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SAMHEUNG  
ELECTRIC  
Co., Ltd.

NO. 1



**SAMHEUNG  
ELECTRIC**

Co., Ltd.

We always listen to  
customers' voice



# Quality directions



Samheung Electric is growing into a customer-reliable corporation through advanced design and flawless quality development that meet customer needs. We always listen to customers' voice through our strong and fast organization culture. Samheung Electric has been committed in technical development for high-voltage incoming

panels and automatic streetlight control panels. Based on IOT-based full-duplex control technology in the future, we are growing into a fast and strong corporation along with our business clients by expanding our business fields in smart distribution panels, smart management systems, Smart PM systems, etc.

## Employees of Samheung Electric

# History

## 2012

- 04 Samheung Electric Co., Ltd. founded  
(capital: 200 million won)
- 07 Registered as an electric engineering business

## 2013

- 10 ISO 9001, ISO 14001 certified

## 2014

- 03 Registered as a cooperator for LS Mtron
- 05 Registered as a cooperator for TK Chemical
- 09 Registered as a cooperator for SK Siltron
- 10 Registered as a cooperator for LG Innotek

## 2015

- 02 Registered as a cooperator for POSCO ESM
- 03 Certified in a venture business confirmation
- 06 Signed an agreement to be an academic-industrial cooperator  
(Department of Electric Energy, Gumi University)
- 12 Capital increased (from 200 million to 400 million)

## 2016

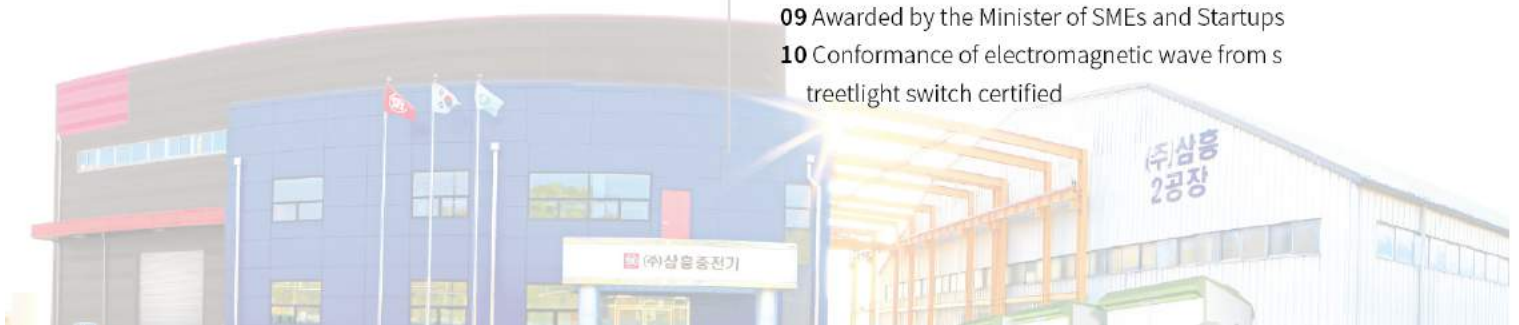
- 03 Certified as a female-owned business
- 08 New factory constructed and relocated
- 10 Registered as a cooperator for the  
Korea Expressway Corporation

## 2017

- 02 Acquired the type approval for oil immersed type transformer  
(Korea Electrotechnology Research Institute)
- 02 Acquired the certificate of conformance with  
the risk analysis standards
- 05 research institute founded and certified  
(Ministry of Science, ICT and Future Planning)
- 05 Certificate of direct production  
(transformer, distribution board, motor control center)
- 06 Acquired the type approval for distribution board for streetlight  
(Korea Electrotechnology Research Institute)
- 06 Registered as a member of  
the Korea Industrial Technology Association
- 07 Official inspection test waived for oil immersed type transformers
- 07 Manufactory (new factory constructed)
- 09 Awarded by the Minister of SMEs and Startups
- 10 Conformance of electromagnetic wave from s  
treetlight switch certified

## 2018

- 01 Registered 12 products of street load centers  
in the comprehensive shopping mall,  
Korea ON-line E-Procurement System
- 07 Registered enclosed-type distribution panels,  
motor control centers, control panels, distribution  
panel, load centers in the comprehensive shopping  
mall, Korea ON-line E-Procurement System
- 09 Streetlight dimming control device  
(dimming controller, dimming model) KC certified



