PRECISE

PRODUCTS CATALOG

2026-2027

ENERGIZING SHARED PROSPERITY

SCAN FOR DIGITAL CATALOGUE

INTRODUCTION

Precise . . . smart gird solution innovator

43 years of consistent performance put forward our comprehensive potential. Precise Corporation Limited remains committed to the continuous development of Smart Energy Solutions that respond to the evolving demands of the modern energy industry. Our offerings encompass high- and low-voltage electrical systems, power protection equipment, and energy management systems, as well as solutions designed to enhance the stability and safety of electrical infrastructure for the public sector, industrial operations, and commercial enterprises.

Precise Corporation Co., Ltd along with companies are committed to our mission to convey the latest electrical innovation and solution prior to using alternative options to replace the conventional electrical system. Yet, to become the ultimate ‘smart grid innovator’

Smart Grid Solution

With our strong passion to improve the quality of living for the community, Precise Corporation Co.,Ltd. is operating under the 3 managing and creating keys which are smart grid, prospect industry and prospect community.

THE ENERGY UTOPIAN OF PRECISE UNIVERSAL

INDUSTRIAL
Prospect industry

SOCIAL
Smart grid

ENERGY NETWORK
Energy network community

CONTENT

Distribution Transformer
- Single phase Distribution transformer
- Three phase Distribution transformer
- Amorphous Metal Distribution Transformer (AMDT)
- TriO Distribution Transformer
- Three Phase Distribution Transformer + IoT
- Terminal box for IoT Transformer
- Transformer Monitoring System (TMS)

Low Voltage & Medium Voltage Switchgears
- AC/DC Distribution Board
- Main Distribution Board (MDB)
- Junction Box
- Metal Clad Switchgear
- Unit Substation
- PQM Panel & Zero Export Panel

Instrument Transformers
- Dry Type Instrument Transformers
- Oil Type Instrument Transformers

LED Lighting

Power Capacitors

Switching Devices
- Solid Dielectric Load Break Switch
- Gas Dielectric Load Break Switch
- Solid Dielectric Automatic Circuit Recloser

Disconnecting Switch

Surge Arresters

Fuses
- High Voltage Distribution Fuse Cutouts
- Composite Insulator Supporter for Fuse Cutouts
- High Voltage Distribution Fuse Links
- Low-voltage Fuse-Switch Disconnectors
- Low Tension Fuse Switches
- Low-voltage H.R.C. fuse-link

Suspension Insulators

Metal Works and Cubicle cabinet

Professional Energy Management System (PEMS)

Installation, Testing, Commissioning, Maintenance and Services

Quality Assurance

Certificates and Type test

DISTRIBUTION TRANSFORMER

DISTRIBUTION TRANSFORMER

PRECISE transformers are primarily designed due to Thai and international standards including TIS, IEC, ANSI, or other specific requirements from customers. Our transformers feature a smart compact design and are developed with high-quality materials. The Products are individually approved and passed the particular test such as routine and type tests to ensure that they fully meet all the required standard in terms of quality, pricing, and services. During the past years, PRECISE has been serving and giving our pleasant services to our international customers from Cambodia, Laos, Myanmar and Philippines.

Operating under the ISO 9001:2015 international standard, Precise drives its business by delivering high-quality products and services, with customer satisfaction at its core. We seamlessly integrate global standards with our customers' specific needs, ensuring we not only meet every requirement but also set new benchmarks that exceed expectations.

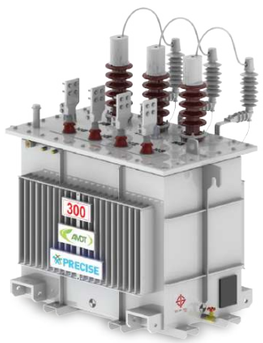
TRANSFORMER PRODUCT PORTFOLIO

- Hermetically Sealed Type Single phase, Capacity 30 to 100 kVA
- Hermetically Sealed Type 3 phase, Capacity 50 to 2,500 kVA
- Completely Self Protected Type (CSP) 3 phase, Capacity 150 to 300 kVA
- Conservator Type 3 phase, Capacity 50 to 2,500 kVA
- Station Service Transformer Oil-immersed type for Substation with cable connection boxes 3 phase, Capacity 50 to 2,500 kVA
- Amorphous Transformers 50 to 1,000 kVA
- Less-Flammable Oil Transformer for Unit Substation
- Available at 50/60 Hz Rated 6.6/11, 7.62/13/2, 12/24, 22, 24, 33, 36 kV
- All Transformers can be designed and customized according to customer specification

