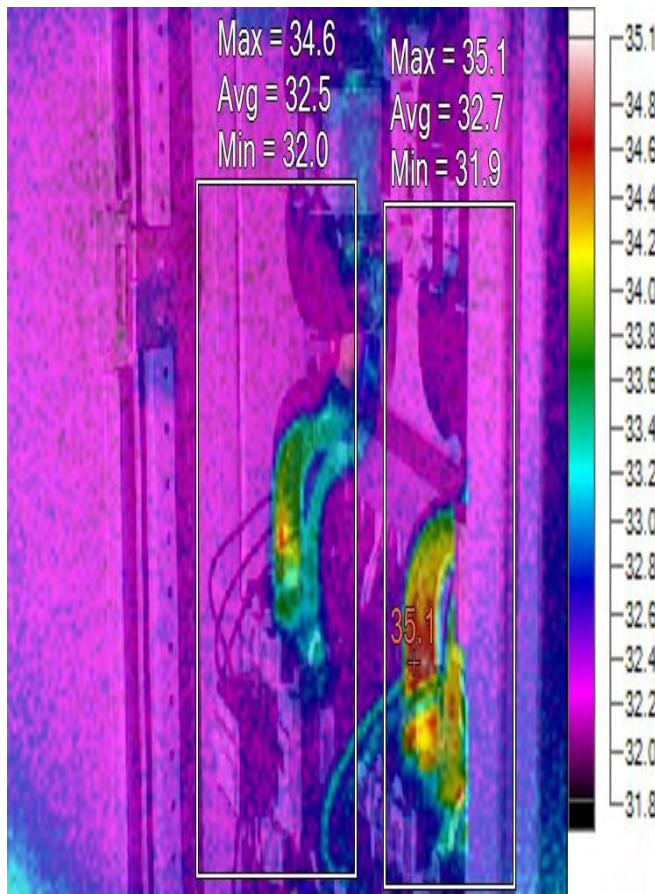
#### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	32.8°C	32.1°C	35.9°C	0.95	0.54
A1	33.0°C	32.2°C	36.1°C	0.95	0.85

Name	Temperature	Emissivity
Hot	36.1°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร C smart condo
Equipment	CAPBANK	Equipment Name:	Step3,4
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000623.IS2

1/12/2024 10:11:12 AM

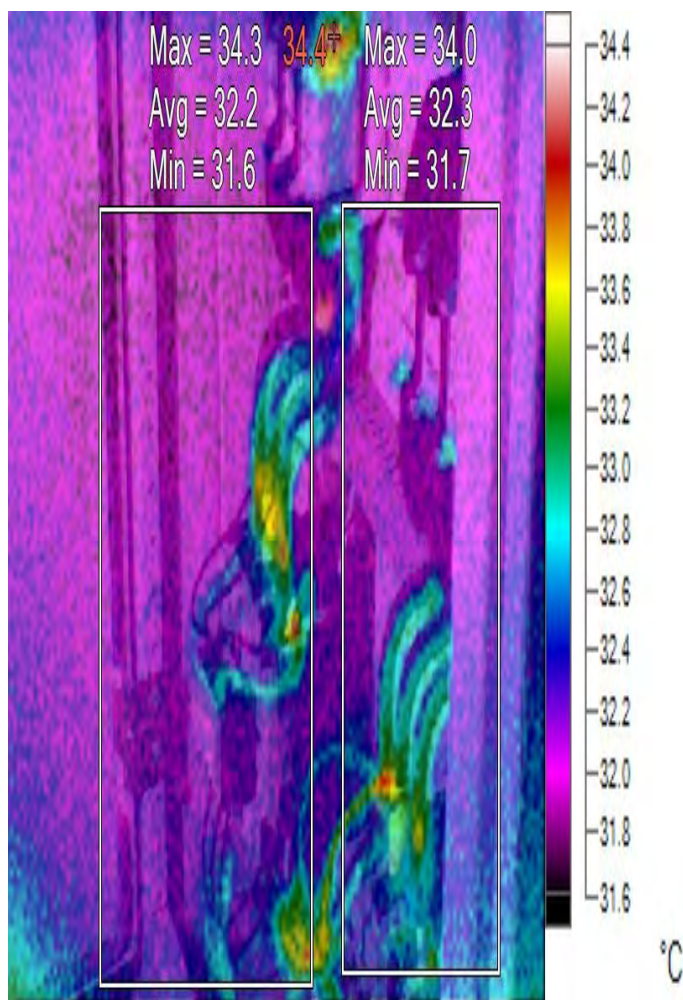
### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	32.5°C	32.0°C	34.6°C	0.95	0.38
A1	32.7°C	31.9°C	35.1°C	0.95	0.64



Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร C smart condo
Equipment	CAPBANK	Equipment Name:	Step5,6
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000624.IS2

1/12/2024 10:11:24 AM

### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	32.2°C	31.6°C	34.3°C	0.95	0.35
A1	32.3°C	31.7°C	34.0°C	0.95	0.34

Name	Temperature	Emissivity
Hot	34.4°C	0.95



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## **After Infrared Report**

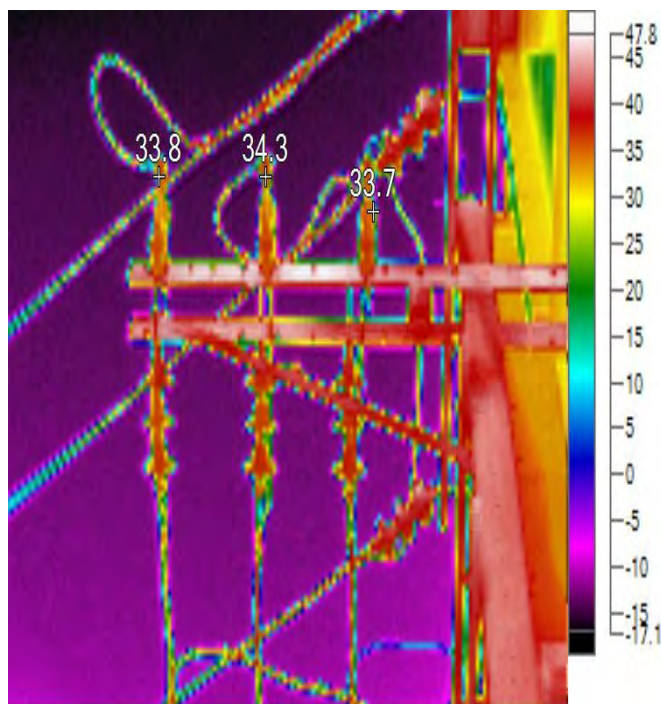
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Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร C Smart condo
Equipment	DROP FUSE	Equipment Name:	TR อาคาร C
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000670.IS2

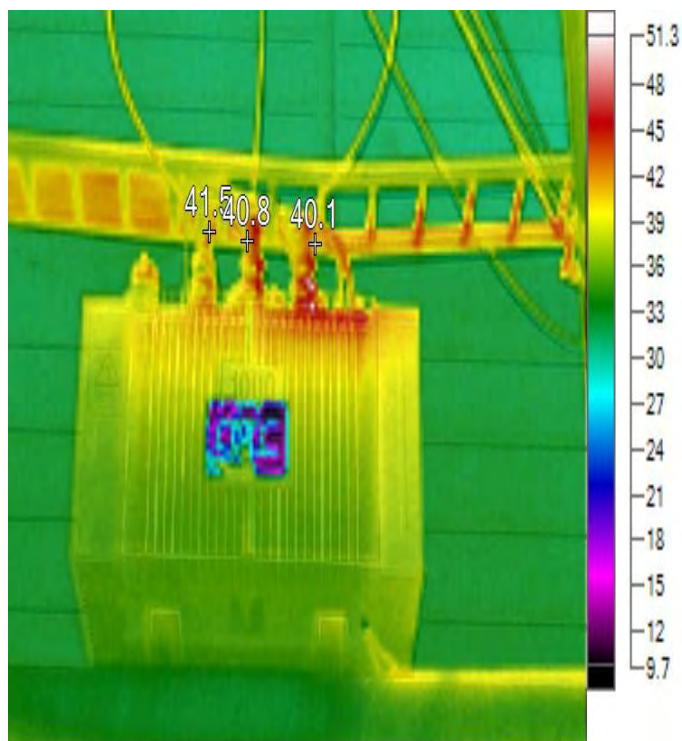
1/16/2024 12:07:05 PM

### Main Image Markers

Name	Temperature	Emissivity
P0	33.8°C	0.95
P1	34.3°C	0.95
P2	33.7°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร C smart condo
Equipment	TR	Equipment Name:	TR อาคาร C
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000671.IS2

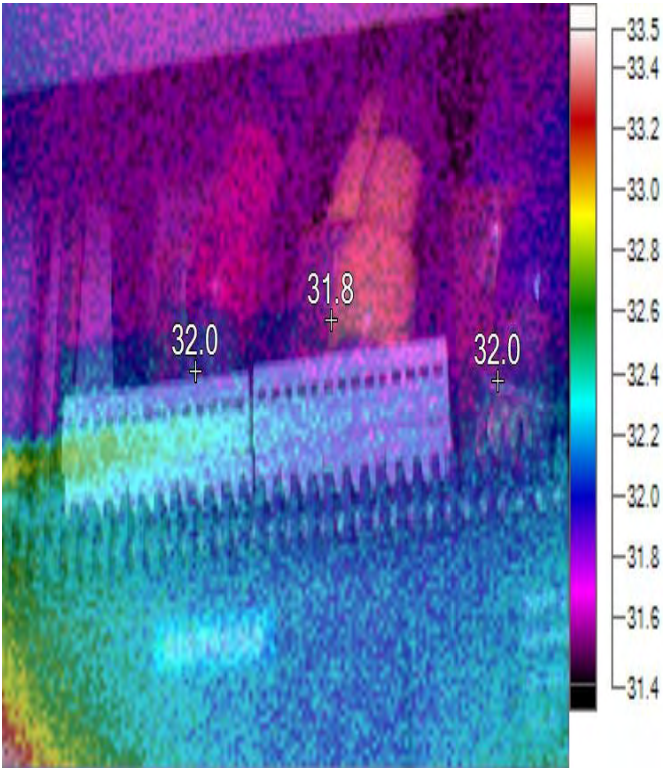
1/16/2024 12:07:33 PM

#### Main Image Markers

Name	Temperature	Emissivity
P0	41.5°C	0.95
P1	40.8°C	0.95
P2	40.1°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร C smart condo
Equipment	ACB	Equipment Name:	MAIN ACB
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000672.IS2

1/16/2024 12:12:15 PM

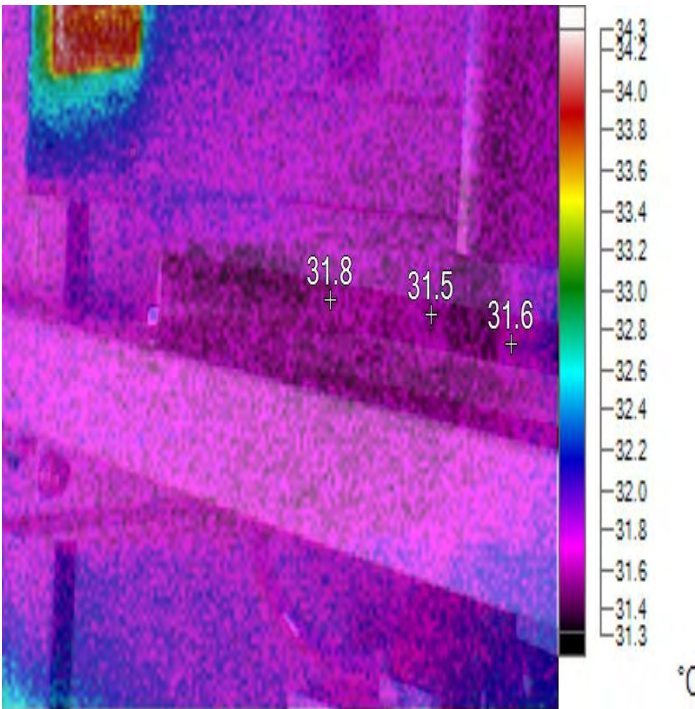
### Main Image Markers

Name	Temperature	Emissivity
P0	32.0°C	0.95
P1	31.8°C	0.95
P2	32.0°C	0.95



Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร C smart condo
Equipment	ACB	Equipment Name:	MAIN ACB
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000673.IS2

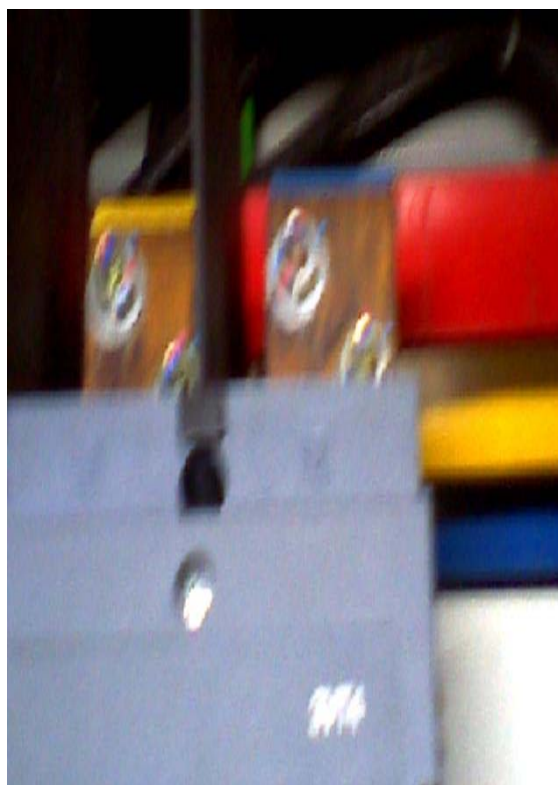
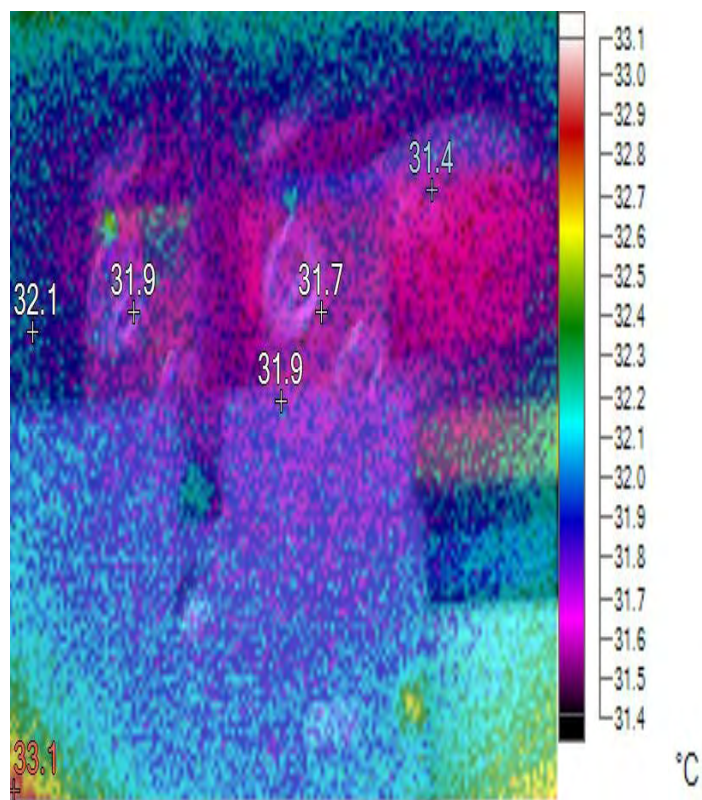
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#### Main Image Markers