# Enclosed switchboard



Model : SH-HV-LV



Identification No. : 23421473

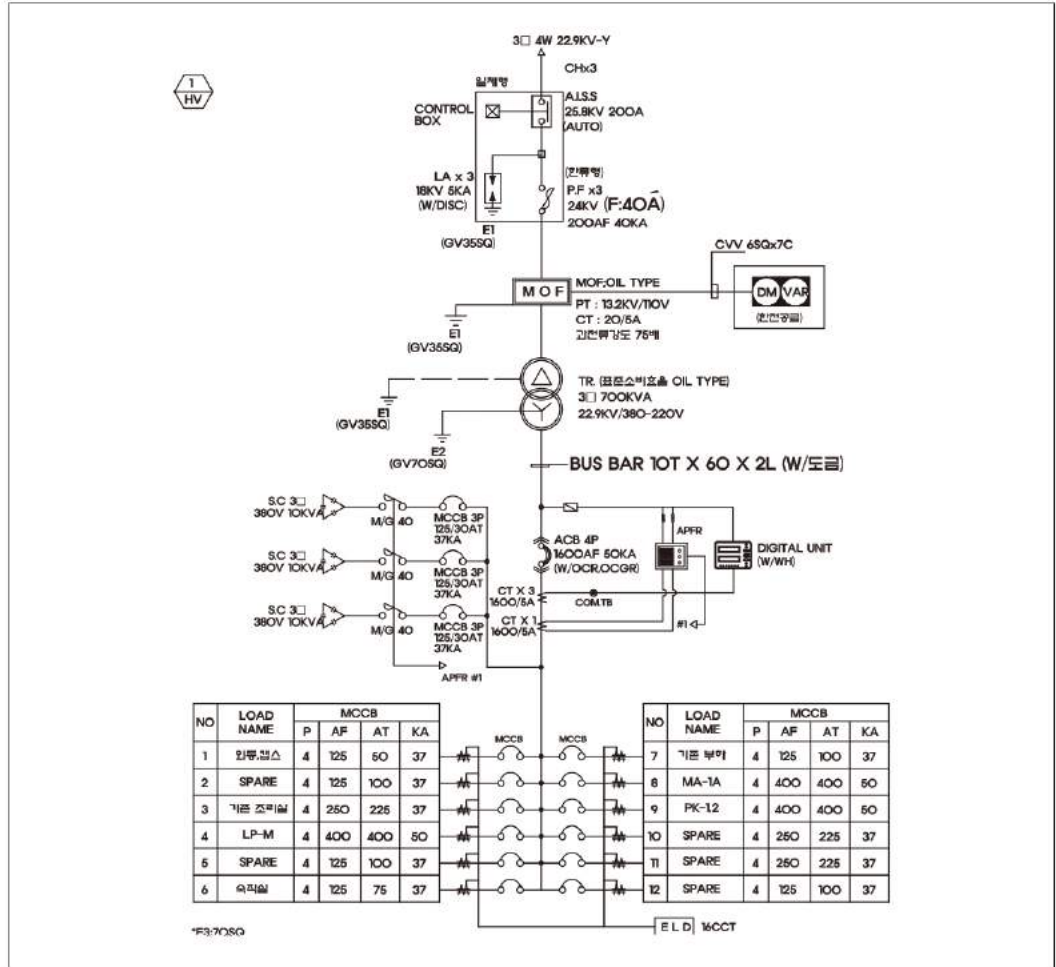
## Components

- "PDC-Control" attached for real-time detection of condensation (dew point temperature) caused by internal temperature and humidity in the distribution board
- External temperature sensor, internal wall temperature sensor, and humidity center installed; ventilation fan for internal temperature control and preventative film heater installed
- Rainfall meter installed at the exterior of the housing (based on outdoor type)
- Real-time detection of the condensation point caused by the difference between internal and external temperatures to organically run the ventilation fan and film heater to effectively prevent condensation at the internal wall of the distribution board and PDU.

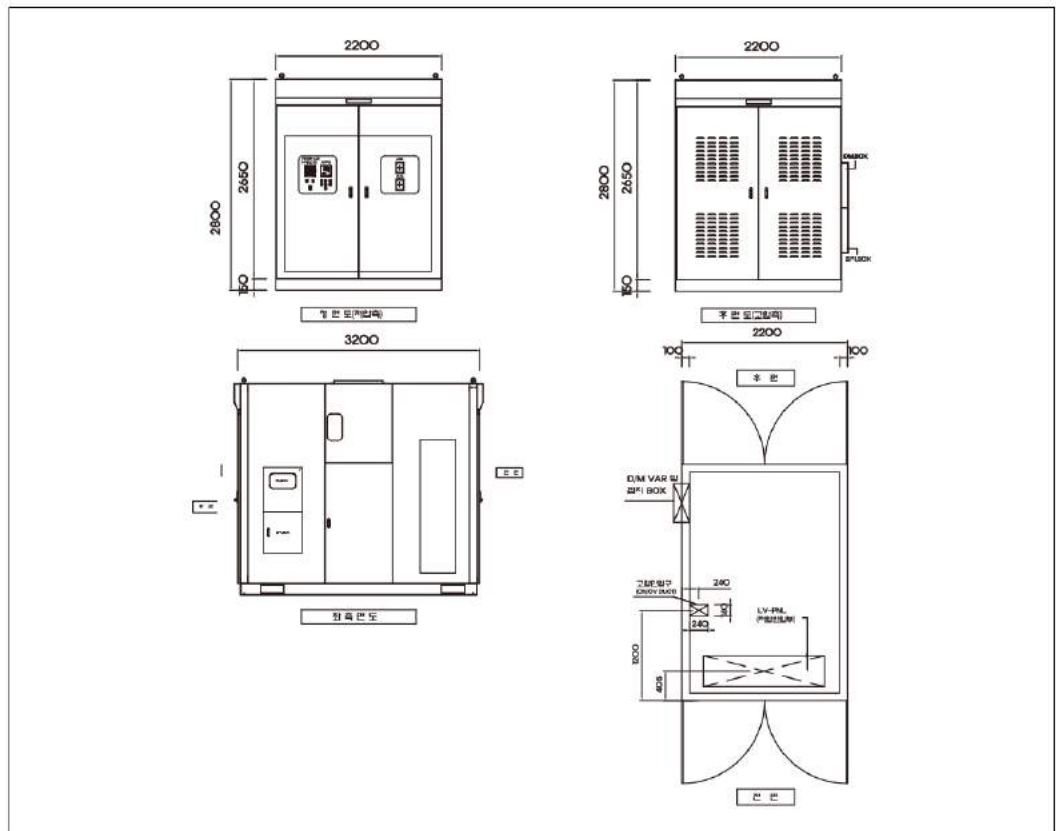
## Note

Enclosure structure	outdoor, indoor	Enclosure materials	2 types of structural steel (KSD 3503 SB41P)  · Frame : 2.3t · Front Door : 3.0t · Rear Door : 3.0t · Side Plate : 1.6t · Top Plate : 1.6t · Bottom Plate : 1.6t · Bade(Angless) 100X50X3.2t(SS41)
Arrangement order and panel status	standalone		
Installation type	outdoor standalone		
Enclosure color	internal and external door (hammer tone)		
Name Plate	Acryl 2t		
Plate for instrumental installation (hammer tone)			
Upper plate and Channel Base (hammer tone)			
Door Handle W/Key			
Ventilation fan AC 220V 35W			