Hermetically Sealed Type
Single phase, Capacity 30 to 100 kVA

Hermetically Sealed Type
3 phase, Capacity 50 to 2,500 kVA

Completely Self Protected Type (CSP)
3 phase, Capacity 150 to 300 kVA



Amorphous Transformers
3 phase, Capacity 50 to 1,000 kVA

Conservator Type
3 phase, Capacity 50 to 2,500 kVA

Station Service Transformer Oil-immersed type
for Substation with cable connection boxes
3 phase, Capacity 50 to 2,500 kVA

SINGLE PHASE DISTRIBUTION TRANSFORMER

Single-phase distribution transformer, 460/230 V, 480/240 V.

Accessories

1. HV bushing
2. LV bushing
3. Lifting lug
4. Hand hole
5. Drain valve
6. Earthing terminal
7. Tap changer
8. Nameplate
9. Bird guard
10. Support lug
11. Earthing terminal for surge arrester
12. Mounting bracket for surge arrester

Specification

Description	12.7 , 22 kV	19 kV
Type of cooling	ONAN	
Type of oil	Mineral oil (Non PCB's)	
Number of phase	1	
Rated frequency (Hz)	50	
Relative humidity (Max) (%)	95	
Altitude (m)	Not exceeding 1,000m above sea level	
Class of insulation	Class A	
Ambient operating temperature (°C)	0 to 50	
Maximum temperature rise		
- Top oil (°C)	50,55	
- Winding (°C)	55,60	
Standard	IEC60076, TIS384	

SINGLE PHASE DISTRIBUTION TRANSFORMER

Single-phase distribution transformer, 22 kV / 460–230 V.

Technical data

Capacity (kVA)	No- load Losses at 75°C (W)	Load losses at 75°C (W)	Total loss at 75°C (W)	Impedance at 75°C	Efficiency (P.F.=1)		Voltage regulation at full load and P.F.=1 (%)	Outline Dimension Approx. In mm.			Oil Volume (Litres)	Total Weight (kg.)
					50% load (%)	100% load (%)		Ltr	Btr	Htr		
30	120	430	550	1.80-2.20	98.51	98.20	1.473	775	590	1,750	50	240
50	150	670	820	1.98-2.42	98.75	98.39	1.36	970	740	1,390	110	330

Note: The characteristics are for information only. Please contact to confirm actual data.

Single-phase distribution transformer, 19 / 33 kV – 480/240 V.

Technical data

Capacity (kVA)	No- load Losses at 75°C (W)	Load losses at 75°C (W)	Total loss at 75°C (W)	Impedance at 75°C	Efficiency (P.F.=1)		Voltage regulation at full load and P.F.=1 (%)	Outline Dimension Approx. In mm.			Oil Volume (Litres)	Total Weight (kg.)
					50% load (%)	100% load (%)		Ltr	Btr	Htr		
30	120	430	550	1.80-2.20	98.51	98.20	1.44	685	680	1,315	56	259
50	150	670	820	1.98-2.42	98.75	98.39	1.36	860	850	1,645	115	360

Note: The characteristics are for information only. Please contact to confirm actual data.

THREE PHASE DISTRIBUTION TRANSFORMER

Three-phase distribution transformer, 6,600 / 11,100 / 22,000 / 33,000 V.