Name	Temperature	Emissivity
P0	31.8°C	0.95
P1	31.5°C	0.95
P2	31.6°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร C smart condo
Equipment	MCCB	Equipment Name:	MAIN CAP
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000674.IS2

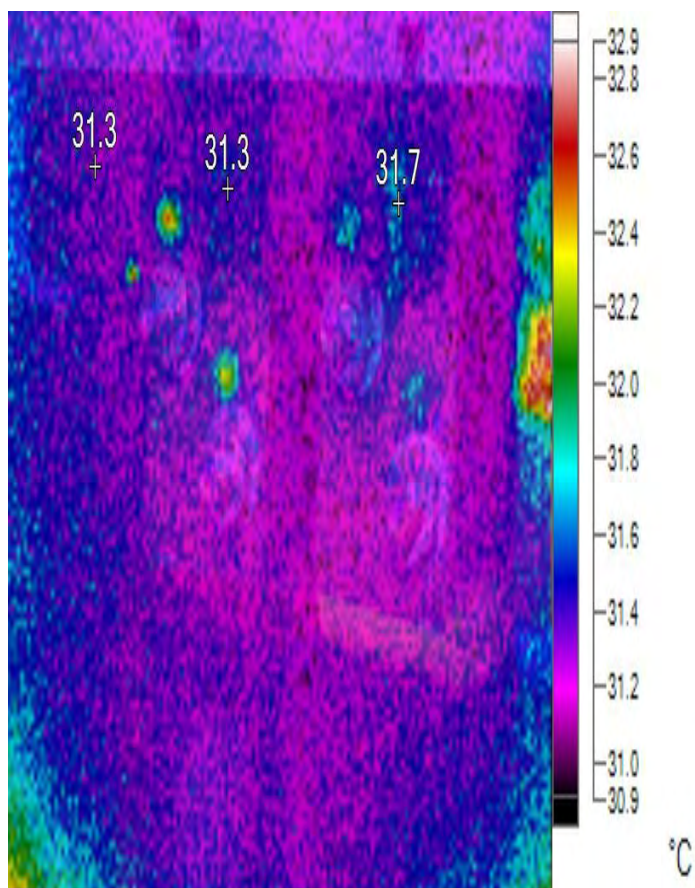
1/16/2024 12:13:01 PM

### Main Image Markers

Name	Temperature	Emissivity
Centerpoint	31.9°C	0.95
Hot	33.1°C	0.95
Cold	31.4°C	0.95
P0	32.1°C	0.95
P1	31.9°C	0.95
P2	31.7°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร Csmart condo
Equipment	MCCB	Equipment Name:	MAIN CAP
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000675.IS2

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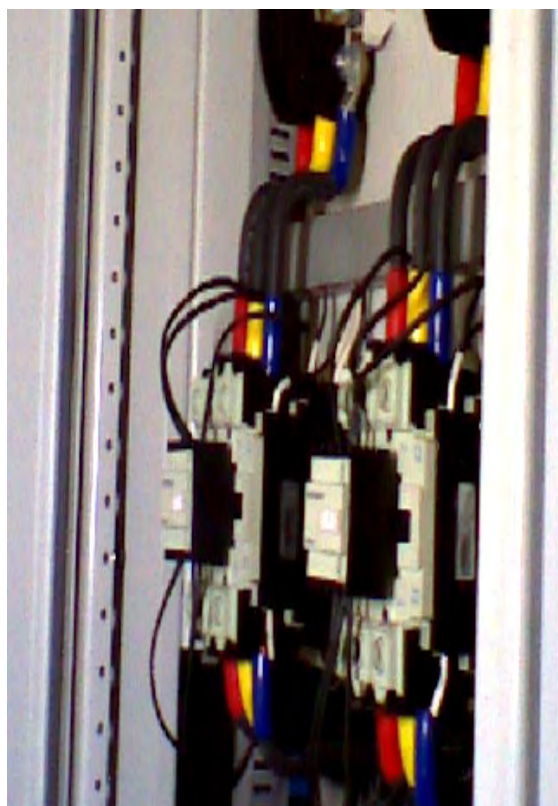
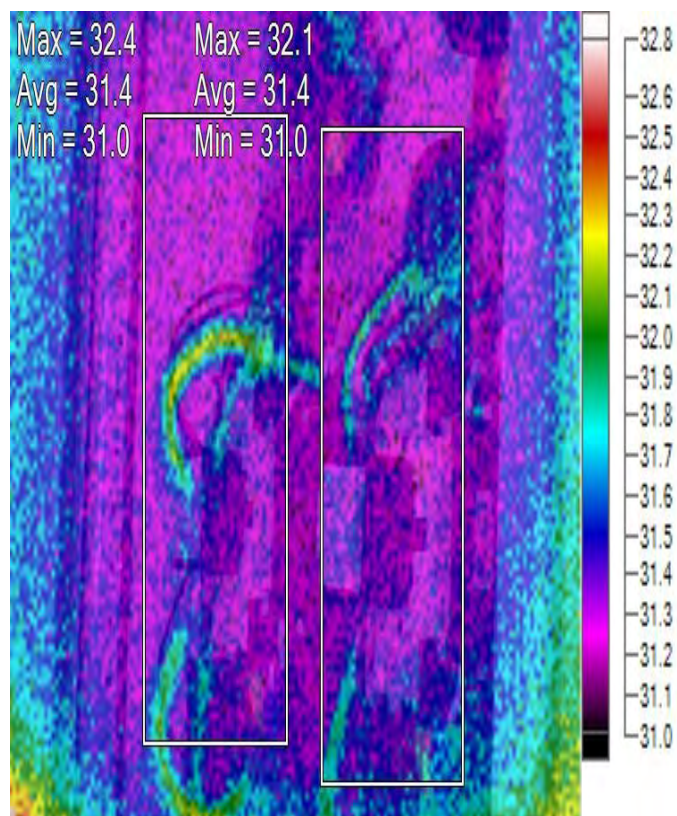
#### Main Image Markers

Name	Temperature	Emissivity
P0	31.3°C	0.95
P1	31.3°C	0.95
P2	31.7°C	0.95



Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร C smart condo
Equipment	CAPBANK	Equipment Name:	Step1,2
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000676.IS2

1/16/2024 12:14:32 PM

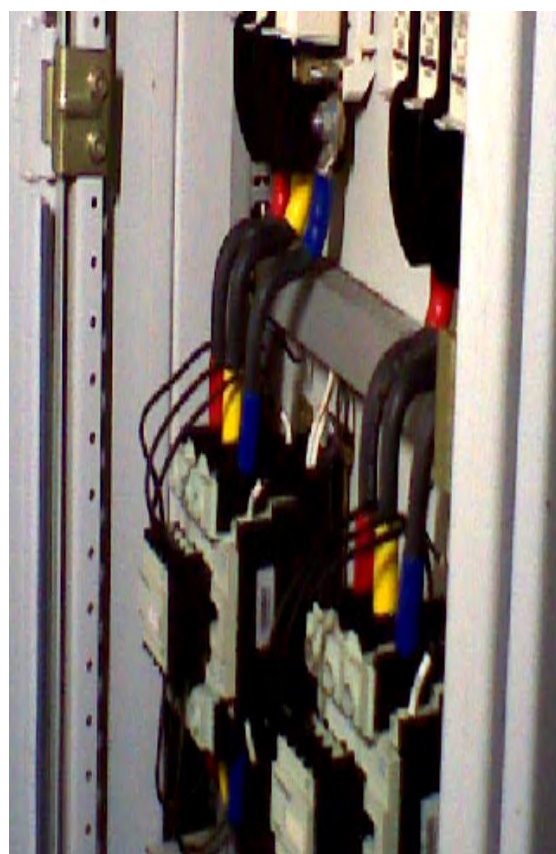
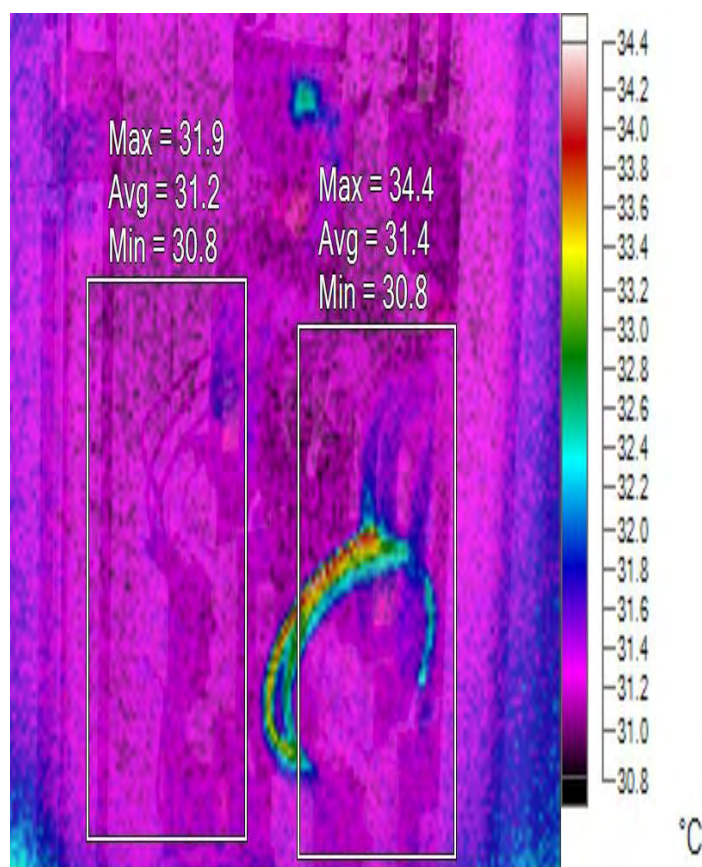
### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	31.4°C	31.0°C	32.4°C	0.95	0.19
A1	31.4°C	31.0°C	32.1°C	0.95	0.15



Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร C smart condo
Equipment	CAPBANK	Equipment Name:	Step3,4
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000677.IS2

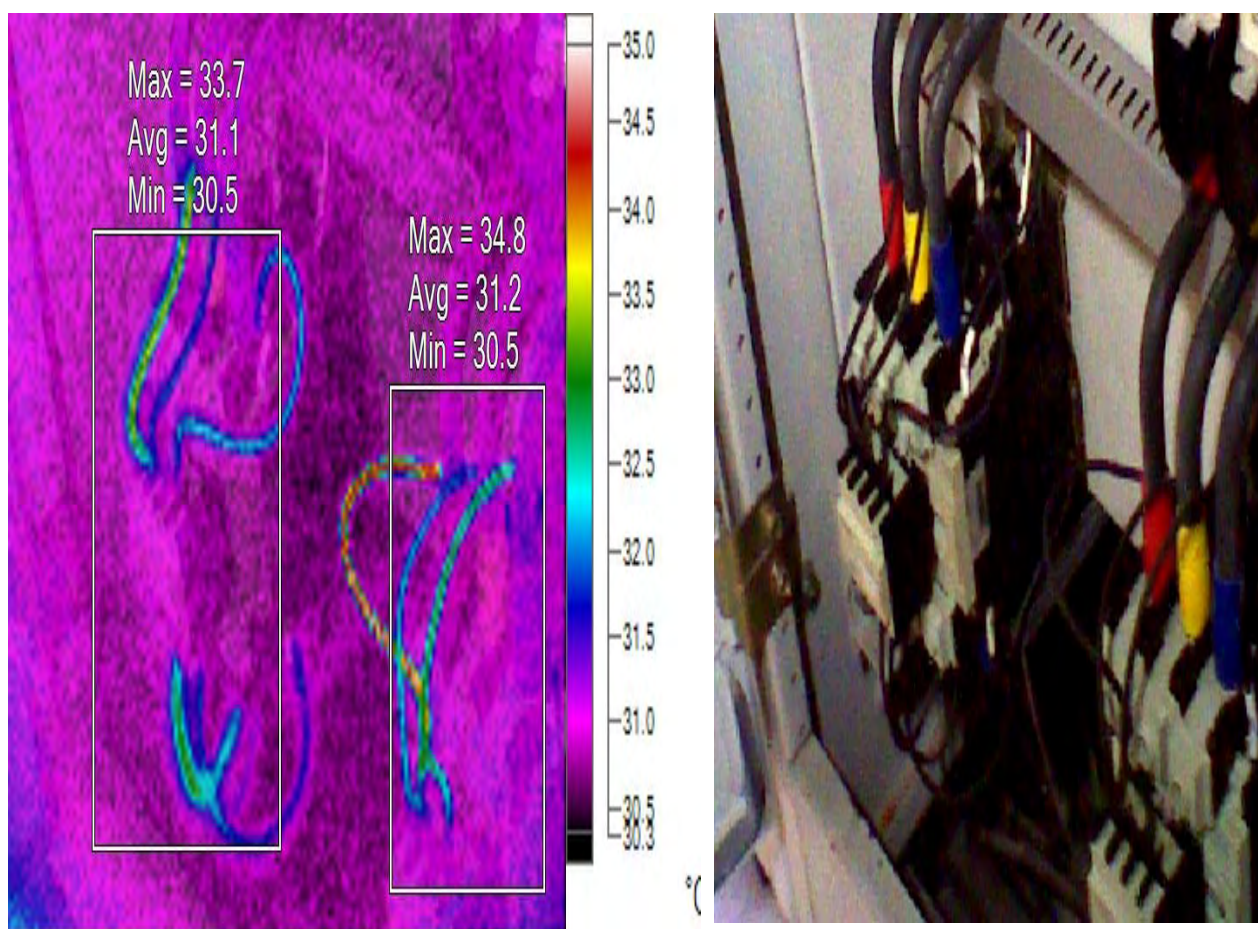
1/16/2024 12:14:45 PM

### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	31.2°C	30.8°C	31.9°C	0.95	0.13
A1	31.4°C	30.8°C	34.4°C	0.95	0.46

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร C smart condo
Equipment	CAPBANK	Equipment Name:	Step5,6
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000678.IS2

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#### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	31.1°C	30.5°C	33.7°C	0.95	0.46
A1	31.2°C	30.5°C	34.8°C	0.95	0.55



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารพาณิชย์คอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Transformer (OIL)

**PLANT** : อาคาร C **JOB REFERENCE NO.** :

## Test Equipments

1. Insulation Tester : MEGGER 2. Turn ratio tester : RAYTECH 3. Winding Tester : METREL  
Type/Model : BM5200 Type/Model : MARK III Type/Model : MI3280

**Cubicle No. :** TR **Feeder Name :** TR อาคาร C

### 1. Data and description

Mfg :	QTC	Rated voltage HV/LV :	24/0.416	kV
Type :	Oil Type Seal type	Rated current HV/LV :	24.06/1387.86	A.
Serial no. :	52311036	Rated frequency :	50	Hz.
Rated KVA :	1000	Total weight :	2900	Kg
Vector Group :	DYN11	Country Mfg :	THAILAND	
Service tap :	1	Year :	2009	

### 2. General condition checked

- Body and seal check	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	
- Oil level &leakage check	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	
- Drier filter condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	
- Bushing and termination	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	
- Grounding connection check	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	
- Buchholz / Temp function check	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	n/a
- Cooling system condition and function check	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	n/a
- Bushing and insulator post cleaning	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	

### 3. Individual test

#### 3.1 Insulation resistance measurement

Test Connection		Test Voltage	Insulation Resistance (GΩ)			Result
Energize	Ground	VDC	1 min	10 min	PI	
H.V.	L.V. + G.	2,500	2.00	2.40	1.120	PASS
L.V.	H.V. + G.	1,000	2.3	-	-	PASS
H.V. + L.V.	G.	2,500	2.8	-	-	PASS

#### 3.2 Dielectric Strength of oil Test

Location	Standard Test	Gap mm.	Temp. oC	STD. DEV.	Breakdown voltage ( kV )						
					1	2	3	4	5	6	AVG.
Main tank	IEC60156-95	2.5	30	7.18	34.9	52.0	49.3	52.9	54.7	49.5	48.9