# Single line diagram



# Outside view



# Official incoming board



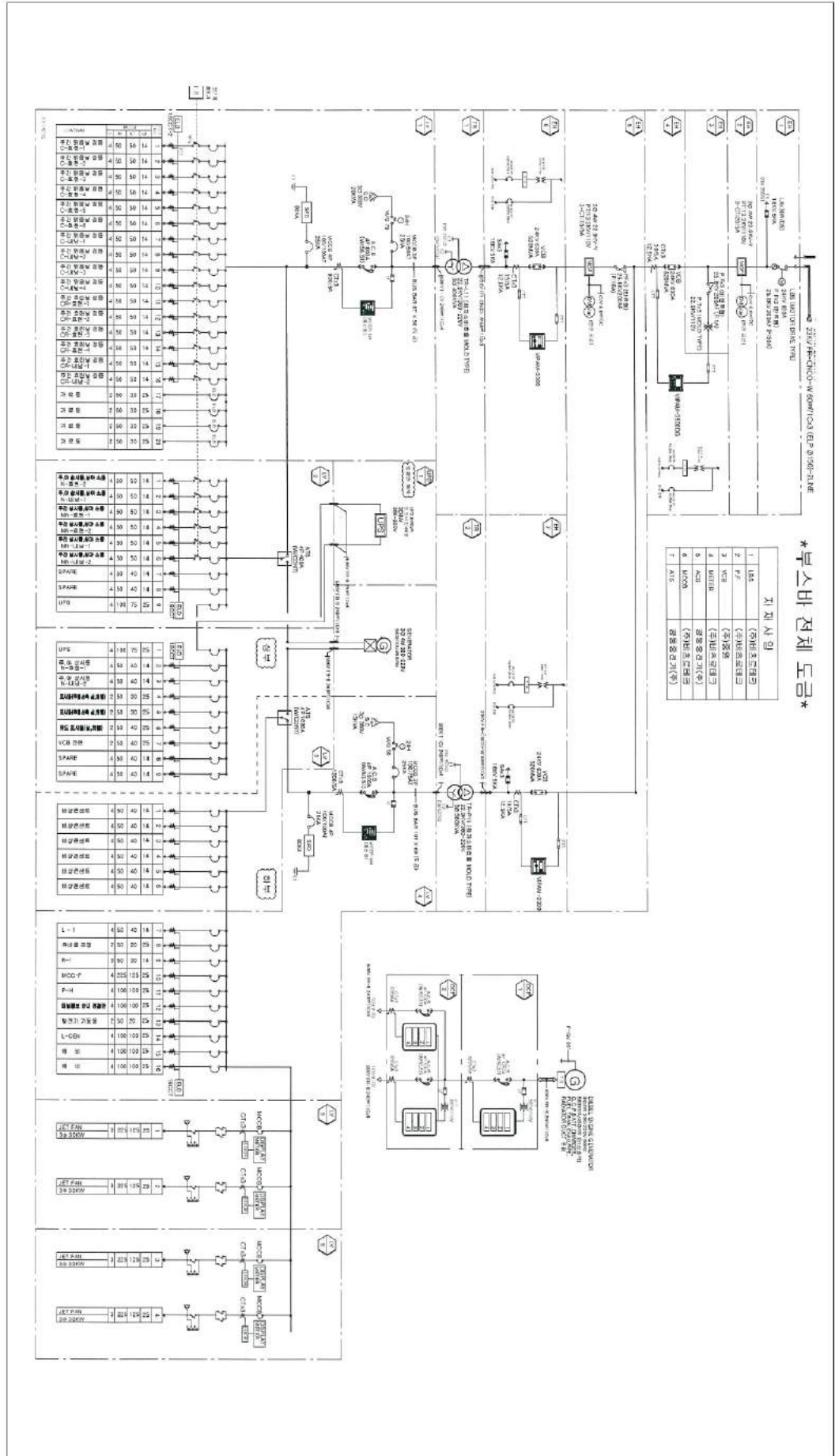
Model : SH-HV-LV

Identification No. : 23421473

## Note

Enclosure structure	outdoor type	Arrangement order and panel status	alliance type from left to right
Enclosure material	Steel	Installation type	standalone
	· Frame : 3.0t	Enclosure measurement	refer to diagram
	· Front Door : 3.0t	Unit	mm
	· Rear Door : 3.0t	Enclosure color	Internal and external door (hammer tone)
	· Side Plate : 2.0t		Plate for instrumental installation (hammer tone)
· Top Plate : 2.0t		Upper plate and channel base (FRZ 100 HPE H/YELLOW DH)	
· Bottom Plate : 2.0t	Door Handle W/Key		
· Others : 1.6t			
Name Plate	Acryl 2t 60X340mm	Ventilation fan AC 220V 38W	

# Single line diagram



# Motor control center (MMC)



Identification No. : 23421474

A motor power basis designed and produced for the safety and high reliability for field operation conditions. Excellent for capacity change and maintenance.

## Features

- Excellent for maintenance and inspection. Highly stable for facility protection.
- Easy for cable duct construction and cabling.
- Excellent for additional expansion and modification.
- Easy unit withdrawal and lead-in
- Easy installation for narrow installation area