Accessories

1. HV bushing
2. LV bushing
3. Lifting lugs
4. Lifting eyes
5. Oil drain valve
6. Oil level guage
7. Off-load tap changer
8. Nameplate
9. Bird guard cap
10. Oil filling plug
11. Support lug
12. Earthing terminal
13. Company plate & logo
14. Thermometer pocket
15. Rating plate
16. Corrugated radiator
17. Sludge drain plug
18. Pressure relief valve
19. Mounting bracket for surge arrester
20. Earthing terminal for surge arrester

Specification

Description	6.6 kV, 11 kV, 22kV , 33kV
Type of cooling	ONAN
Type of oil	Mineral oil (Non PCB's)
Number of phase	3
Rated frequency (Hz)	50
Connection symbol	Dyn11
Relative humidity (Max) (%)	95
Altitude (m)	Not exceeding 1,000m above sea level
Class of insulation	Class A
Ambient operating temperature (°C)	0 to 50
Maximum temperature rise	
- Top oil (°C)	50,55,60
- Winding (°C)	55,60,65
Standard	IEC60076, TIS384

THREE PHASE DISTRIBUTION TRANSFORMER

Three-phase distribution transformer, 6,600 / 11,000 – 416/240, 400/230 V.

Technical data

Capacity (kVA)	No- load Losses at 75°C (W)	Load losses at 75°C (W)	Total loss at 75°C (W)	Impedance at 75°C	Efficiency (P.F.=1)		Voltage regulation at full load and P.F.=1 (%)	Outline Dimension Approx. In mm.			Oil Volume (Litres)	Total Weight (kg.)
					50% load (%)	100% load (%)		Ltr	Btr	Htr		
50	200	1,200	1,400	3.6-4.4	98.04	97.28	2.47	980	720	1,020	88	420
100	300	1,900	2,200		98.47	97.85	1.98	1,130	700	950	115	600
160	400	2,600	3,000		98.70	98.16	1.71	1,200	760	1,050	130	730
200	500	3,100	3,600		98.74	98.23	1.63	1,310	770	1,110	200	950
250	600	4,100	4,700		98.72	98.15	1.72	1,340	760	1,100	170	950
315	700	4,900	5,600		98.79	98.25	1.64	1,290	850	1,150	200	1,120
400	850	5,600	6,450		98.89	98.41	1.49	1,300	900	1,250	260	1,310
500	1,150	7,600	8,750		98.79	98.28	1.61	1,400	1,000	1,240	365	1,855
630	1,350	9,500	10,850		98.83	98.31	1.71	1,500	1,025	1,200	375	1,855
800	1,450	13,000	14,450	5.4-6.6	98.84	98.23	1.83	1,700	1,080	1,380	510	2,200
1,000	1,800	15,000	16,850		98.90	98.35	1.71	1,760	1,360	1,200	660	2,550

Note: The characteristics are for information only. Please contact to confirm actual data.

Three-phase distribution transformer, 33,000 – 416/240 , 400/230 , 416/240 V.

Technical data

Capacity (kVA)	No- load Losses at 75°C (W)	Load losses at 75°C (W)	Total loss at 75°C (W)	Impedance at 75°C	Efficiency (P.F.=1)		Voltage regulation at full load and P.F.=1 (%)	Outline Dimension Approx. In mm.			Oil Volume (Litres)	Total Weight (kg.)
					50% load (%)	100% load (%)		Ltr	Btr	Htr		
50	170	950	1,120	3.6-4.4	98.40	97.81	1.98	1,120	720	1,140	130	580
100	260	1,550	1,810		98.72	98.22	1.63	1,210	790	1,210	160	770
160	370	2,100	2,470		98.89	98.48	1.40	1,250	810	1,300	210	980
250	520	2,950	3,470		99.00	98.63	1.27	1,350	860	1,290	300	1,200
315	630	3,500	4,130		99.05	98.71	1.20	1,490	810	1,580	470	1,830
400	750	4,150	4,900		99.11	98.79	1.13	1,600	870	1,670	600	2,300
500	900	4,950	5,850		99.15	98.84	1.08	1,715	950	1,550	650	2,350
630	1,050	5,850	6,900	5.4-6.6	99.21	98.92	1.14	1,750	960	1,720	700	2,700
1,000	1,300	12,150	13,450		99.14	98.67	1.43	2,000	1,120	1,800	900	3,400

Note: The characteristics are for information only. Please contact to confirm actual data.