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saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Transformer (OIL)  
**PLANT** : อาคาร C **JOB REFERENCE NO.** :

Oil Tester Type : Hiprotronic 0-75kV Model : OC60d

### 3.3 Transformer Turn Ratio Test

Tap Position	Name Plate Ratio			Measurement Ratio			Result
	H.V. Side	L.V. Side	Ratio	Phase	Ratio	% Error	
1	24,000	416	99.9230	H1-H0, X1-X3	100.0400	0.11%	pass
				H2-H0, X2-X1	100.0300	0.10%	pass
				H3-H0, X3-X2	100.1400	0.21%	pass

### 4. Test result of individual test

- Dielectric strength test ☒ Normal ☐ Abnormal
- Insulation resistance test ☒ Normal ☐ Abnormal
- Winding resistance test ☐ Normal ☐ Abnormal
- Transformer ratio test ☒ Normal ☐ Abnormal
- Function test ☐ Normal ☐ Abnormal

#### Setting

Winding temperature [°C]	Actual	Maximum	Fan 1	Fan 2	Alarm	Trip
	-	-	-	-	-	-

- Winding temperature start fan ☐ Normal ☐ Abnormal
- Winding temperature alarm ☐ Normal ☐ Abnormal
- Winding temperature trip ☐ Normal ☐ Abnormal

### 5. Comment

1. รวบรวมสายด้านแรงต่ำชำรุด



## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

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<b>CUSTOMER</b>	: นิติบุคคลอาคารสมารถคอนโด พระราม 2	<b>EQUIPMENTS NAME</b>	: Distribution Transformer (OIL)
<b>PLANT</b>	: อาคาร C	<b>JOB REFERENCE NO.</b>	:

---

---

Signature (Tester)

Signature (Approved)

Signature (Customer)

ATIWAN

Date : 15/1/2567

Date :

Date :

---



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : AIR CIRCUIT BREAKER (ACB)  
**PLANT** : อาคาร C **JOB REFERENCE NO.** :

## Test Equipments

1. Insulation Tester : MEGGER  
Type/Model : BM21  
2. Micro Ohm : AEMC  
Type/Model : 6240  
3. Full Test kit : SIEMENS  
Type/Model : Test kit

**Cubicle No. :** MDB **Feeder Name :** Main ACB  
Manufacture : SIEMENS Rated Voltage (Un) : 500 V Motor Drive : -  
Type/Model : 3WT8161-6AA00-0AA2 Rated Current (In) : 1600 A Opening Coil : -  
Racking type : FIX Interrupting Current (Icu) : 66KA 1s Closing Coil : -  
Serial No. : 7200290914027 Frquency / Pole : 50 Hz/3 POLE Under Voltage : -

## 1. Visual Mechanical and Electrical Inspection

- Body and seal (Undamaged) condition	<input type="checkbox"/> Normal	<input checked="" type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Gripping contact condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Arc Chute Chamber condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Motor drive & gear condition	<input type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input checked="" type="checkbox"/> N/A
- Racking/Rail mechanism condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- L.V. auxiliaries plug condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Wiring and Connection of control cable	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Grounding & Mounting condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A

## Comment

## 2. Inspection before Individual Test

- Battery voltage measurement .....Vdc	<input type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input checked="" type="checkbox"/> N/A
- Function test for breaker	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Function test for motor charging spring	<input type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input checked="" type="checkbox"/> N/A
- Function test for under voltage release	<input type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input checked="" type="checkbox"/> N/A

## 3. Contact Resistance Test

Status	Test Current (ADC)	Phase	Resistance ( $\mu\Omega$ )	Calculate Watt loss		Result
				at 100A (W)	Average (W)	
CLOSED	100	L1	53.0	0.530	0.447	<input checked="" type="checkbox"/> PASS
		L2	41.0	0.410		<input type="checkbox"/> NOT PASS
		L3	40.0	0.400		

## 4. Insulation Resistance Test

Status	Test Connection		Test Voltage (VDC)	Phase	Resistance (M $\Omega$ )	Result
	Energized	Ground				
CLOSE	Top	Ground	1000	L1-G	-	<input checked="" type="checkbox"/> PASS
				L2-G	-	<input type="checkbox"/> NOT PASS
				L3-G	-	
OPEN	Top	Bottom	1000	L1-L1	-	<input type="checkbox"/> PASS
				L2-L2	-	<input type="checkbox"/> NOT PASS
				L3-L3	-	





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**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : AIR CIRCUIT BREAKER (ACB)  
**PLANT** : อาคาร C **JOB REFERENCE NO.** :

## 5. Protective Relay

Manufacture : SIEMENS Rated Primary Current (In) : 1,600 A  
Relay type : ETU37WT Rated Operating Current (Io) : 1,440.0  
Serial No. : SZVXOOO5002926 Year/Installed : -

### Relay setting type

Function	Characteristic curve	Primary current
Long time ( L ) $I_1$ 0.9 * In	t 1 : 10 S@6Ir	9,600 A.
Short circuit time ( S ) $I_2$ 6 * In	t 2 : 0.3 s $I^2$ ton <input type="checkbox"/> $I = 8 \text{ In}$ <input type="checkbox"/> $I > I_2$	14,400 A.
Instantaneous time ( I ) $I_3$ $\geq 20$ * In		50,000 A.
Ground ( G ) $I_4$ 300 * In	t 4 : 0.3 s $I^2$ ton	500 A.

### 5.1 Overload with inverse long time delay ,I1

Description	Should be	As found			Result
		Phase A.	Phase B.	Phase C.	
Operating time at 3 time	10.00 s.	8.935 s.	8.935 s.	8.935 s.	<input checked="" type="checkbox"/> PASS <input type="checkbox"/> NOT PASS

### 5.2 Shorty-time short circuit ,I2

Description	Should be	As found			Result
		Phase A.	Phase B.	Phase C.	
Operating time at 1.5 time	0.3 s.	0.336 s.	0.336 s.	0.336 s.	<input checked="" type="checkbox"/> PASS <input type="checkbox"/> NOT PASS

### 5.3 Instantaneous short circuit ,I3

Description	Should be	As found			Result
		Phase A.	Phase B.	Phase C.	
Operating time at 1.5 time	<0.05 s.	0.024 s.	0.024 s.	0.024 s.	<input checked="" type="checkbox"/> PASS <input type="checkbox"/> NOT PASS

### 5.4 Earth fault ,I4

Description	Should be	As found	Result
Pickup current	OFF A.	450 A.	<input checked="" type="checkbox"/> PASS
Operating time at 1.5 time	0.3 s.	0.336 s.	<input type="checkbox"/> NOT PASS

## 6. Comment

### 1. Cover Setting ไม่ดี



## AKS engineering power Co., Ltd.

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<b>CUSTOMER</b>	: นิติบุคคลอาคารสมารถคอนโด พระราม 2	<b>EQUIPMENTS NAME</b>	: AIR CIRCUIT BREAKER (ACB)
<b>PLANT</b>	: อาคาร C	<b>JOB REFERENCE NO.</b>	:

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Signature (Tester)

Signature (Approved)

Signature (Customer)

ATIWAN

Date : 15/1/2567

Date :

Date :

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# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai, saimai,

Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสุมารทคอนโด พระราม 2 **EQUIPMENTS NAME** : LV CAPACITOR BANK

**PLANT** : อาคาร C **JOB REFERENCE NO.** :

## Test Equipments

1. Insulation Tester : MEGGER  
Type/Model : MIT420/2  
2. RLC Tester : VOLTH  
Type/Model : S-LCR1  
3. Resistance Tester : SANWA  
Type/Model : YX360TRF

**Cubicle No. :** CAP BANK

**Feeder Name :** อาคาร C

## 1. Name Plate Data

Manufacture : DUCATI Voltage : 400 VAC Fluid type : -  
Type/Model : 416.37.0108 Frequency : 50 Hz Ins.n level : -  
Serial No. : Reactive : 25 x 2 KVAR Temp. cat. : - 25/D  
Year : 2008 Phase : 3 Ph. Connected : D  
Standard : IEC 60831 1-2 Capacitance : 3x166 uF R-Discharge : -

## 2. Automatic Power Factor Controller (APFC)

Manufacture : JANITZA CT "s ratio : 1600/5 Voltage : 400  
Type/Model : PR0PHI6R Setting C/K : 0.081 PF Setting : 0.96  
Serial No. : 6604/0699 Time setting : 40 Other : 90 °

## 3. General Visual Insection Check

☒ Capacitor bank and Support cubicle :  
☒ Power factor control relay :  
☒ Selector switch and push button :  
☒ Status lamp ON / OFF :  
☒ Main Circuit Breaker ☒ Yes 1000 A ☐ No. :  
☐ Molded Case Circuit breaker : N/A  
☒ Control cable, Termination :  
☒ Power Cable size 50 mm<sup>2</sup> :  
☒ Fuse base :  
☒ Fuse link condition :  
☒ Magnetic Contactor Condition :  
☒ Magnetic contactor's surface condition :  
☒ Capacitor unit condition :  
☐ Reactor winding insulator condition : N/A  
☐ Reactor iron core condition : N/A  
☐ Reactor cable connection condition : N/A  
☒ Grounding connection condition :  
☐ Cooling equipment condition : N/A

## 5. Check Capacitance and Discharge resistance of Capacitor

Step	Serial No.	Phase	Frequency (Hz)	Resistance (kΩ)	Capacitance (μF)		% Error	Result	Insulation test (MΩ)
					Measurement	Calculation			
1		A-B	50	46.00	502.00	497.61	-0.88	Pass	3,800
		B-C	50	46.00	502.00	497.61	-0.88	Pass	
		C-A	50	46.00	500.00	497.61	-0.48	Pass	



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**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : LV CAPACITOR BANK

**PLANT** : อาคาร C **JOB REFERENCE NO.** :

2	A-B	50	46.00	498.00	497.61	-0.08	Pass	3,600
	B-C	50	46.00	494.00	497.61	0.73	Pass	
	C-A	50	46.00	495.00	497.61	0.52	Pass	

## 5. Check Capacitance and Discharge resistance of Capacitor (Con'd)

Step	Serial No.	Phase	Frequency (Hz)	Resistance (kΩ)	Capacitance (μF)		% Error	Result	Insulation test (MΩ)
					Measurement	Calculation			
3		A-B	50	46.00	503.00	497.61	-1.08	Pass	4,700
		B-C	50	46.00	503.00	497.61	-1.08	Pass	
		C-A	50	46.00	503.00	497.61	-1.08	Pass	
4		A-B	50	46.00	496.00	497.61	0.32	Pass	2,900
		B-C	50	46.00	497.00	497.61	0.12	Pass	
		C-A	50	46.00	498.00	497.61	-0.08	Pass	
5		A-B	50	46.00	499.00	497.61	-0.28	Pass	2,700
		B-C	50	46.00	501.00	497.61	-0.68	Pass	
		C-A	50	46.00	499.00	497.61	-0.28	Pass	
6		A-B	50	46.00	486.00	497.61	2.33	Pass	3,200
		B-C	50	46.00	480.00	497.61	3.54	Pass	
		C-A	50	46.00	486.00	497.61	2.33	Pass	

## 6. Comment

1.หน้าจอบ PFC เสื่อมสภาพ

Signature (Tester)

ATIWAN

Signature (Approved)

Signature (Customer)

File name: Cap\_/Cap PM

Report page: 2





## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai, saimai,  
Bangkok 10220, Thailand, Tel. 063-6538758

<b>CUSTOMER</b>	: นิติบุคคลอาคารสมารถคอนโด พระราม 2	<b>EQUIPMENTS NAME</b>	:	LV CAPACITOR BANK
<b>PLANT</b>	: อาคาร C	<b>JOB REFERENCE NO.</b>	:	

Date : 15/1/2024

Date :

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร C

Feeder/Panel name : PP1ชั้น 1

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker r No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	16	N
N	40	31	32		
N	40	33	34		
N	40	35	36		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 15, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)  
**PLANT** : อาคาร C

Feeder/Panel name : LP 1 ชั้น 1

## 1. Panel board unit inspection record

Main breaker rated current

63

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and  
Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker r No.	Breaker No.	Circuit rated current (A)	Status
N	16	1	2	16	N
N	16	3	4	16	N
N	16	5	6	16	N
N	16	7	8	16	N
N	16	9	10	16	N
N	16	11	12	16	N
N	16	13	14	16	N
N	16	15	16	16	N
N	16	17	18	16	N
N	16	19	20	16	N
N	16	21	22	16	N
N	16	23	24	16	N
N	16	25	26	16	N
N	16	27	28	16	N
N	16	29	30	16	N
		31	32		
		33	34		
		35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 15, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร C

Feeder/Panel name : PP-2 ชั้น 2

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker r No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	OFF
N	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	OFF
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	OFF
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	40	N
N	40	31	32	16	OFF
N	40	33	34		
N	16	35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 15, 2024

Signature (Customer)

Date :





# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร C

Feeder/Panel name : PP-3 ชั้น 3

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
OFF	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	16	N
N	40	31	32	16	N
N	40	33	34		
		35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 15, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร C

Feeder/Panel name : PP-4 ชั้น 4

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	OFF
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
OFF	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	16	OFF
N	40	31	32		
N	40	33	34		
N	40	35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 15, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร C

Feeder/Panel name : PP-5 ชั้น 5

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
OFF	40	5	6	40	N
OFF	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	OFF
N	40	25	26	40	N
N	40	27	28	40	OFF
N	40	29	30	16	OFF
N	40	31	32		
N	40	33	34		
N	40	35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 15, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร C

Feeder/Panel name : PP-6 ชั้น 6

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	OFF
N	40	13	14	40	N
N	40	15	16	40	N
OFF	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	16	N
N	40	31	32		
N	40	33	34		
N	40	35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 15, 2024

Signature (Customer)

Date :





# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร C

Feeder/Panel name : PP-7 ชั้น 7

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker r No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	16	N
N	40	31	32		
N	40	33	34		
N	40	35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 15, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร C

Feeder/Panel name : PP-7 ชั้น 7

## 1. Panel board unit inspection record

Main breaker rated current

250 A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker r No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	OFF
N	40	3	4	40	OFF
N	40	5	6	40	N
N	40	7	8	40	OFF
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
OFF	40	25	26	40	N
N	40	27	28	40	OFF
N	40	29	30	16	N
N	40	31	32		
N	40	33	34		
N	40	35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 15, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสภารวม 2 **EQUIPMENTS NAME** : Grounding Resistance Test  
**PLANT** : อาคาร C **JOB REFERENCE NO.** :

## Test Equipments

- Grounding Resistance Test Type : 1623 Identity : FLUKE

**Locations Name** :

### 1. Method of Test and Measured values

- ☐ 1. 3/4-Pole Fall of Potential (Result : Resistance (RE) ( $\Omega$ ))  
☐ 2. Selective Earth Measurement (One Clamp) (Result : RE1 = Current draw into grounding system ( $\Omega$ )  
RE2 = Current draw into system or equipment ( $\Omega$ ) )  
☒ 3. Ground Loop Measurement (Two Clamp) (Result : Resistance-Loop ( $\Omega$ ))

#### Setting value for 1 & 2

Voltage ☐ 20 V ☒ 48 V  
Frequency ☐ AFC = 111 Hz

### 2. Visual Inspection

- Ground terminal box physical condition ☒ Normal ☐ See comment ☐ N/A  
- Wiring and connection ☒ Normal ☐ See comment ☐ N/A

### 3. Grounding resistance measurement

Item	Feeder name	Resistance( $\Omega$ )	Item	Feeder name	Resistance( $\Omega$ )
1	MDB	1.12 $\Omega$	11		
2	TR	2.00 $\Omega$	12		
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