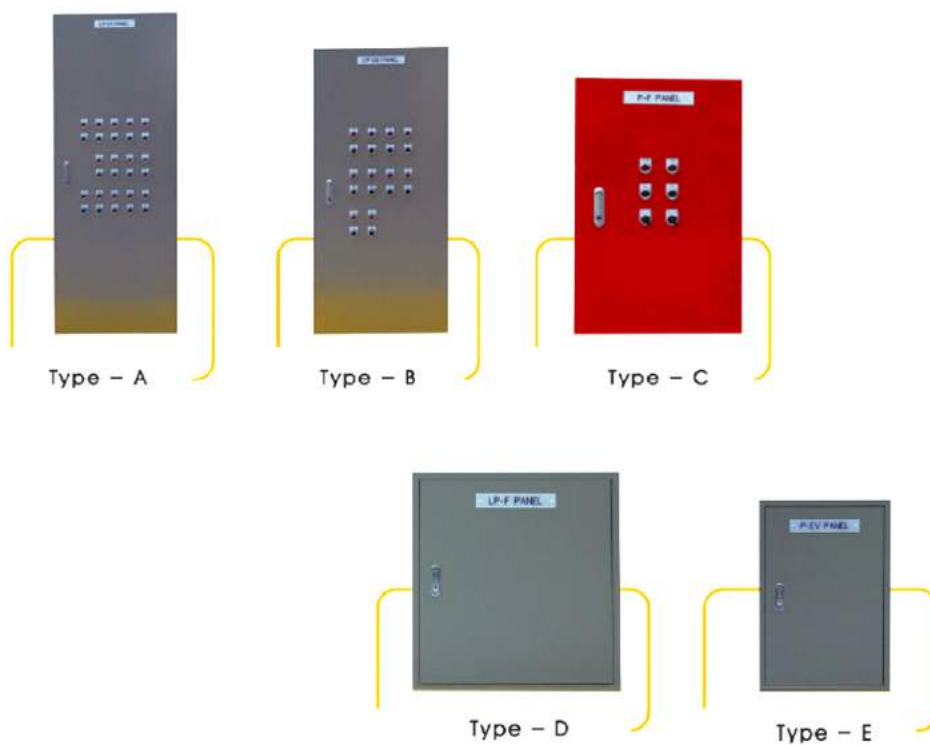


# ○ Distribution board



Identification No. : 23421475

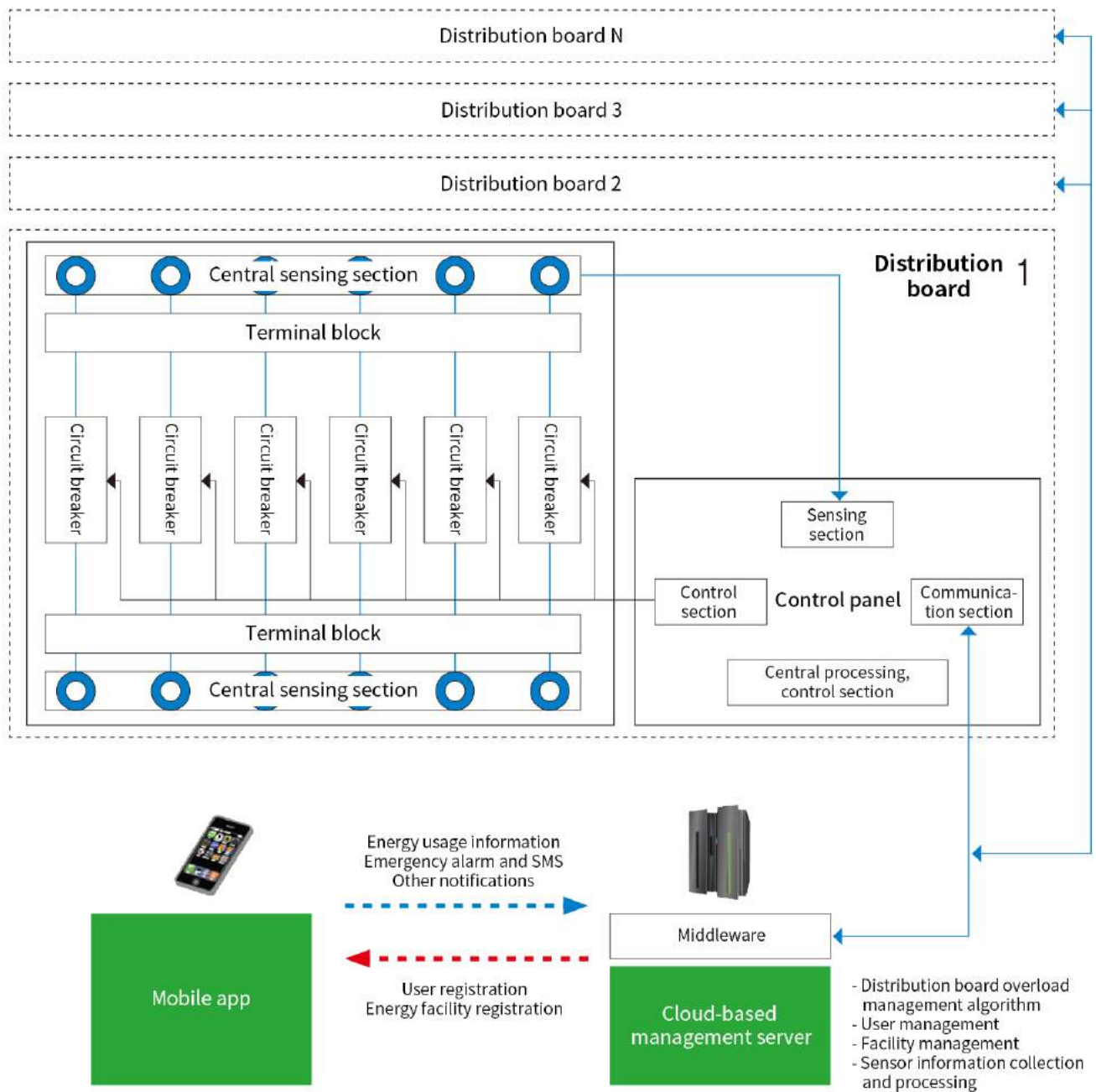
Excellent distribution board that meets various customer needs through sufficient consideration of field conditions and appropriate standardization for the purpose of the facility



# Smart distribution board system

## System diagram

- See the system information at a glance, using the beacon communication to send the data to each manager's smartphone App through real-time detection of power consumption, temperature, and humidity of the product!
- **Synchronization between the management system and APP that immediately applies the sensors the user needs**



# Streetlight distribution board

## General type



  Identification No. 23295509



**Model** SH-A1-P20

**Spec** General type, 2-circuit,  
exposed type, GPS controller

  Identification No. 23295515

**Model** SH-A1-P40

**Spec** General type, 4-circuit,  
exposed type, GPS controller



  Identification No.23295516

**Model** SH-A1-P60

**Spec** General type, 6-circuit,  
exposed type, GPS controller


## Advanced type (switch excluded)



  Identification No.23295506



**Model** SH-B1-P40

**Spec** Advanced type, 4-circuit,  
exposed type

  Identification No.23295507

**Model** SH-B1-P60

**Spec** Advanced type, 6-circuit,  
exposed type

  Identification No.23295508

**Model** SH-B1-P80

**Spec** Advanced type, 8-circuit,  
exposed type

# Streetlight distribution board

## GPS



Identification No. 23295517

**Model** SH-A1-P2H

**Spec** Advanced type, 2-circuit,  
exposed type, GPS controller



Identification No. 23295510

**Model** SH-A1-P4H

**Spec** Advanced type, 4-circuit,  
exposed type, GPS controller



Identification No. 23295511

**Model** SH-A1-P6H

**Spec** Advanced type, 6-circuit,  
exposed type, GPS controller

## Full-duple



Identification No. 23295512

**Model** SH-A2-P40

**Spec** Advanced type, 4-circuit,  
exposed type, Full-duplex switch



Identification No. 23295513

**Model** SH-A2-P60

**Spec** Advanced type, 6-circuit,  
exposed type, Full-duplex switch



Identification No. 23295514

**Model** SH-A2-P80

**Spec** Advanced type, 8-circuit,  
exposed type, Full-duplex switch

## Automatic streetlight switch

### GPS



Identification No. 23361996

Model SH-A3-U2X

Spec GPS streetlight switch  
(2-output, internal GPS module)

### Full-duplex



Identification No. 23361997

Model SH-A4-U2X

Spec Full-duplex streetlight switch  
(2-output, CDMA method)

## Automatic security light switch

### Electronic type



Identification No. 23361995

Model SH-A5-U10

Spec Electronic security light switch  
(1-output, 2.5ka, 5ka)

### GPS



Identification No. 23362000

Model SH-A6-U10

Spec GPS security light switch  
(1-output, 2.5ka, 5ka)

## Security light switch UNIT

### Electronic type



Identification No. 23361999

Model SH-A5-UNIT

Spec Electronic security light switch unit  
(1-output)