THREE PHASE DISTRIBUTION TRANSFORMER

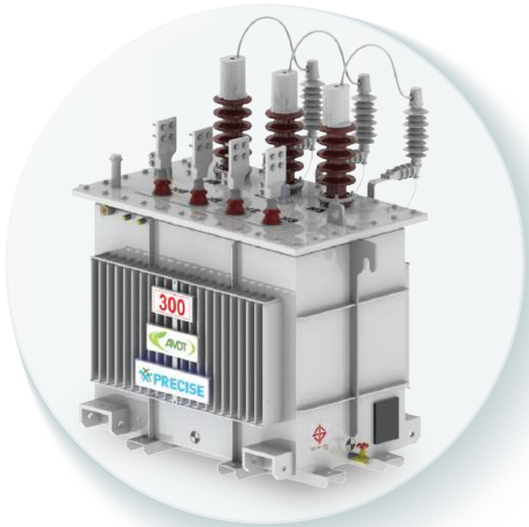
Three-phase distribution transformer, 22,000 – 416/240 , 400/230 V.

Technical data

Capacity (kVA)	No- load Losses at 75°C (W)	Load losses at 75°C (W)	Total loss at 75°C (W)	Impedance at 75°C	Efficiency (P.F.=1)		Voltage regulation at full load and P.F.=1 (%)	Outline Dimension Approx. In mm.			Oil Volume (Litres)	Total Weight (kg.)
					50% load (%)	100% load (%)		Ltr	Btr	Htr		
50	160	950	1,110	3.6-4.4	98.43	97.83	1.98	980	720	1,020	88	420
100	250	1,550	1,800		98.74	98.23	1.63	1,130	700	950	115	600
160	360	2,100	2,460		98.91	98.49	1.40	1,200	760	1,050	130	730
250	500	2,950	3,450		99.02	98.64	1.27	1,340	760	1,100	170	950
315	700	3,900	4,600		98.95	98.56	1.33	1,290	850	1,150	200	1,120
400	850	4,600	5,450		99.01	98.66	1.24	1,300	900	1,250	260	1,310
500	1,150	6,600	7,750		98.89	98.74	1.41	1,400	1,000	1,240	365	1,855
630	1,350	8,500	9,850		98.91	98.46	1.56	1,500	1,025	1,200	375	1,855
800	1,450	12,000	13,450	5.4-6.6	98.90	98.35	1.71	1,700	1,080	1,380	510	2,200
1,000	1,600	13,500	15,100		99.01	98.51	1.56	1,760	1,360	1,200	660	2,550
1,250	1,800	16,000	17,800		99.08	98.60	1.49	1,950	1,400	1,740	930	4,000
1,500	2,100	19,500	21,600		99.08	98.58	1.51	2,200	1,480	1,680	970	4,500
1,600	2,300	21,000	23,300		99.07	98.56	1.59	2,300	1,500	1,750	1,000	4,700
2,000	2,700	22,700	25,400		99.17	98.75	1.31	2,465	1,475	2,020	1,390	5,600
2,500	3,200	30,800	34,000		99.21	98.87	1.25	2,660	1,610	2,480	2,055	7,470

Note: The characteristics are for information only. Please contact to confirm actual data.

AMORPHOUS METAL DISTRIBUTION TRANSFORMER (AMDT)

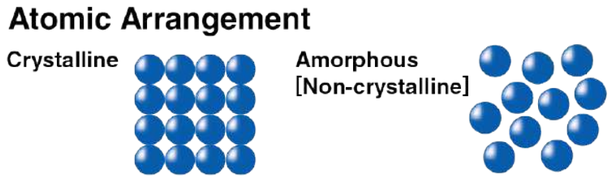


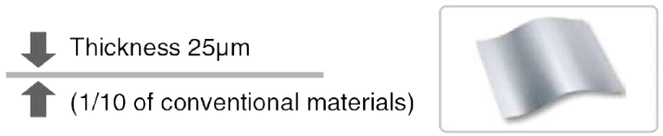
Benefits of using Amorphous Transformer	Amorphous Transformers are suitable for
Higher efficiency	Solar Power Plant
Lower energy losses	Very Small Power Plant
Reduce CO_2 Emissions	High electrical tariffs charge
Saving total ownership costs	Low loading factor e.g. apartment or rural area, etc.