Note: Acceptable value of ground resistance is not more than 5 Ohm

### 4. Comment

Signature (Tester) Signature (Approved) Signature (Customer)  
ATIWAN  
Date : 15/1/2567 Date : Date :

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# ELECTRICAL SYSTEM PREVENTIVE MAINTENANCE REPORT

## SMART CONDO RAMA 2

อาคาร D

Date : APRIL 25, 2024

Descriptions : Preventive maintenance LV  
system

**AKS engineering power Co., Ltd.**  
51/8chonchop Villages, soi saimai 10 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



## AKS engineering power Co., Ltd.

51/8chonchop Villages, soi saimai 10,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758

### Conditions status and meaning



อันตราย ต้องทำการแก้ไขอย่างเร่งด่วน



ไม่ปกติ ไม่สามารถแก้ไขได้ทันที จำเป็นต้องรออะไหล่ เพื่อแก้ไข



เริ่มไม่ปกติ เป็นสัญญาณแจ้งเตือน สามารถใช้งานได้ ส่งผลการใช้งานกับอุปกรณ์ระยะยาว ควรพิจารณาทำการแก้ไข



ปกติ การทำงาน และสภาพโดยทั่วไปปกติ ควรตรวจสอบ และดูแลแนวโน้มในครั้งถัดไป

### SUMMARY TEST REPORTS

No.	Equipments name	Descriptions	Status
1	อาคาร D		
1.1	TR.	1. รางสายด้านแรงต่ำชำรุด 2. ค่าTurn Ratio สูงเกินค่ามาตรฐาน ควรเผื่อระวัง	
1.2	ตู้MDB	1. สภาพตู้โดยทั่วไปปกติ	
1.3	ACB	1. Cover Setting ETUไม่มี	
1.4	CAP BANK	1. หน้าจอ PFCเสื่อมสภาพ	
2	Grounding TR System		
2.1		1. ค่าGround ปกติ	



## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758







## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758





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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758





# ELECTRICAL SYSTEM PREVENTIVE MAINTENANCE REPORT

## SMART CONDO RAMA 2

อาคาร E

Date : APRIL 25, 2024

Descriptions : Preventive maintenance LV  
system

**AKS engineering power Co., Ltd.**  
51/8chonchop Villages, soi saimai 10 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : + 063-6538758



## AKS engineering power Co., Ltd.

51/8chonchop Villages, soi saimai 10,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758

### Conditions status and meaning



อันตราย ต้องทำการแก้ไขอย่างเร่งด่วน



ไม่ปกติ ไม่สามารถแก้ไขได้ทันที จำเป็นต้องรออะไหล่ เพื่อแก้ไข



เริ่มไม่ปกติ เป็นสัญญาณแจ้งเตือน สามารถใช้งานได้ ส่งผลการใช้งานกับอุปกรณ์ระยะยาว ควรพิจารณาทำการแก้ไข



ปกติ การทำงาน และสภาพโดยทั่วไปปกติ ควรตรวจสอบ และดูแลแนวโน้มในครั้งถัดไป

### SUMMARY TEST REPORTS

No.	Equipments name	Descriptions	Status
1	อาคาร E		
1.1	TR.	1 รangkaianแรงต่ำชำรุด	
1.2	ตู้MDB	1. สภาพตู้โดยทั่วไปปกติ	
1.3	ACB	1. Cover Setting ETUไม่มี 2. จอแสดงผลETU เสื่อมสภาพ 3. ETU ERRER	
1.4	CAP BANK	1. หน้าจอ PFC เสื่อมสภาพ	
2	Grounding TR System		
2.1		1. ค่าGround ปกติ	





## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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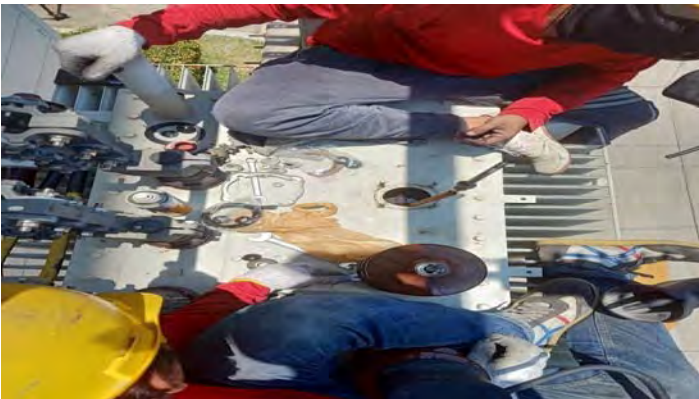


## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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# ELECTRICAL SYSTEM PREVENTIVE MAINTENANCE REPORT

## SMART CONDO RAMA 2

อาคาร F

Date : APRIL 25, 2024

Descriptions : Preventive maintenance LV  
system

**AKS engineering power Co., Ltd.**  
51/8chonchop Villages, soi saimai 10 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



## AKS engineering power Co., Ltd.

51/8chonchop Villages, soi saimai 10,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : +66 909288794  
email : f\_18\_hernet@hotmail.com

### Conditions status and meaning



อันตราย ต้องทำการแก้ไขอย่างเร่งด่วน



ไม่ปกติ ไม่สามารถแก้ไขได้ทันที จำเป็นต้องรออะไหล่ เพื่อแก้ไข



เริ่มไม่ปกติ เป็นสัญญาณแจ้งเตือน สามารถใช้งานได้ ส่งผลการใช้งานกับอุปกรณ์ระยะยาว ควรพิจารณาทำการแก้ไข



ปกติ การทำงาน และสภาพโดยทั่วไปปกติ ควรตรวจสอบ และดูแลแนวโน้มในครั้งถัดไป

### SUMMARY TEST REPORTS

No.	Equipments name	Descriptions	Status
1	<b>อาคาร F</b>		
1.1	TR.	1 เสาดึงหม้อแปลงเสียง 2 รวงสายต้านแรงต่ำชำรุด	
1.2	ตู้MDB	1. สภาพตู้โดยทั่วไปปกติ	
1.3	ACB	1. ETU ชำรุด	
1.4	CAP BANK	1. หน้าจอ PFC เสื่อมสภาพ	
2	<b>Grounding TR System</b>		
2.1		1. ค่าGround ปกติ	



## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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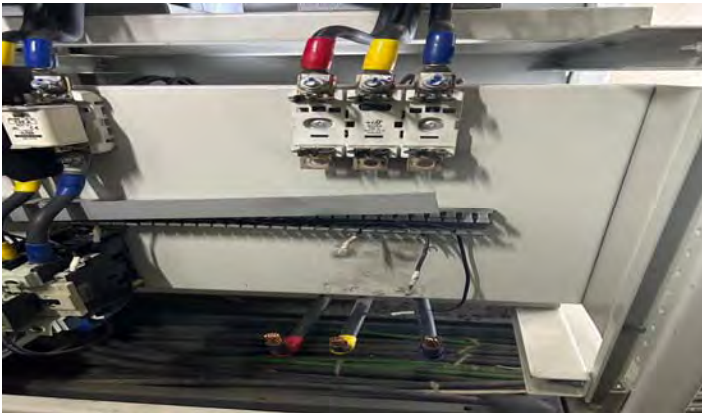


## AKS engineering power Co., Ltd.

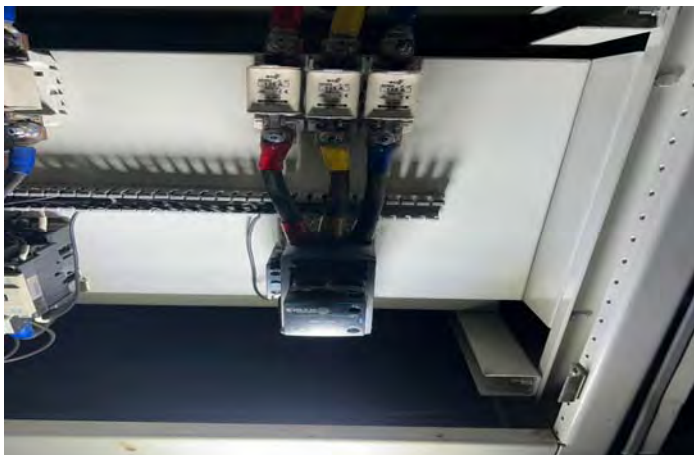
62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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# ELECTRICAL SYSTEM PREVENTIVE MAINTENANCE REPORT

## SMART CONDO RAMA 2

อาคาร G

Date : APRIL 25, 2024

Descriptions : Preventive maintenance LV  
system

**AKS engineering power Co., Ltd.**  
51/8chonchop Villages, soi saimai 10 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758





## AKS engineering power Co., Ltd.

51/8chonchop Villages, soi saimai 10,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758

### Conditions status and meaning



อันตราย ต้องทำการแก้ไขอย่างเร่งด่วน



ไม่ปกติ ไม่สามารถแก้ไขได้ทันที จำเป็นต้องรออะไหล่ เพื่อแก้ไข



เริ่มไม่ปกติ เป็นสัญญาณแจ้งเตือน สามารถใช้งานได้ ส่งผลการใช้งานกับอุปกรณ์ระยะยาว ควรพิจารณาทำการแก้ไข



ปกติ การทำงาน และสภาพโดยทั่วไปปกติ ควรตรวจสอบ และดูแลแนวโน้มในครั้งถัดไป

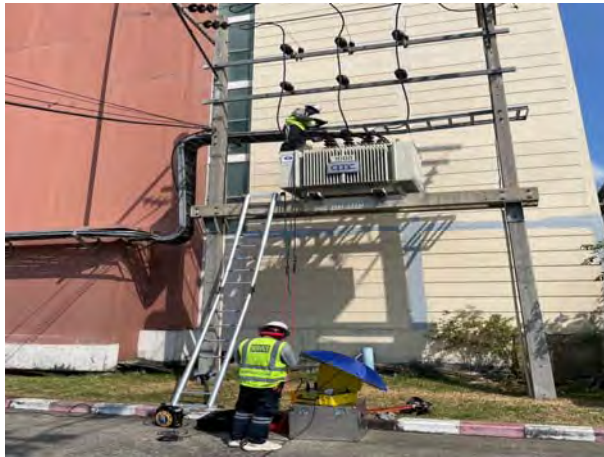
### SUMMARY TEST REPORTS

No.	Equipments name	Descriptions	Status
1	อาคาร G		
1.1	TR.	1 สภาพตู้โดยทั่วไปปกติ	
1.2	ตู้MDB	1. สภาพตู้โดยทั่วไปปกติ	
1.3	ACB	1. Cover Setting ETUไม่มี	
1.4	CAP BANK	1. หน้าจอ PFC เสื่อมสภาพ 2 Step 4ถอดFUSE ไว้	
2	Grounding TR System		
2.1		1. ค่าGround ปกติ	



## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : +66 952534098,  
email : f\_18\_hernet@hotmail.com



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## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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## AKS engineering power Co., Ltd.

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saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758



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# ELECTRICAL SYSTEM PREVENTIVE MAINTENANCE REPORT

## SMART CONDO RAMA 2

อาคาร H

Date : JANUARY 16, 2024

Descriptions : Preventive maintenance LV  
system

**AKS engineering power Co., Ltd.**  
51/8chonchop Villages, soi saimai 10 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758



# AKS engineering power Co., Ltd.

51/8chonchop Villages, soi saimai 10,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

## Conditions status and meaning



อันตราย ต้องทำการแก้ไขอย่างเร่งด่วน



ไม่ปกติ ไม่สามารถแก้ไขได้ทันที จำเป็นต้องรออะไหล่เพื่อแก้ไข



เริ่มไม่ปกติ เป็นสัญญาณแจ้งเตือน สามารถใช้งานได้ ส่งผลการใช้งานกับอุปกรณ์ระยะยาว ควรพิจารณาทำการแก้ไข



ปกติ การทำงาน และสภาพโดยทั่วไปปกติ ควรตรวจสอบ และดูแลแนวโน้มในครั้งถัดไป

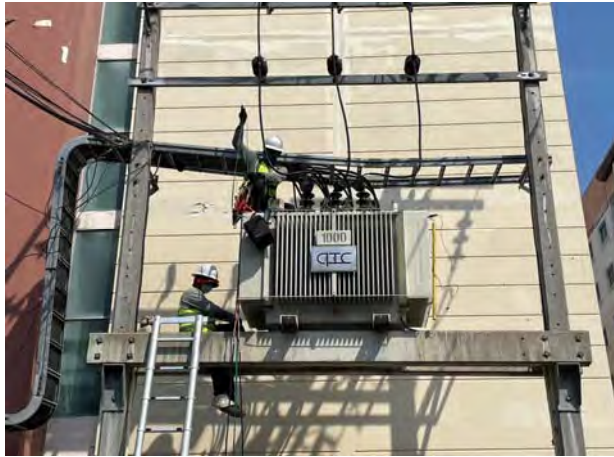
## SUMMARY TEST REPORTS

No.	Equipments name	Descriptions	Status
1	อาคาร H		
1.1	TR.	1 สายมีรอยไหม้ที่ เฟส A,B,C 2 เสาดึงหม้อแปลงเอียง	
1.2	ตู้MDB	1. สภาพตู้โดยทั่วไปปกติ	
1.3	ACB	1. Cover Setting ETUไม่มี	
1.4	CAP BANK	1. หน้าจอ PFC เสื่อมสภาพ	
2	Grounding TR System		
2.1		1. ค่าGround ปกติ	



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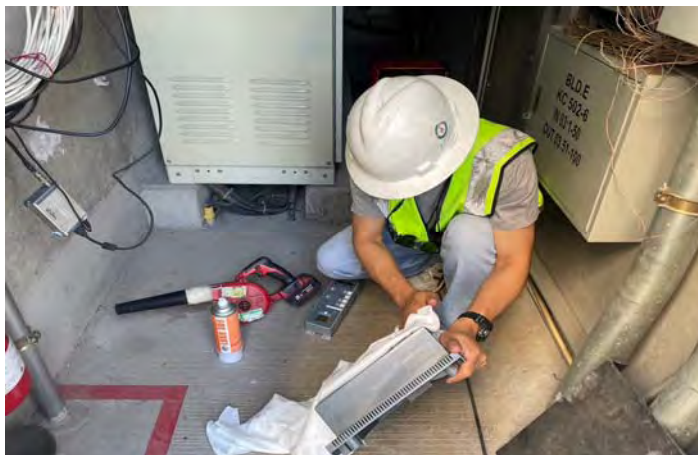
62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758



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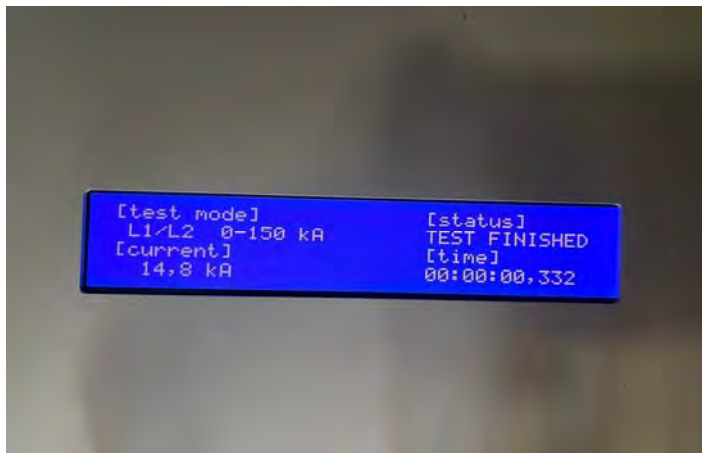
62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758



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14 เสาดังหม้อแปลงเอียง



15





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16



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18 สายมีรอยไหม้ที่ เฟส A,B,C