### GPS

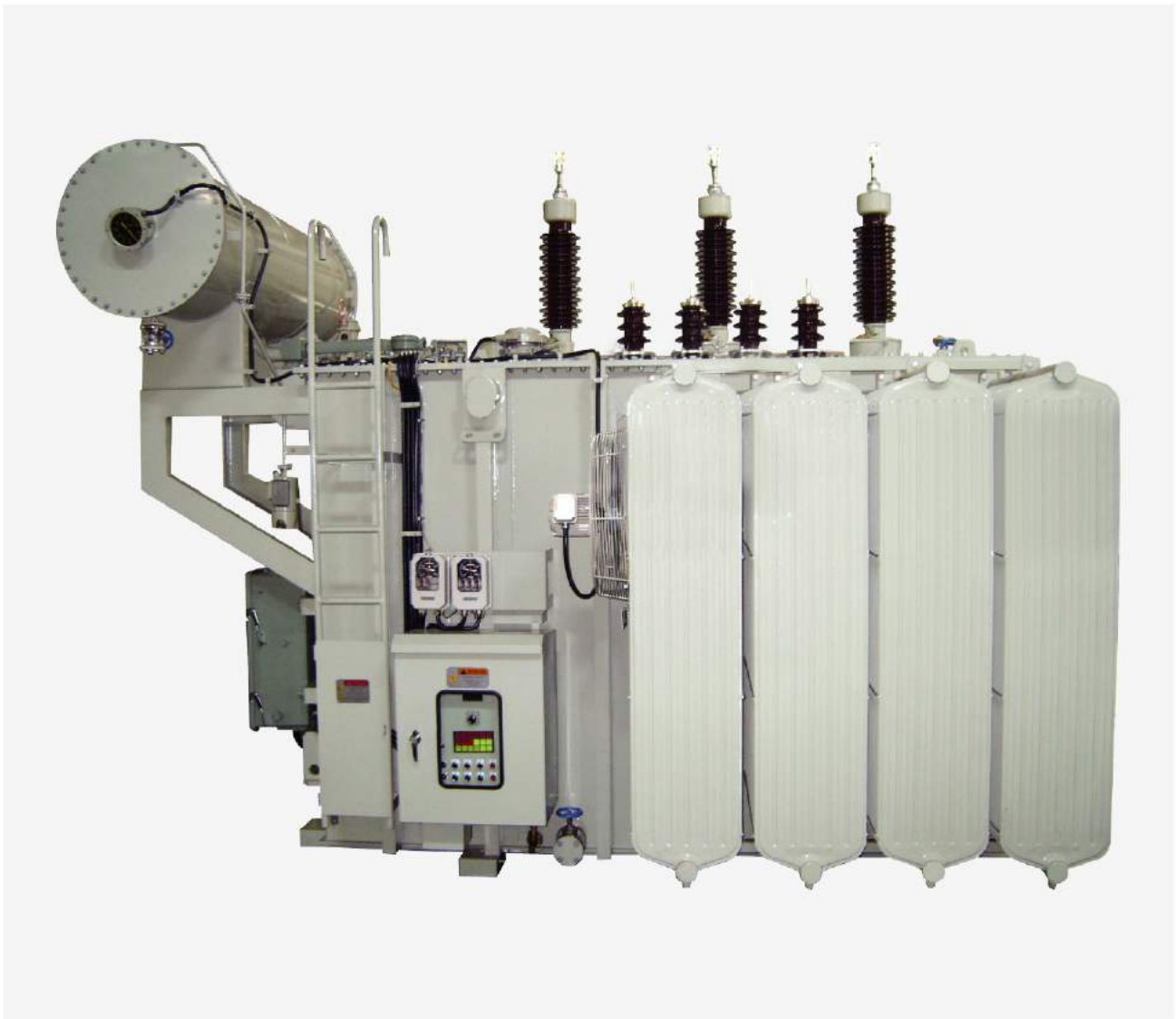


Identification No. 23361998

Model SH-A6-UNIT

Spec GPS security light switch unit  
(1-output)

# On Load Tapchanger Power Transformer



## Ratings

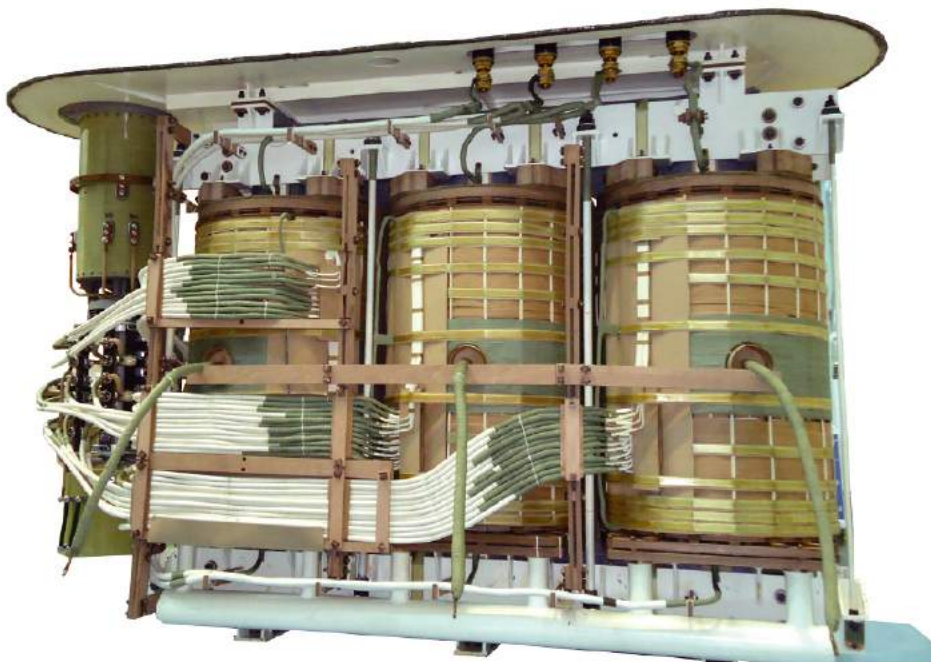
Phase	Single or Three Phase
Frequency	50Hz or 60Hz
Rated Capacity	2MVA - 100MVA
Rated Voltage	Below 154 kv
Polarity	Subtractive , Addtlve
Connection	Dyn11,Ddo,Yd1,Yz11,Dy5,Dz0
Cooling System	ONAN,ONAF,ONWF
Applying Standard	JEC-2200,IEC-60076,IEEE C57.12.90