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19 หน้าจอ PFC เสื่อมสภาพ



20



21 Cover Setting ETUไม่มี

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## **Infrared Report**

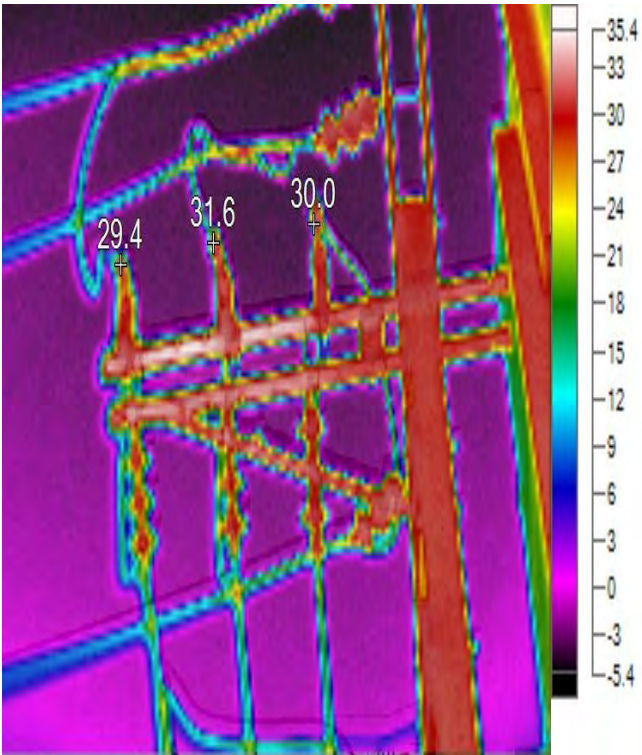
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Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร H Smart condo
Equipment	DROP FUSE	Equipment Name:	TR อาคาร D
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000661.IS2

1/12/2024 10:57:31 AM

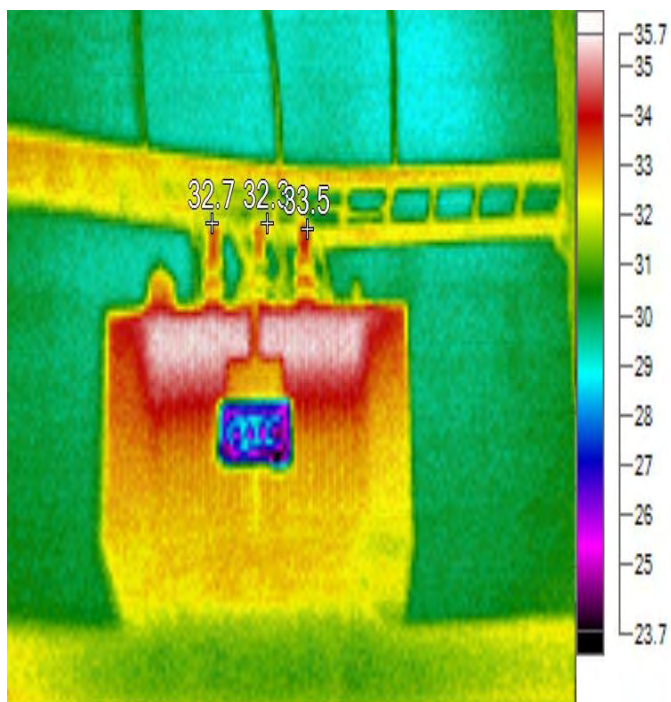
#### Main Image Markers

Name	Temperature	Emissivity
P0	30.0°C	0.95
P1	31.6°C	0.95
P2	29.4°C	0.95



Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร smart condo
Equipment	TR	Equipment Name:	TR อาคาร H
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000662.IS2

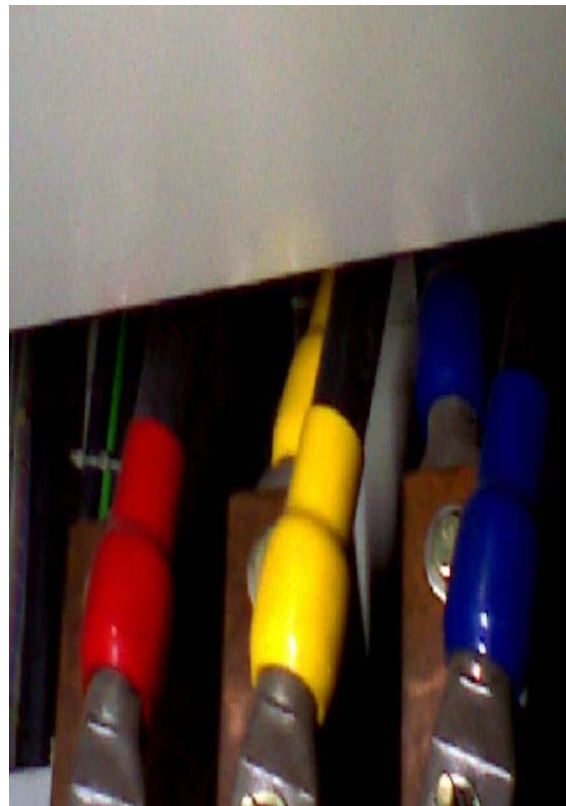
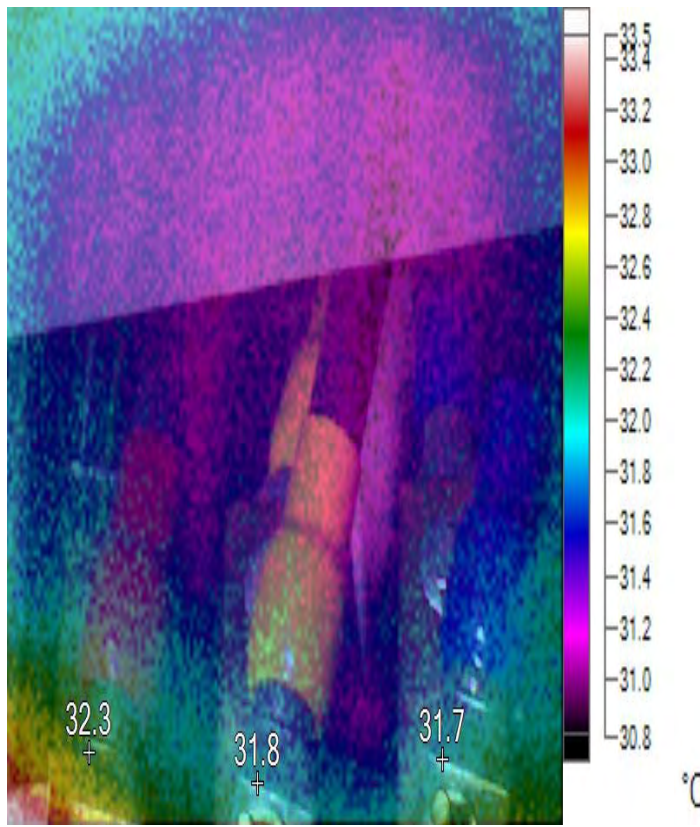
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#### Main Image Markers

Name	Temperature	Emissivity
P0	32.7°C	0.95
P1	32.3°C	0.95
P2	33.5°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร H smart condo
Equipment	ACB	Equipment Name:	MAIN ACB
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000663.IS2

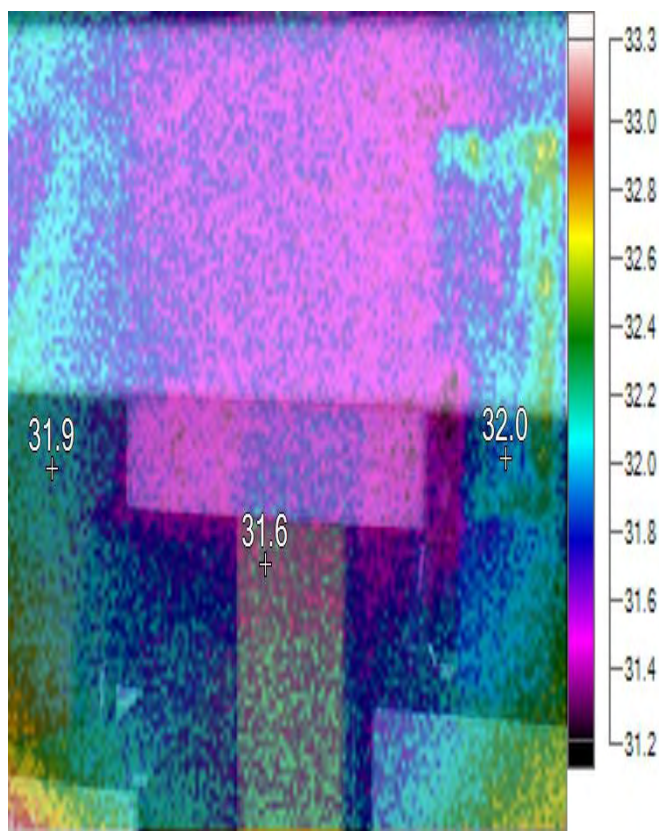
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#### Main Image Markers

Name	Temperature	Emissivity
P0	32.3°C	0.95
P1	31.8°C	0.95
P2	31.7°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร H smart condo
Equipment	ACB	Equipment Name:	MAIN ACB
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000664.IS2

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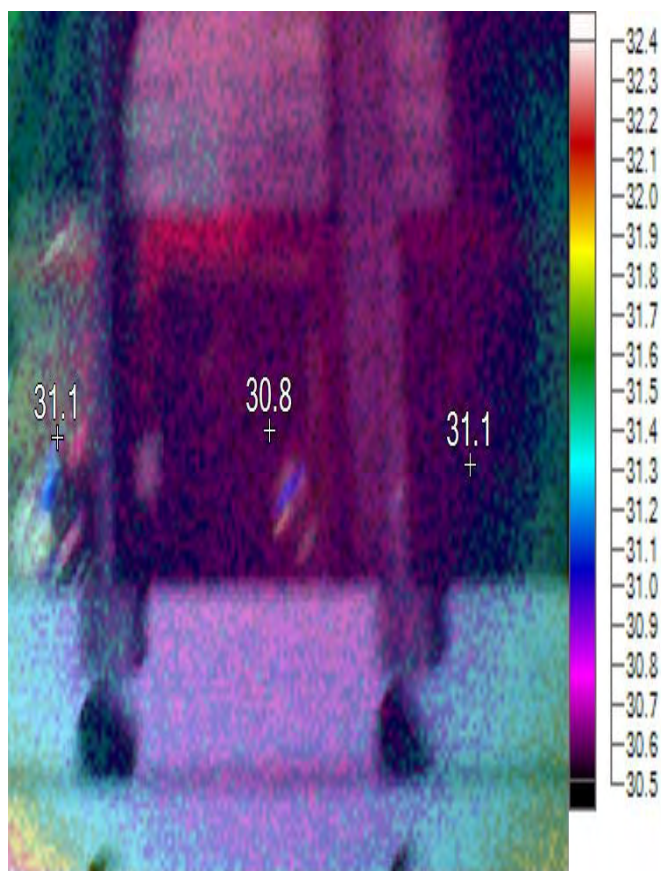
### Main Image Markers

Name	Temperature	Emissivity
P0	31.9°C	0.95
P1	31.6°C	0.95
P2	32.0°C	0.95



Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร H smart condo
Equipment	MCCB	Equipment Name:	MAIN CAP
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000665.IS2

1/12/2024 11:02:22 AM

#### Main Image Markers

Name	Temperature	Emissivity
P0	31.1°C	0.95
P1	30.8°C	0.95
P2	31.1°C	0.95



Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร H smart condo
Equipment	MCCB	Equipment Name:	MAIN CAP
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000666.IS2

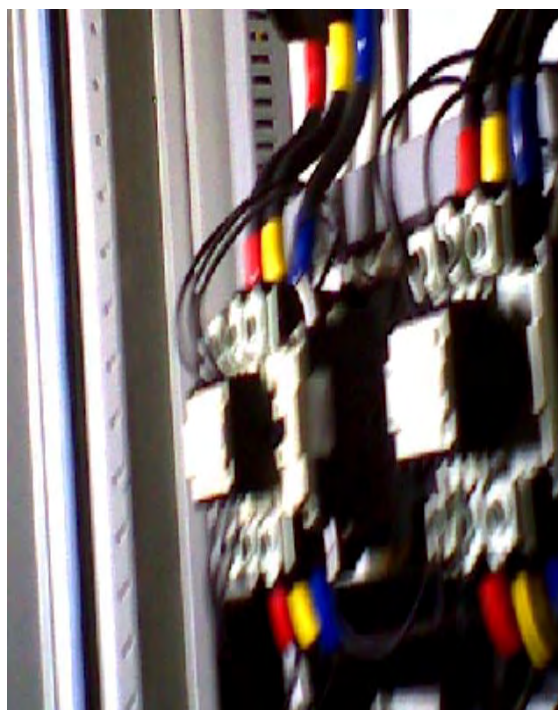
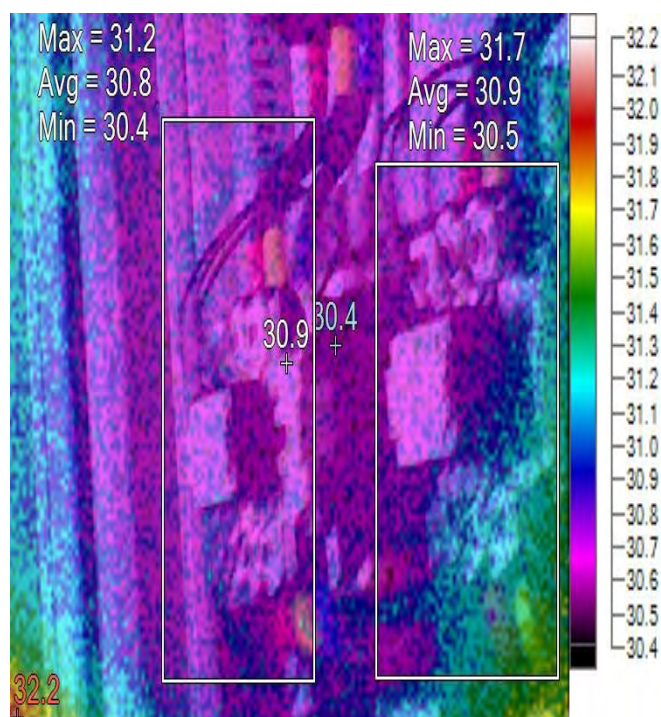
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### Main Image Markers

Name	Temperature	Emissivity
Hot	32.6°C	0.95
P0	31.6°C	0.95
P1	31.2°C	0.95
P2	31.3°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร H smart condo
Equipment	CAPBANK	Equipment Name:	Step1,2
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000667.IS2

1/12/2024 11:03:12 AM

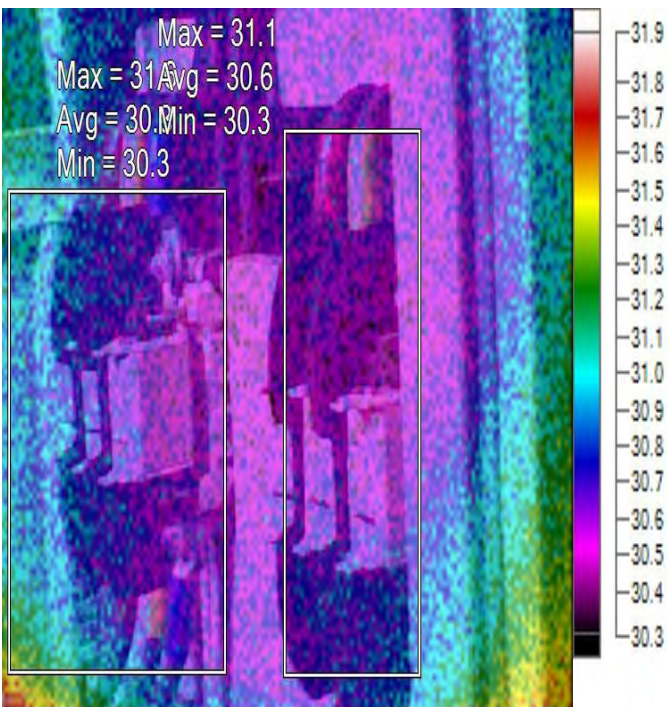
### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	30.8°C	30.4°C	31.2°C	0.95	0.11
A1	30.9°C	30.5°C	31.7°C	0.95	0.24