## Characteristics & Dimensions

Three Phase 69000V / L.V

Capacity (kVA)	Efficiency (%)	Regulation (%)	Exciting Current (%)	Dimension			Oil (ℓ)	Total Weight (Kg)
				W	D	H		
5000	98.70	1.40	2.50	3200	2650	3100	6200	18000
7500	98.89	1.35	2.30	3250	2800	3300	7200	22000
10000	99.10	1.30	1.80	3500	3000	3400	9300	26000
15000	99.30	1.20	1.50	3600	3400	3600	9800	31000
20000	99.30	1.00	1.40	3800	3500	3700	11000	38000
25000	99.40	1.00	1.30	3900	3800	3900	14000	49000
30000	99.40	0.90	1.20	4000	3900	3900	16400	58000
40000	99.50	0.85	1.10	4000	4200	4000	18500	65000
50000	99.50	0.85	1.10	4400	4300	4300	20000	73000

Tolerance: ±5%



# Power Transformer



## Ratings

Phase	Single or Three Phase
Frequency	50Hz or 60Hz
Rated Capacity	30kVA - 100MVA
Rated Voltage	Below 154 kv
Polarity	Subtractive , Addtlve
Connection	Dyn11,Ddo,Yd1,Yz11,Dy5,Dz0
Cooling System	ONAN,ONAF,ONWF
Applying Standard	JEC-2200,IEC-60076,IEEE C57.12.90



## Characteristics & Dimensions

Three Phase 22900V / 3300&6600V

Capacity (kVA)	Efficiency (%)	Regulation (%)	Exciting Current (%)	Dimension			Oil (ℓ)	Total Weight (Kg)
				W	D	H		
500	98.20	1.80	4.00	1335	1535	1565	620	1600
1000	98.40	1.60	3.50	1495	2015	1815	1100	2600
1500	98.40	1.60	3.50	1600	1960	1910	1500	4800
2000	98.40	1.60	3.00	1680	2510	2160	1800	6500
2500	98.40	1.50	3.00	1780	2560	2160	2000	7000
3000	98.50	1.50	3.00	1890	2600	2440	2600	8300
4000	98.70	1.40	2.50	2120	2800	2740	2900	9500
5000	98.90	1.35	2.30	2200	3000	2770	3600	11000
7500	99.10	1.30	1.80	2320	3200	3100	3900	14000
10000	99.30	1.25	1.70	2600	3300	3590	5000	18500
12000	99.30	1.20	1.60	2600	3350	3590	6500	20000
15000	99.30	1.00	1.50	2800	4050	3800	7500	24000
20000	99.40	1.00	1.30	2850	4200	3900	8600	27000

Tolerance: ±5%



# Distribution Transformer



## Ratings

Phase	Single or Three Phase
Frequency	50Hz or 60Hz
Rated Capacity	20kVA - 100MVA
Rated Voltage	Below 66kv
Polarity	Subtractive , Addtlve
Connection	Dyn11,Ddo,Yd1,Yz11,Dy5,Dz0
Cooling System	ONAN,ONAF,ONWF
Applying Standard	JEC-2200,IEC-60076,IEEE C57.12.90

## Characteristics & Dimensions

COLGATE Three Phase 22900V / L.V

Capacity (kVA)	Efficiency (%)	Regulation (%)	Exciting Current (%)	Dimension			Oil (ℓ)	Total Weight (Kg)
				W	D	H		
100	97.30	2.00	4.50	1071	756	1251	230	780
200	97.60	1.90	4.50	1131	776	1251	360	820
300	97.60	1.90	4.50	1221	846	1351	360	960
400	97.60	1.90	4.50	1216	846	1401	420	1310
500	98.00	1.90	4.20	1386	956	1411	450	1390
600	98.00	1.80	4.20	1406	966	1451	540	1450
700	98.00	1.80	4.20	1506	1076	1451	660	2070
800	98.20	1.80	4.00	1556	1123	1501	710	2310
900	98.20	1.80	4.00	1606	1126	1551	730	1750
1000	98.30	1.50	3.80	1606	1166	1601	820	2500
1200	98.30	1.50	3.80	1756	1256	1651	1000	3000
1500	98.30	1.50	3.80	1921	1326	1801	1200	3910
2000	98.40	1.50	3.50	2046	1396	1876	1360	4560
2500	98.60	1.40	3.00	2141	1556	1876	1480	5300
3000	98.60	1.40	3.00	2496	1682	1876	1680	6200



# Pole Mounted Transformer

## One Bushing Type



## Ratings

Phase	Single
Frequency	50Hz or 60Hz
Rated Capacity	5kVA - 500kVA
Rated Voltage	Below 33kv
Polarity	Subtractive , Addtlve
Cooling System	ONAN
Applying Standard	JEC-2200,IEC-60076,IEEE C57.12.90

## Characteristics & Dimensions

COLGATE Three Phase 22900V / L.V

Capacity (kVA)	Efficiency (%)	Regulation (%)	Exciting Current (%)	No Load-Load (W)	Dimension			Oil (ℓ)	Total weight (Kg)
					W	D	H		
20	98.10	1.70	1.20	500	500	560	1080	40	170
30	98.30	1.50	1.00	570	570	590	1130	53	220
50	98.50	1.40	0.80	680	680	640	1135	70	300
75	98.50	1.40	0.80	720	720	670	1170	89	390
100	98.60	1.40	0.70	830	830	700	1215	114	450

Tolerance: ±5%

## One Bushing Type



SAMHEUNG ELECTRIC CO., LTD

# Pole Mounted Transformer

## Two Bushing Type



## Ratings

Phase	Single
Frequency	50Hz or 60Hz
Rated Capacity	10kVA - 333kVA
Rated Voltage	Below 33kv
Polarity	Subtractive , Addtlve
Cooling System	ONAN
Applying Standard	JEC-2200,IEC-60076,IEEE C57.12.90

## Characteristics & Dimensions

Single Phase 7620V-y / LV

Capacity (kVA)	Efficiency (%)	Regulation (%)	Exciting Current (%)	No-load Loss	load Loss	Dimension		
						W	D	H
10	97.80	3.00	1.56	36	120	360	550	950
15	98.10	3.00	1.65	50	195	370	560	1000
25	98.40	2.80	1.48	80	290	460	650	1060
37.5	98.60	2.60	1.24	105	360	490	680	1090
50	98.70	1.90	1.27	135	500	620	720	1130
75	98.80	1.80	1.12	190	650	660	750	1180
100	98.80	1.70	1.06	210	850	690	780	1240
167	98.80	1.60	1.02	450	1500	900	910	1300
250	98.90	1.50	1.10	650	2250	990	1005	1340
333	98.90	1.40	1.00	800	3200	1050	1020	1390

## Two Bushing Type



# Pad Mounted Transformer



## Ratings

Phase	Single or Three Phase
Frequency	50Hz or 60Hz
Rated Capacity	30kVA - 3000MVA
Rated Voltage	Below 33 kv
Polarity	Subtractive , Addtlve
Connection	Dyn11,Ddo,Yd1,Yz11,Dy5,Dz0
Cooling System	Oil Immersed Self Cooling
Applying Standard	JEC-2200,IEC-60076,IEEE C57.12.90



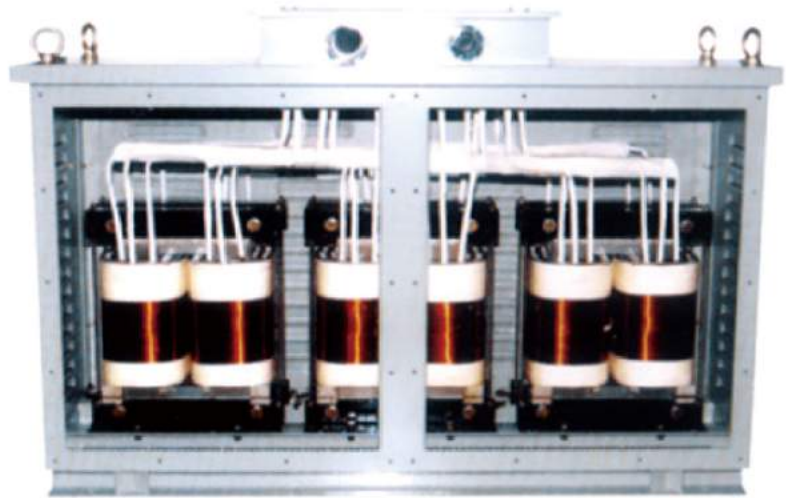
## Characteristics & Dimensions

Capacity (kVA)	Efficiency (%)	Regulation (%)	Exciting Current (%)	Dimension			Oil (ℓ)	Total Weight (Kg)
				W	D	H		
75	97.50	2.00	1.90	1500	1000	1400	450	1200
100	97.70	2.00	1.80	1500	1000	1400	450	1300
150	98.10	1.80	1.80	1500	1000	1400	500	1400
200	98.20	1.80	1.80	1500	1100	1400	500	1550
300	98.20	1.60	1.50	1500	1250	1400	500	1750
500	98.20	1.60	1.50	1500	1500	1400	500	2100

Tolerance: ±5%



# Pad Mounted Transformer



## Ratings

Phase	Single or Three Phase
Frequency	50Hz or 60Hz
Rated Capacity	30kVA - 10VA
Rated Voltage	Below 13.2 kv
Polarity	Subtractive , Addtlve
Connection	Dyn11,Ddo,Yd1,Yz11,Dy5,Dz0
Cooling System	AN,AF,ANAN,ANAF
Applying Standard	JEC-2200,IEC-60076,IEEE C57.12.90

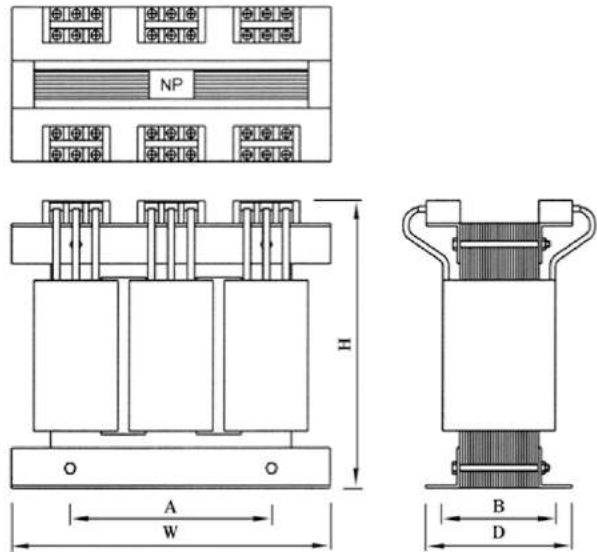
## Characteristics & Dimensions

Three Phase 6600V / L.V

Capacity (kVA)	Efficiency (%)	Regulation (%)	Exciting Current (%)	Dimension			Total Weight (Kg)
				W	D	H	
30	96.50	3.00	9.00	500	380	500	140
50	96.60	2.80	8.50	550	400	580	200
75	96.80	2.60	8.00	600	400	650	280
100	97.00	2.50	7.50	700	450	800	360
150	97.20	2.40	7.00	800	530	850	440
200	97.40	2.30	7.00	900	550	950	520
300	97.60	2.20	7.00	1000	600	1000	730
400	97.80	2.10	6.00	1100	650	1100	950
500	97.90	2.00	6.00	1200	680	1250	1300
750	98.00	1.90	6.00	1300	700	1300	1800
1000	98.20	1.80	5.00	1400	730	1350	2300
1500	98.30	1.70	5.00	1500	750	1400	2900
2000	98.40	1.60	5.00	1600	800	1500	3600

Tolerance: ±5%

# Motor Starting Reactor & Auto Transformer



## Ratings

Phase	Three Phase
Frequency	50Hz or 60Hz
Rated Capacity	22kVA - 5000VA
Rated Voltage	Below 6.6 kv
Cooling System	AN,ONAN
Standard Tap	50%,75%,80%
Rating Time	1min,3min,5min
Insulation Level	AN(H Class),ONAN(A Class)
Applying Standard	JEC-2200,IEC-60076,IEEE C57.12.90

## Characteristics & Dimensions

Three Phase 6600V / L.V

Reactor 6600V&3300V						Auto Transformer 6600V&3300V					
Capacity	A	B	H	X	Y	Capacity	A	B	H	X	Y
37.5kw	420	340	360	280	260	37.5kw	440	380	440	400	200
45kw	420	340	360	280	260	45kw	440	400	440	400	200
56kw	420	340	360	280	260	56kw	440	400	480	400	220
75kw	420	360	360	280	280	75kw	440	400	480	400	220
94kw	450	360	370	300	290	94kw	490	440	540	450	280
112.5kw	450	360	370	300	290	112.5kw	490	440	540	450	280
131kw	480	380	390	320	290	131kw	490	440	540	450	280
150kw	500	380	430	320	290	150kw	490	440	540	450	280
187.5kw	500	380	430	320	310	187.5kw	560	460	580	520	300
225kw	520	380	440	340	310	225kw	560	460	580	520	300
262.5kw	550	380	450	360	310	262.5kw	560	460	580	520	300
30kw	550	400	460	360	310	30kw	580	480	600	540	320
337.5kw	550	400	460	360	330	337.5kw	580	480	600	540	320
375kw	550	400	460	360	350	375kw	580	480	600	540	320