Name	Temperature	Emissivity
Hot	32.2°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร H smart condo
Equipment	CAPBANK	Equipment Name:	Step3,4
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000668.IS2

1/12/2024 11:03:22 AM

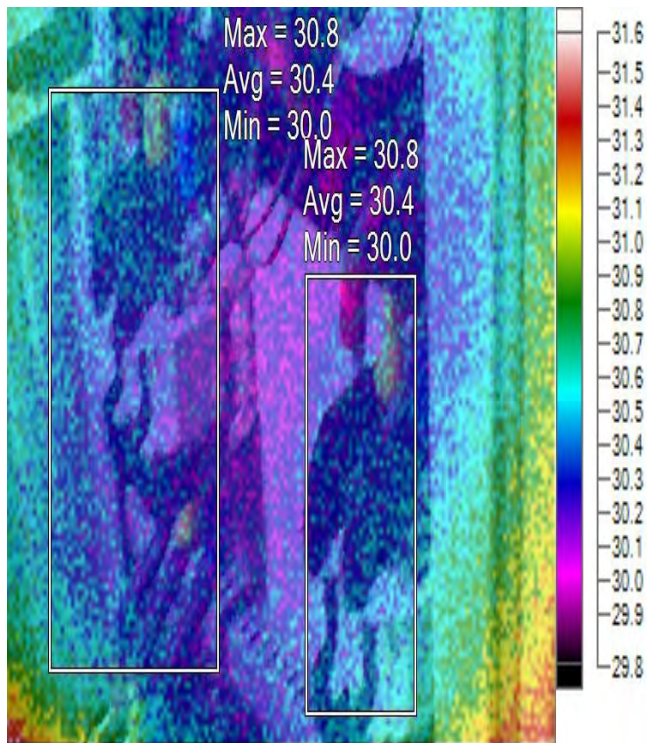
### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	30.8°C	30.3°C	31.6°C	0.95	0.18
A1	30.6°C	30.3°C	31.1°C	0.95	0.12



Inspected By: ATIWAN B.

Inspection Date:	12/1/2024	Location	อาคาร H smart condo
Equipment	CAPBANK	Equipment Name:	Step5,6
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000669.IS2

1/12/2024 11:03:27 AM

### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	30.4°C	30.0°C	30.8°C	0.95	0.13
A1	30.4°C	30.0°C	30.8°C	0.95	0.13



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## **After Infrared Report**

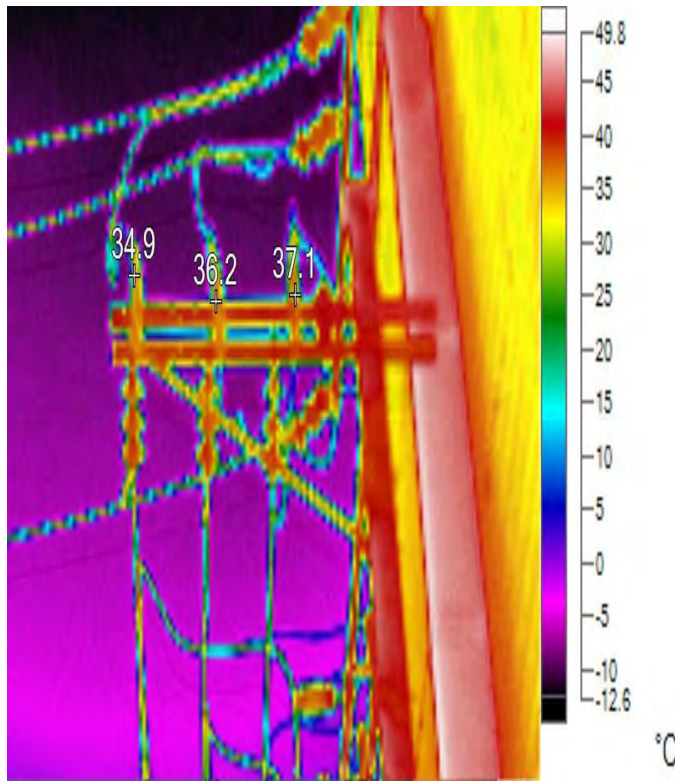
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Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร H Smart condo
Equipment	DROP FUSE	Equipment Name:	TR อาคาร D
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000713.IS2

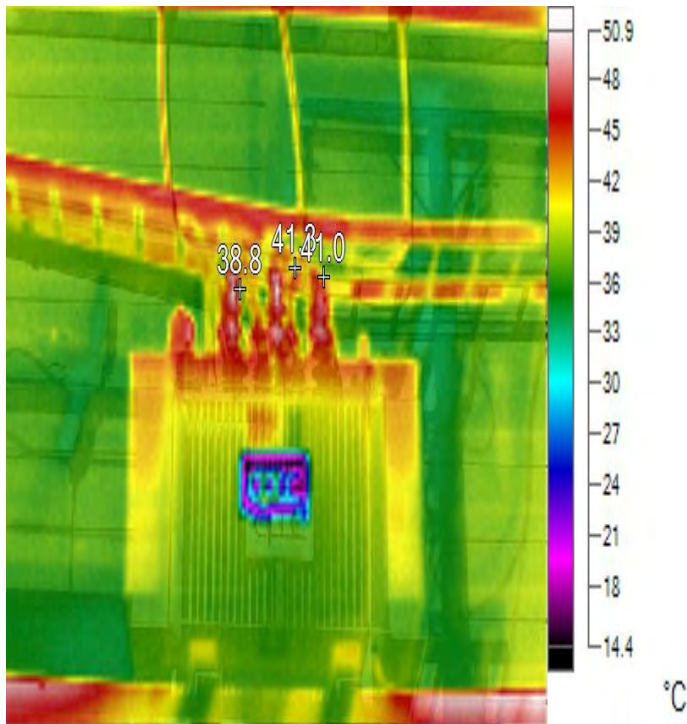
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### Main Image Markers

Name	Temperature	Emissivity
P0	34.9°C	0.95
P1	36.2°C	0.95
P2	37.1°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร smart condo
Equipment	TR	Equipment Name:	TR อาคาร H
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



**IR000714.IS2**

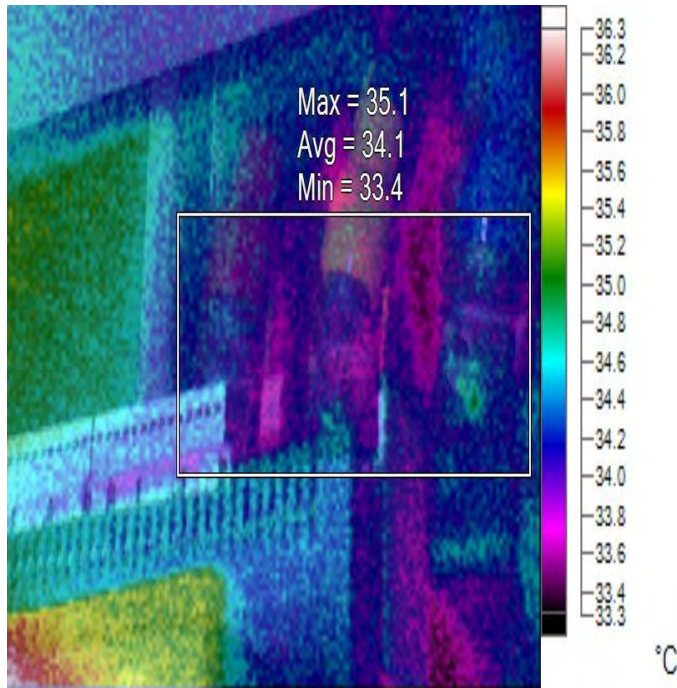
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### Main Image Markers

Name	Temperature	Emissivity
P0	38.8°C	0.95
P1	41.3°C	0.95
P2	41.0°C	0.95

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร H smart condo
Equipment	ACB	Equipment Name:	MAIN ACB
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



**IR000715.IS2**

1/16/2024 3:18:45 PM

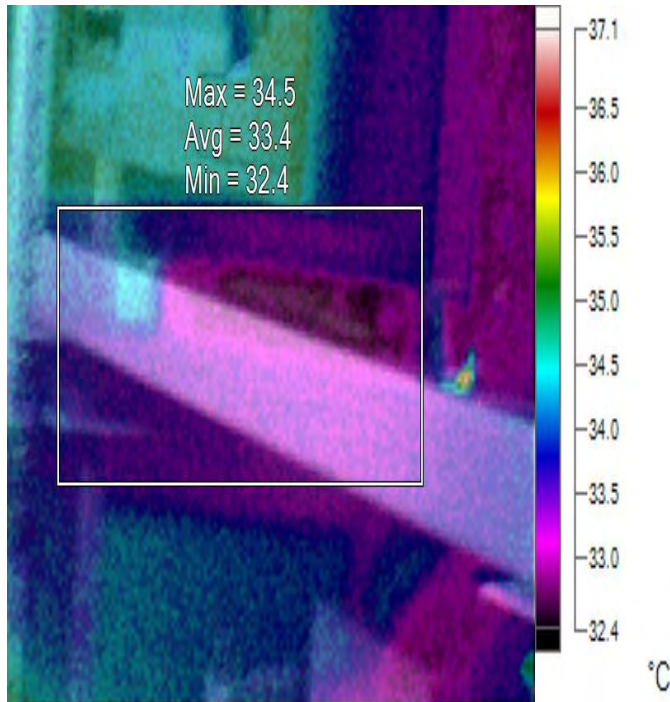
### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	34.1°C	33.4°C	35.1°C	0.95	0.21



Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร H smart condo
Equipment	ACB	Equipment Name:	MAIN ACB
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



**IR000716.IS2**

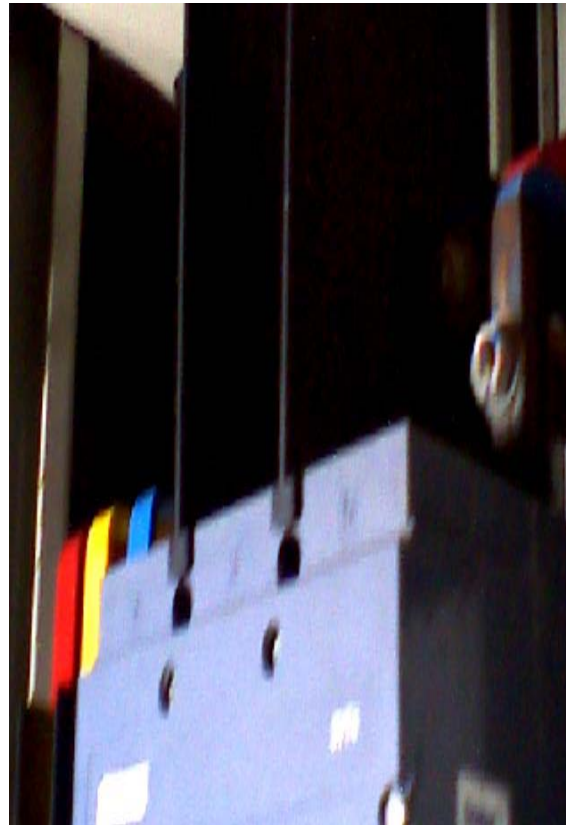
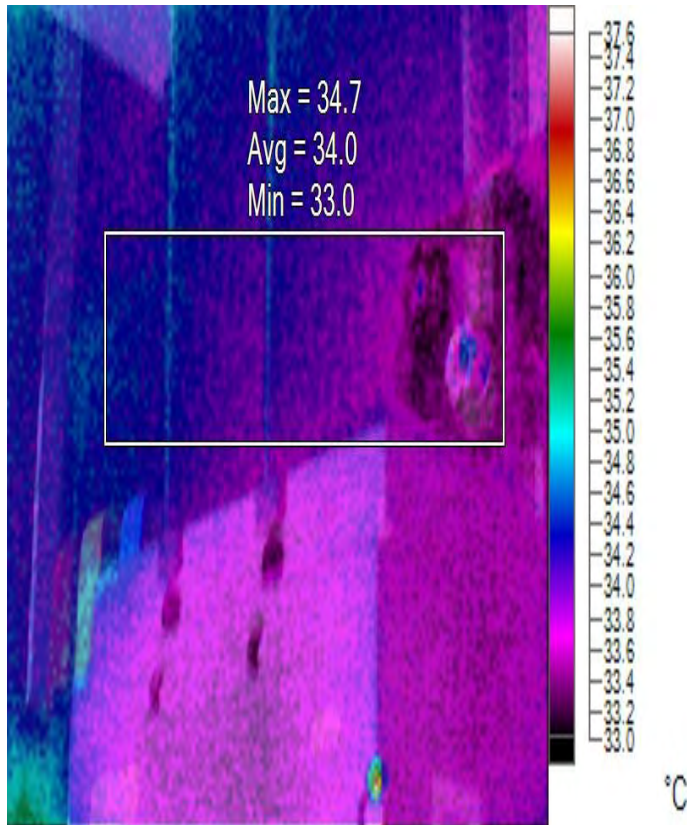
1/16/2024 3:18:54 PM

### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	33.4°C	32.4°C	34.5°C	0.95	0.36

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร H smart condo
Equipment	MCCB	Equipment Name:	MAIN CAP
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



**IR000717.IS2**

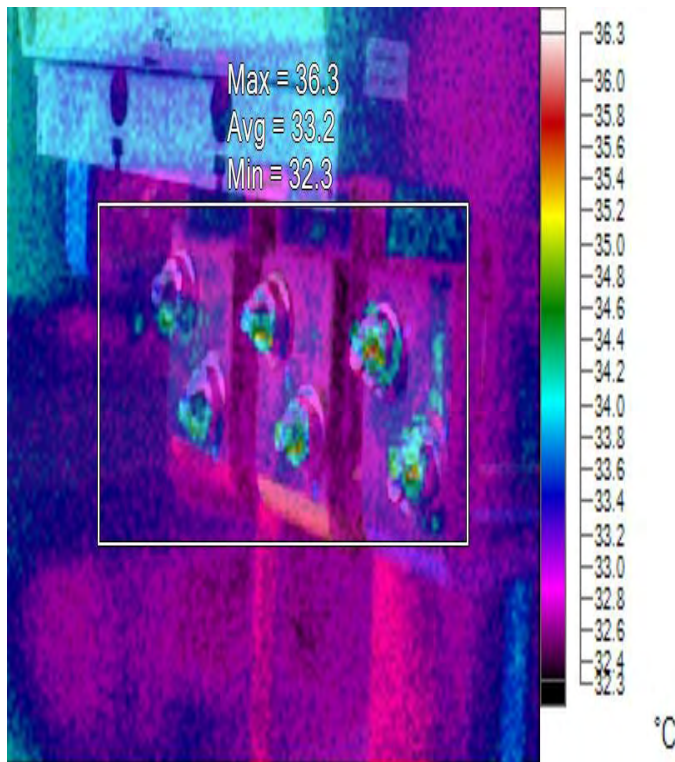
1/16/2024 3:19:14 PM

### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	34.0°C	33.0°C	34.7°C	0.95	0.34