Tolerance: ±5%

SAMHEUNG ELECTRIC CO., LTD

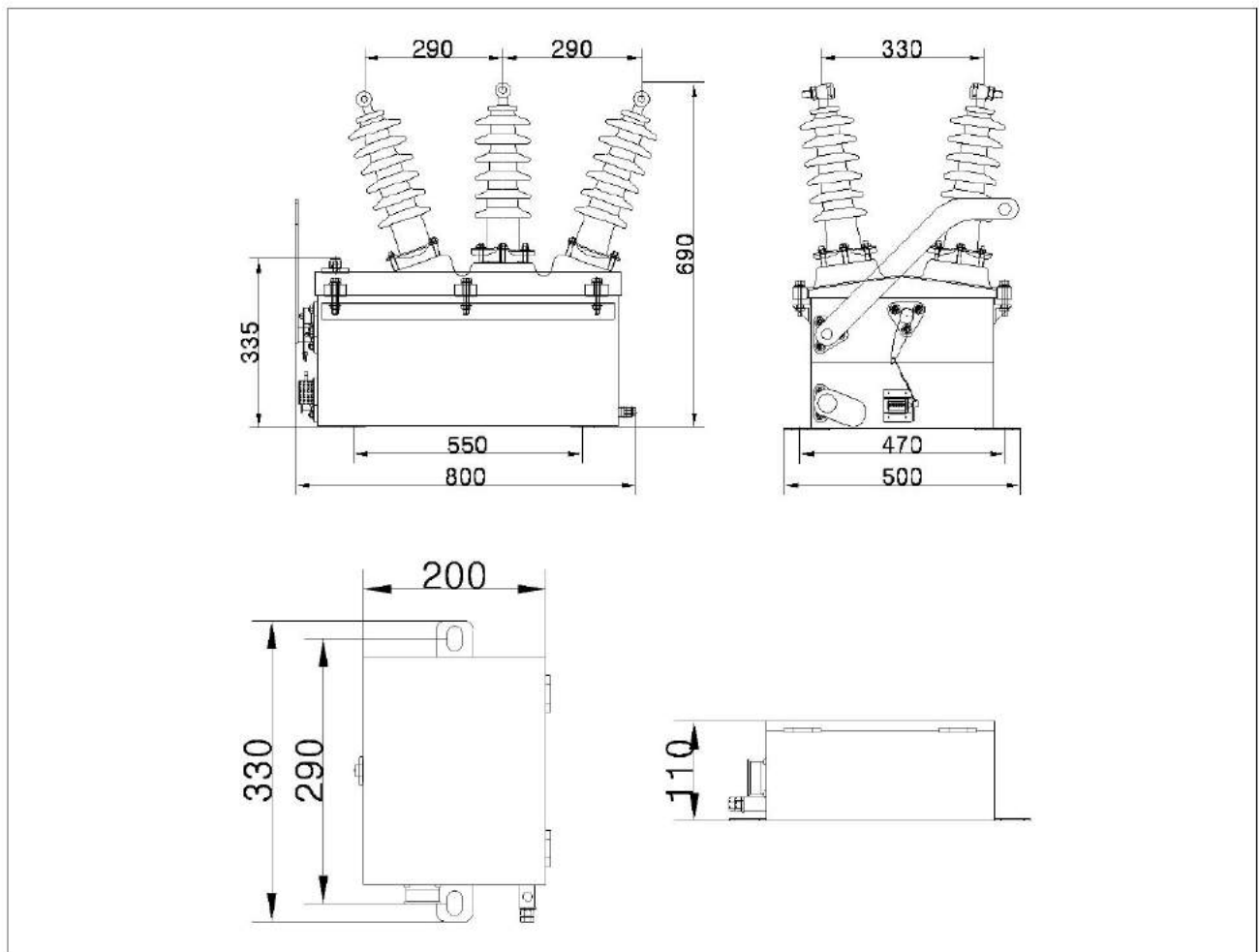
# Auto Sectionalizing Fault Switch

Automatic fault section switch (outdoor) 25.8kV 200A 15kA(Asym)



## Ratings

Rated Voltage	25.8kV
Normal Voltage	22.9kV
Rated Frequency	60Hz
Rated Current	200A
Rated Short-time Current	15kA Asym / 10kV 1sec. Sym / 3.5kV 10 sec. sym
Rated Closing Current	15kA Asym
Rated Short-Circuit Making Current	900A
Operating Voltage	DC24V
Impulse Withstand Voltage(1.2x50 $\mu$ s)	Main Body : 150kV Control Circuit : 5kV
Min. Operating Current	<p><b>PHASE</b> 10, 20, 30, 50, 70, 100, 140, 200 (Block)</p> <p><b>GROUND</b> 5, 10, 15, 25, 35, 50, 70, 100 (By-pass)</p> <p>* Max. Over Current : 800A</p>





**SAMHEUNG  
ELECTRONIC**



ISO1400



ISO9001



Manufactory



Corporate research institute



Venture business confirmation



Electric engineering business registration



Small business confirmation



Female-owned business confirmation



Qualified competitive bidder registration



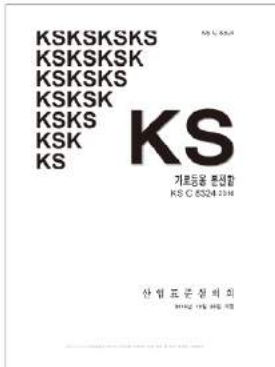
Direct production confirmation for distribution board



Direct production confirmation



Waterproofing and dustproofing test report



KSC8324-distribution board



Award certificate  
(Minister of SMEs and Startups)



Streetlight distribution board  
performance report



Certificate of official test waive  
for transformers



Direct production certificate  
for transformers



High-efficiency certification for  
oil immersed transformers 300KVA



High-efficiency certification for  
oil immersed transformers 500KVA



High-efficiency certification for  
oil immersed transformers 600KVA



High-efficiency certification for  
oil immersed transformers 700KVA



High-efficiency certification for  
oil immersed transformers 750KVA



Certificate of streetlight  
GPS control panel



Certificate of streetlight  
full-duplex control panel



Certificate of automatic  
streetlight switch GPS



Certificate of automatic  
streetlight switch full-duplex



Certificate of automatic  
security light switch GPS



Certificate of automatic  
security light switch electronic-type

SAMHEUNG ELECTRIC CO., LTD

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Headquarters /  
auxiliary research institute

39662) 287-87, Chogok-gil, Nam-myeon,  
Gimcheon-si, Gyeongsangbuk-do  
TEL. 054) 432-9111  
FAX. 054) 434-7111  
E-mail. sh91111@hanmail.net  
www.shhe.kr