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร H smart condo
Equipment	MCCB	Equipment Name:	MAIN CAP
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000718.IS2

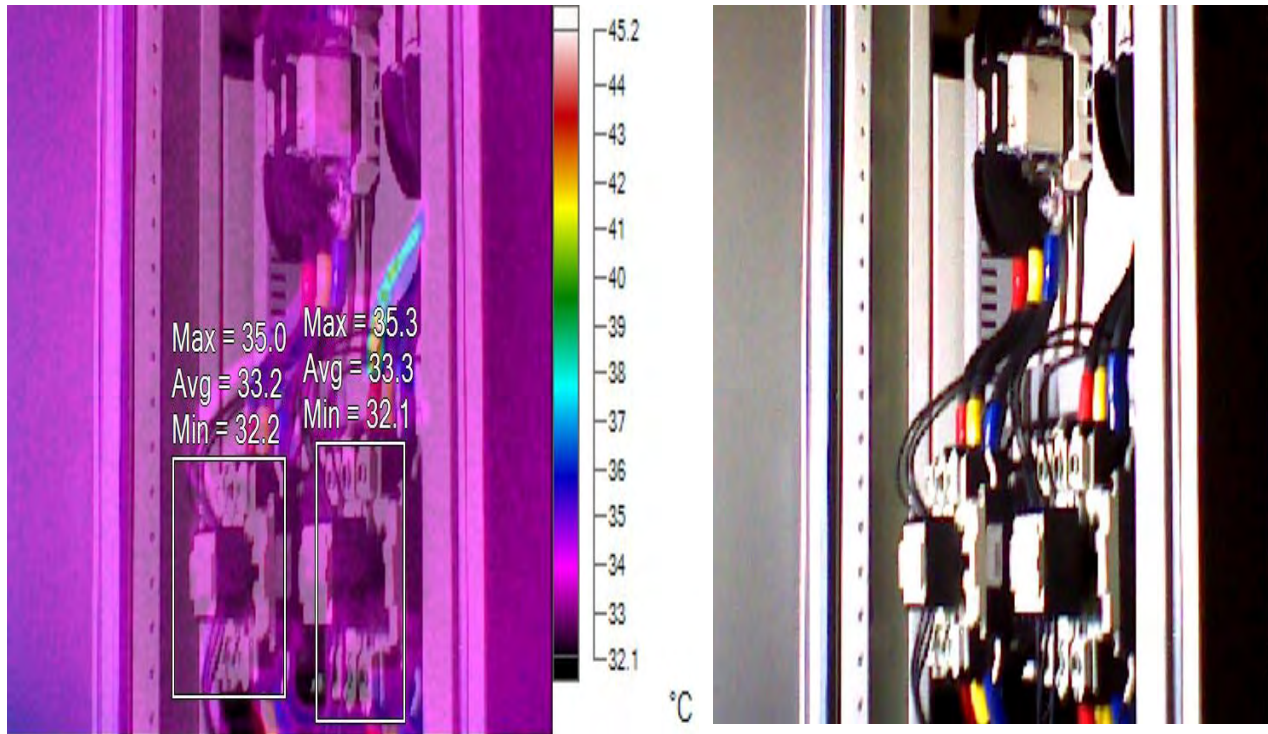
1/16/2024 3:19:23 PM

### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	33.2°C	32.3°C	36.3°C	0.95	0.39

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร H smart condo
Equipment	CAPBANK	Equipment Name:	Step1,2
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000719.IS2

1/16/2024 3:20:14 PM

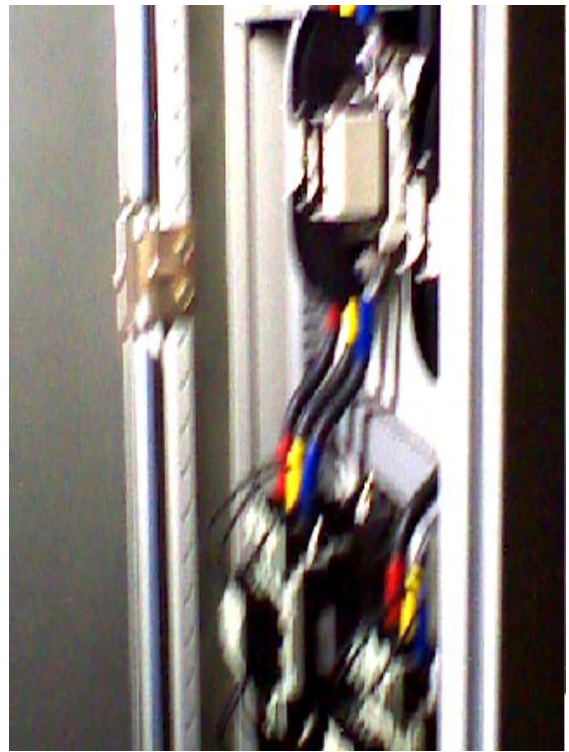
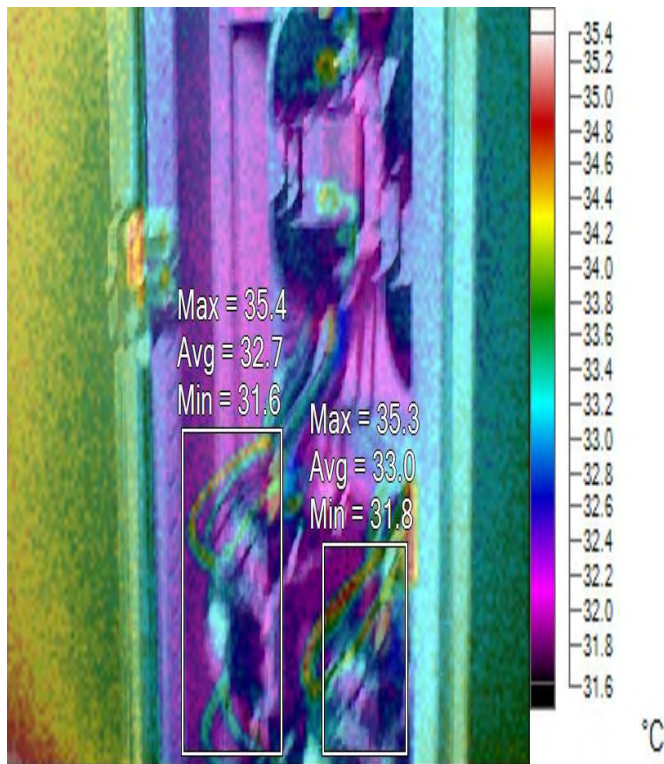
### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	33.2°C	32.2°C	35.0°C	0.95	0.41
A1	33.3°C	32.1°C	35.3°C	0.95	0.52



Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร H smart condo
Equipment	CAPBANK	Equipment Name:	Step3,4
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



IR000720.IS2

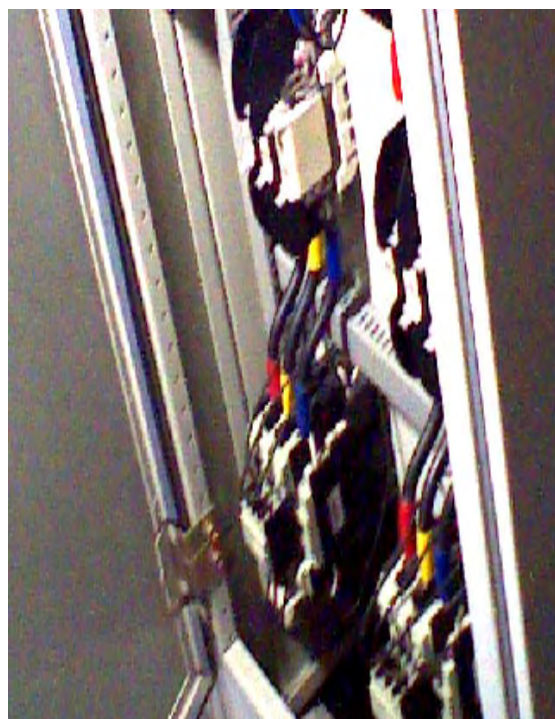
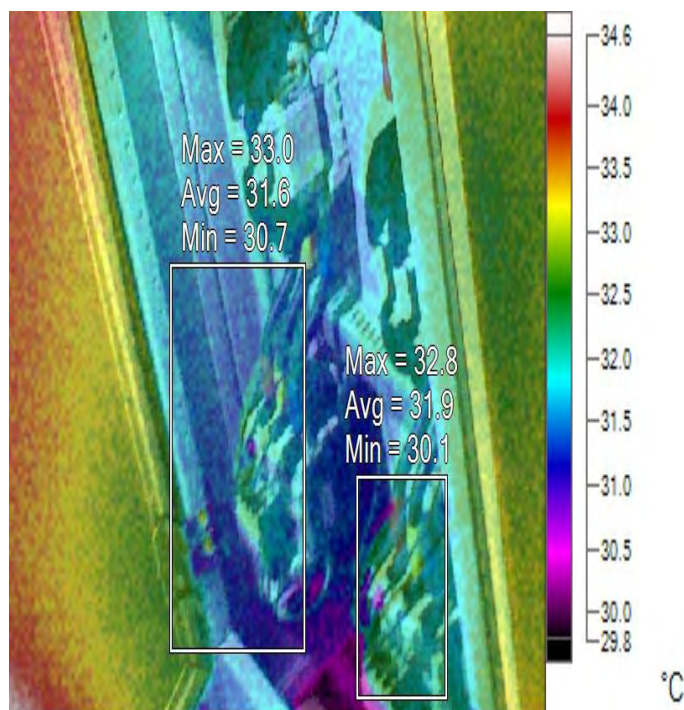
1/16/2024 3:20:21 PM

### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	32.7°C	31.6°C	35.4°C	0.95	0.47
A1	33.0°C	31.8°C	35.3°C	0.95	0.58

Inspected By: ATIWAN B.

Inspection Date:	16/1/2024	Location	อาคาร H smart condo
Equipment	CAPBANK	Equipment Name:	Step5,6
Emissivity:	0.95	Reflected Temperature:	30.0 °C
Camera Manufacturer	Fluke Thermography	Camera:	Tis75-14040173



**IR000721.IS2**

1/16/2024 3:20:34 PM

### Main Image Markers

Name	Avg	Min	Max	Emissivity	St. Dev.
A0	31.6°C	30.7°C	33.0°C	0.95	0.38
A1	31.9°C	30.1°C	32.8°C	0.95	0.48



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Transformer (OIL)

**PLANT** : อาคาร H **JOB REFERENCE NO.** :

## Test Equipments

1. Insulation Tester : MEGGER 2. Turn ratio tester : RAYTECH 3. Winding Tester : METREL  
Type/Model : BM5200 Type/Model : MARK III Type/Model : MI3280

**Cubicle No. :** TR **Feeder Name :** TR อาคาร H

### 1. Data and description

Mfg :	QTC	Rated voltage HV/LV :	24/0.416	kV
Type :	Oil Type Seal type	Rated current HV/LV :	24.06/1387.86	A.
Serial no. :	52311031	Rated frequency :	50	Hz.
Rated KVA :	1000	Total weight :	2900	Kg
Vector Group :	DYN11	Country Mfg :	THAILAND	
Service tap :	1	Year :	2009	

### 2. General condition checked

- Body and seal check	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	
- Oil level &leakage check	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	
- Drier filter condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	
- Bushing and termination	<input type="checkbox"/> Normal	<input checked="" type="checkbox"/> Abnormal	Comment 1
- Grounding connection check	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	
- Buchholz / Temp function check	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	n/a
- Cooling system condition and function check	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	n/a
- Bushing and insulator post cleaning	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	

### 3. Individual test

#### 3.1 Insulation resistance measurement

Test Connection		Test Voltage	Insulation Resistance (GΩ)			Result
Energize	Ground	VDC	1 min	10 min	PI	
H.V.	L.V. + G.	2,500	3.8	4.1	1.090	PASS
L.V.	H.V. + G.	1,000	2.6	-	-	PASS
H.V. + L.V.	G.	2,500	2.7	-	-	PASS

#### 3.2 Dielectric Strength of oil Test

Location	Standard Test	Gap mm.	Temp. oC	STD. DEV.	Breakdown voltage ( kV )						
					1	2	3	4	5	6	AVG.
Main tank	IEC60156-95	2.5	42	0.09	80.0	80.0	79.9	80.0	80.0	79.8	80.0

Oil Tester Type : Hiprotronic 0-75kV

Model : OC60d



# AKS engineering power Co., Ltd.

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**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Transformer (OIL)  
**PLANT** : อาคาร H **JOB REFERENCE NO.** :

## 3.3 Transformer Turn Ratio Test

Tap Position	Name Plate Ratio			Measurement Ratio			Result
	H.V. Side	L.V. Side	Ratio	Phase	Ratio	% Error	
1	24,000	416	99.9230	H1-H0, X1-X3	100.1900	0.27%	pass
				H2-H0, X2-X1	100.1900	0.26%	pass
				H3-H0, X3-X2	100.1900	0.32%	pass

## 4. Test result of individual test

- |                              |  |                                   |  |
|------------------------------|--|-----------------------------------|--|
| - Dielectric strength test   | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |  |
| - Insulation resistance test | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |  |
| - Winding resistance test    | <input type="checkbox"/> Normal            | <input type="checkbox"/> Abnormal |  |
| - Transformer ratio test     | <input checked="" type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |  |
| - Function test              | <input type="checkbox"/> Normal            | <input type="checkbox"/> Abnormal |  |

### Setting

Winding temperature [°C]	Actual	Maximum	Fan 1	Fan 2	Alarm	Trip
	-	-	-	-	-	-

- |                               |                                 |                                   |  |
|-------------------------------|---------------------------------|-----------------------------------|--|
| Winding temperature start fan | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |  |
| Winding temperature alarm     | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |  |
| Winding temperature trip      | <input type="checkbox"/> Normal | <input type="checkbox"/> Abnormal |  |

## 5. Comment

1.เสาดั้งหม้อแปลงเอียง

2.สายมีรอยไหม้ที่ เฟส A,B,C

Signature (Tester)

ATIWAN

Date : 16/1/2567

Signature (Approved)

Date :

Signature (Customer)

Date :





# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : AIR CIRCUIT BREAKER (ACB)

**PLANT** : อาคาร H **JOB REFERENCE NO.** :

## Test Equipments

1. Insulation Tester : MEGGER  
Type/Model : BM21

2. Micro Ohm : AEMC  
Type/Model : 6240

3. Full Test kit : SIEMENS  
Type/Model : Test kit

**Cubicle No. :** MDB **Feeder Name :** Main ACB

Manufacture : SIEMENS Rated Voltage (Un) : 500 V Motor Drive : -

Type/Model : 3WT8161-6AA00-0AA2 Rated Current (In) : 1600 A Opening Coil : -

Racking type : FIX Interrupting Current (Icu) : 66KA 1s Closing Coil : -

Serial No. : 7200291117019 Frquency / Pole : 50 Hz/3 POLE Under Voltage : -

## 1. Visual Mechanical and Electrical Inspection

- Body and seal (Undamaged) condition	<input type="checkbox"/> Normal	<input checked="" type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Gripping contact condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Arc Chute Chamber condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Motor drive & gear condition	<input type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input checked="" type="checkbox"/> N/A
- Racking/Rail mechanism condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- L.V. auxiliaries plug condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Wiring and Connection of control cable	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Grounding & Mounting condition	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A

## Comment

## 2. Inspection before Individual Test

- Battery voltage measurement .....Vdc	<input type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input checked="" type="checkbox"/> N/A
- Function test for breaker	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input type="checkbox"/> N/A
- Function test for motor charging spring	<input type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input checked="" type="checkbox"/> N/A
- Function test for under voltage release	<input type="checkbox"/> Normal	<input type="checkbox"/> See comment	<input checked="" type="checkbox"/> N/A

## 3. Contact Resistance Test

Status	Test Current (ADC)	Phase	Resistance (μΩ)	Calculate Watt loss		Result
				at 100A (W)	Average (W)	
CLOSED	100	L1	27.0	0.270	0.277	<input checked="" type="checkbox"/> PASS
		L2	26.0	0.260		<input type="checkbox"/> NOT PASS
		L3	30.0	0.300		

## 4. Insulation Resistance Test

Status	Test Connection		Test Voltage (VDC)	Phase	Resistance (MΩ)	Result
	Energized	Ground				
CLOSE	Top	Ground	1000	L1-G	-	<input checked="" type="checkbox"/> PASS
				L2-G	-	<input type="checkbox"/> NOT PASS
				L3-G	-	
OPEN	Top	Bottom	1000	L1-L1	-	<input type="checkbox"/> PASS
				L2-L2	-	<input type="checkbox"/> NOT PASS
				L3-L3	-	



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

<b>CUSTOMER</b>	: นิติบุคคลอาคารสมารถคอนโด พระราม 2	<b>EQUIPMENTS NAME</b>	: AIR CIRCUIT BREAKER (ACB)
<b>PLANT</b>	: อาคาร H	<b>JOB REFERENCE NO.</b>	:

## 5. Protective Relay

Manufacture	: SIEMENS	Rated Primary Current (In)	: 1,600 A
Relay type	: ETU37WT	Rated Operating Current (Io)	: 1,600.0
Serial No.	: SZVXOOO5001516	Year/Installed	: -

### Relay setting type

Function	Characteristic curve	Primary current
Long time ( L ) $I_1 \frac{1}{* In}$	t 1 : 10 S@6Ir	9,600 A.
Short circuit time ( S ) $I_2 \frac{6}{* In}$	t 2 : 0.3 s $I^2_{ton}$	14,400 A.
	<input type="checkbox"/> $I = 8 In$ <input type="checkbox"/> $I > I_2$	
Instantaneous time ( I ) $I_3 \frac{\geq 20}{* In}$	t 4 : 0.3 s $I^2_{ton}$	50,000 A.
Ground ( G ) $I_4 \frac{30}{* In}$		500 A.

#### 5.1 Overload with inverse long time delay ,I1

Description	Should be	As found			Result
		Phase A.	Phase B.	Phase C.	
Operating time at 3 time	10.00 s.	9.044 s.	9.044 s.	9.044 s.	<input type="checkbox"/> PASS <input type="checkbox"/> NOT PASS

#### 5.2 Shorty-time short circuit ,I2

Description	Should be	As found			Result
		Phase A.	Phase B.	Phase C.	
Operating time at 1.5 time	0.3 s.	0.346 s.	0.346 s.	0.346 s.	<input type="checkbox"/> PASS <input type="checkbox"/> NOT PASS

#### 5.3 Instantaneous short circuit ,I3

Description	Should be	As found			Result
		Phase A.	Phase B.	Phase C.	
Operating time at 1.5 time	<0.05 s.	0.033 s.	0.033 s.	0.033 s.	<input type="checkbox"/> PASS <input type="checkbox"/> NOT PASS

#### 5.4 Earth fault ,I4

Description	Should be	As found	Result
Pickup current	30 A.	450 A.	<input type="checkbox"/> PASS
Operating time at 1.5 time	0.3 s.	0.334 s.	<input type="checkbox"/> NOT PASS

## 6. Comment

### 1. Cover Setting ไม่ดี

Signature (Tester)

Signature (Approved)

Signature (Customer)

ATIWAN

File name: ACB\_/ACB\_PR111

Report page: 2



## AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

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<b>CUSTOMER</b>	:	นิติบุคคลอาคารสมารถคอนโด พระราม 2	<b>EQUIPMENTS NAME</b>	:	AIR CIRCUIT BREAKER (ACB)
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<b>PLANT</b>	:	อาคาร H
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<b>JOB REFERENCE NO.</b>	:	
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Date :	16/1/2567
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Date :	
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Date :	
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# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai, saimai,

Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสภารทคอนโด พระราม 2 **EQUIPMENTS NAME** : LV CAPACITOR BANK

**PLANT** : อาคาร H **JOB REFERENCE NO.** :

## Test Equipments

1. Insulation Tester : MEGGER  
Type/Model : MIT420/2

2. RLC Tester : VOLTH  
Type/Model : S-LCR1

3. Resistance Tester : SANWA  
Type/Model : YX360TRF

**Cubicle No. :** CAP BANK

**Feeder Name :** อาคาร H

## 1. Name Plate Data

Manufacture : DUCATI Voltage : 400 VAC Fluid type : -

Type/Model : 416.37.0108 Frequency : 50 Hz Ins.n level : -

Serial No. : Reactive : 25 x 2 KVAR Temp. cat. : - 25/D

Year : 2008 Phase : 3 Ph. Connected : D

Standard : IEC 60831 1-2 Capacitance : 3x166 uF R-Discharge : -

## 2. Automatic Power Factor Controller (APFC)

Manufacture : JANITZA CT "s ratio : 1600/5 Voltage : 400

Type/Model : PR0PHI6R Setting C/K : 0.081 PF Setting : 0.96

Serial No. : 6604/0701 Time setting : 40 Other : 90 °

## 3. General Visual Insection Check

☒ Capacitor bank and Support cubicle : \_\_\_\_\_

☒ Power factor control relay : \_\_\_\_\_

☒ Selector switch and push button : \_\_\_\_\_

☒ Status lamp ON / OFF : \_\_\_\_\_

☒ Main Circuit Breaker ☒ Yes 1000 A ☐ No. : \_\_\_\_\_

☐ Molded Case Circuit breaker : N/A

☒ Control cable, Termination : \_\_\_\_\_

☒ Power Cable size 50 mm<sup>2</sup> : \_\_\_\_\_

☒ Fuse base : \_\_\_\_\_

☒ Fuse link condition : \_\_\_\_\_

☒ Magnetic Contactor Condition : \_\_\_\_\_

☒ Magnetic contactor's surface condition : \_\_\_\_\_

☒ Capacitor unit condition : \_\_\_\_\_

☐ Reactor winding insulator condition : N/A

☐ Reactor iron core condition : N/A

☐ Reactor cable connection condition : N/A

☒ Grounding connection condition : \_\_\_\_\_

☐ Cooling equipment condition : N/A

## 5. Check Capacitance and Discharge resistance of Capacitor

Step	Serial No.	Phase	Frequency (Hz)	Resistance (kΩ)	Capacitance (μF)		% Error	Result	Insulation test (MΩ)
					Measurement	Calculation			
1		A-B	50	46.00	512.00	497.61	-2.89	Pass	5,100
		B-C	50	46.00	504.00	497.61	-1.28	Pass	
		C-A	50	46.00	502.00	497.61	-0.88	Pass	





# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai, saimai,

Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : LV CAPACITOR BANK  
**PLANT** : อาคาร H **JOB REFERENCE NO.** :

## 5. Check Capacitance and Discharge resistance of Capacitor (Con'd)

Step	Serial No.	Phase	Frequency (Hz)	Resistance (kΩ)	Capacitance (μF)		% Error	Result	Insulation test (MΩ)
					Measurement	Calculation			
2		A-B	50	46.00	501.00	497.61	-0.68	Pass	6,900
		B-C	50	46.00	501.00	497.61	-0.68	Pass	
		C-A	50	46.00	501.00	497.61	-0.68	Pass	
3		A-B	50	46.00	502.00	497.61	-0.88	Pass	4,700
		B-C	50	46.00	502.00	497.61	-0.88	Pass	
		C-A	50	46.00	500.00	497.61	-0.48	Pass	
4		A-B	50	46.00	501.00	497.61	-0.68	Pass	3,800
		B-C	50	46.00	499.00	497.61	-0.28	Pass	
		C-A	50	46.00	500.00	497.61	-0.48	Pass	
5		A-B	50	46.00	503.00	497.61	-1.08	Pass	5,000
		B-C	50	46.00	501.00	497.61	-0.68	Pass	
		C-A	50	46.00	501.00	497.61	-0.68	Pass	
6		A-B	50	46.00	506.00	497.61	-1.69	Pass	3,100
		B-C	50	46.00	502.00	497.61	-0.88	Pass	
		C-A	50	46.00	500.00	497.61	-0.48	Pass	

## 6. Comment

1.หน้าจอบ PFC เสื่อมสภาพ

Signature (Tester)

ATIWAN

Date : 16/1/2024

Signature (Approved)

Date :

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร H

Feeder/Panel name : PP1ชั้น 1

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker r No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	OFF
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	27	28	40	N
N	40	29	30	16	OFF
N	40	31			
N	40	33			
N	40	35			

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Signature (Customer)

Date :

Date : January 16, 2024



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)  
**PLANT** : อาคาร H

Feeder/Panel name : LP 1 ชั้น 1

## 1. Panel board unit inspection record

Main breaker rated current

63

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and  
Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker r No.	Breaker No.	Circuit rated current (A)	Status
N	16	1	2	16	N
N	16	3	4	16	N
N	16	5	6	16	N
N	16	7	8	16	N
N	16	9	10	16	N
N	16	11	12	16	N
N	16	13	14	16	N
N	16	15	16	16	N
N	16	17	18	16	N
N	16	19	20	16	N
N	16	21	22	16	N
N	16	23	24	16	N
N	16	25	26	16	N
N	16	27	28	16	N
N	16	29	30	16	N
		31	32	32	N
		33	34		
		35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 16, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร H

Feeder/Panel name : PP-2 ชั้น 2

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	N
N	40	9	10	40	N
OFF	40	11	12	40	N
OFF	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	OFF
N	40	27	28	40	N
N	40	29	30	40	N
N	40	31	32	40	N
N	40	33	34	40	N
N	40	35	36	40	N
N	40	37	38		
N	40	39	40		
N	16	41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 16, 2024

Signature (Customer)

Date :





# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร H

Feeder/Panel name : PP-3 ชั้น 3

## 1. Panel board unit inspection record

Main breaker rated current

250 A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker r No.	Breaker No.	Circuit rated current (A)	Status
OFF	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	40	N
N	40	31	32	40	N
N	40	33	34	40	N
		35	36	16	N
		37	38	16	N
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 16, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร H

Feeder/Panel name : PP-4 ชั้น 4

## 1. Panel board unit inspection record

Main breaker rated current

250 A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker r No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	16	N
N	40	31	32		
N	40	33	34		
N	40	35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 16, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร H

Feeder/Panel name : PP-5 ชั้น 5

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	16	OFF
N	40	31	32		
N	40	33	34		
N	40	35	36		
OFF	40	37	38		
N	40	39	40		
N	40	41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 16, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร H

Feeder/Panel name : PP-6 ชั้น 6

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker r No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	16	N
N	40	31	32		
N	40	33	34		
N	40	35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 16, 2024

Signature (Customer)

Date :





# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร H

Feeder/Panel name : PP-7 ชั้น 7

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	N
N	40	9	10	40	N
N	40	11	12	40	N
N	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	16	N
N	40	31	32		
N	40	33	34		
N	40	35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 16, 2024

Signature (Customer)

Date :



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62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสมารถคอนโด พระราม 2 **EQUIPMENTS NAME** : Distribution Borad(LP)

**PLANT** : อาคาร H

Feeder/Panel name : PP-8 ชั้น 8

## 1. Panel board unit inspection record

Main breaker rated current

250

A

Scope of work

1.1 Visual Inspection check

1.2 Clean cubicle and Equipment

1.3 Tightening connection check

Note: System live bus when visual and

Inspection check

Code of status :

N : Normal

C1 : See comment number 1

C2 : See comment number 2

Cx : See comment number x

Status	Circuit rated current (A)	Breaker No.	Breaker No.	Circuit rated current (A)	Status
N	40	1	2	40	N
N	40	3	4	40	N
N	40	5	6	40	N
N	40	7	8	40	OFF
N	40	9	10	40	N
N	40	11	12	40	N
OFF	40	13	14	40	N
N	40	15	16	40	N
N	40	17	18	40	N
N	40	19	20	40	N
N	40	21	22	40	N
N	40	23	24	40	N
N	40	25	26	40	N
N	40	27	28	40	N
N	40	29	30	16	N
N	40	31	32		
N	40	33	34		
N	40	35	36		
		37	38		
		39	40		
		41	42		

## 2. Comment

Signature (Tester)

Atiwan B.

Signature (Approved)

Date :

Date : January 16, 2024

Signature (Customer)

Date :



# AKS engineering power Co., Ltd.

62/93chonchop Villages, soi saimai 48 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. 063-6538758

**CUSTOMER** : นิติบุคคลอาคารสภารมวทคอนโด พระราม 2 **EQUIPMENTS NAME** : Grounding Resistance Test  
**PLANT** : อาคาร H **JOB REFERENCE NO.** :

## Test Equipments

- Grounding Resistance Test Type : 1623 Identity : FLUKE

**Locations Name** :

### 1. Method of Test and Measured values

- ☐ 1. 3/4-Pole Fall of Potential (Result : Resistance (RE) ( $\Omega$ ))  
☐ 2. Selective Earth Measurement (One Clamp) (Result : RE1 = Current draw into grounding system ( $\Omega$ )  
RE2 = Current draw into system or equipment ( $\Omega$ ) )  
☒ 3. Ground Loop Measurement (Two Clamp) (Result : Resistance-Loop ( $\Omega$ ))

#### Setting value for 1 & 2

Voltage ☐ 20 V ☒ 48 V  
Frequency ☐ AFC = 111 Hz

### 2. Visual Inspection

- Ground terminal box physical condition ☒ Normal ☐ See comment ☐ N/A  
- Wiring and connection ☒ Normal ☐ See comment ☐ N/A

### 3. Grounding resistance measurement

Item	Feeder name	Resistance( $\Omega$ )	Item	Feeder name	Resistance( $\Omega$ )
1	MDB	0.10 $\Omega$	11		
2	TR	2.17 $\Omega$	12		
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

Note: Acceptable value of ground resistance is not more than 5 Ohm

### 4. Comment

Signature (Tester) Signature (Approved) Signature (Customer)  
ATIWAN  
Date : 16/1/2567 Date : Date :



# ELECTRICAL SYSTEM PREVENTIVE MAINTENANCE REPORT

## SMART CONDO RAMA 2

อาคาร นิติ

Date : APRIL 25, 2024

Descriptions : Preventive maintenance LV  
system

**AKS engineering power Co., Ltd.**  
51/8chonchop Villages, soi saimai 10 ,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758





## AKS engineering power Co., Ltd.

51/8chonchop Villages, soi saimai 10,saimai,  
saimai, Bangkok 10220, Thailand, Tel. : 063-6538758

### Conditions status and meaning



อันตราย ต้องทำการแก้ไขอย่างเร่งด่วน



ไม่ปกติ ไม่สามารถแก้ไขได้ทันที จำเป็นต้องรออะไหล่ เพื่อแก้ไข



เริ่มไม่ปกติ เป็นสัญญาณแจ้งเตือน สามารถใช้งานได้ ส่งผลการใช้งานกับอุปกรณ์ระยะยาว ควรพิจารณาทำการแก้ไข



ปกติ การทำงาน และสภาพโดยทั่วไปปกติ ควรตรวจสอบ และดูแลแนวโน้มในครั้งถัดไป

### SUMMARY TEST REPORTS

No.	Equipments name	Descriptions	Status
1	อาคาร นิติ		
1.1	TR.	1 เสาตั้งหม้อแปลงเอียง	
1.2	ตู้DB	1. สภาพตู้โดยทั่วไปปกติ	
1.3	MCCB	1. สภาพตู้โดยทั่วไปปกติ	
2	Grounding TR System		
2.1		1. ค่าGround ปกติ	



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