AMORPHOUS METAL DISTRIBUTION TRANSFORMER (AMDT)

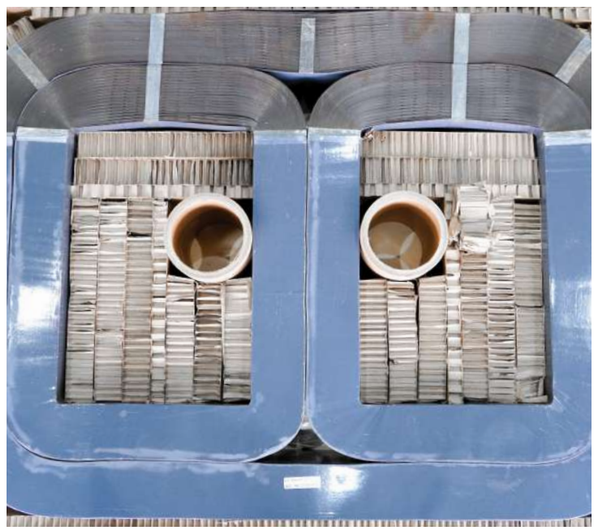
What is Amorphous Transformer?

The amorphous is a non-crystal substance created by rapidly freezing liquids of high temperature. Because there is no rule of atomic arrangement, the energy loss (hysteresis loss) is small when the flux of magnetic induction passes the iron core. In addition, eddy current loss is decreasedbecause the thickness is approximately 0.025 mm, which is about 1/10 comparing with silicon steel. Therefore, theno load loss (eddy current loss and hysteresisloss) can be decreased to about 1/5 of silicon steel's

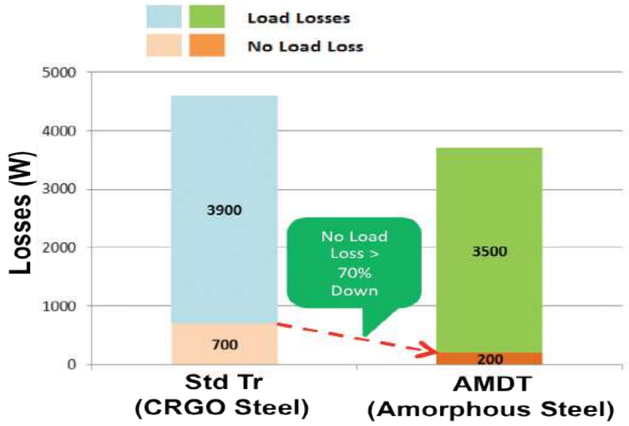


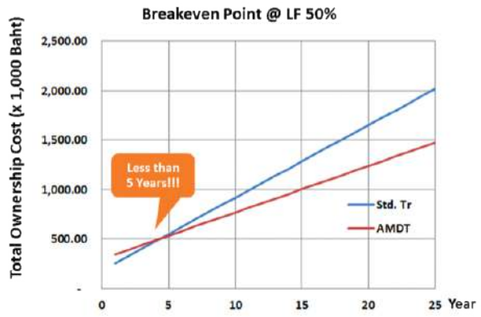


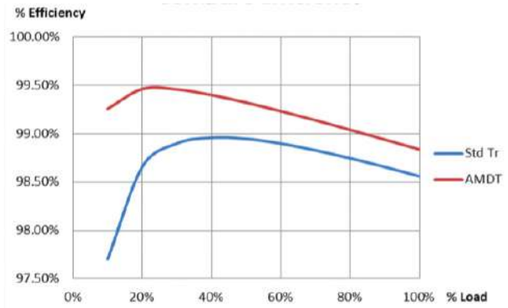
Ribbon thickness is 1/10 of Silicon Steel's
[Silicon Steel:0.23mm, Amorphous Alloy:0.025mm]



AMORPHOUS METAL DISTRIBUTION TRANSFORMER (AMDT)







Note: Breakeven point calculated from Electric Charge @ 5 baht/ kWhr

Item		Std. Tr.	AMDT
100 % Loaded	No-Load Loss	700 (100%)	200 (28.5%)
Factor (LF)	Load Loss	3,900 (100%)	3,500 (89.7%)
(Watt)	Total Losses	4,600 (100%)	3,700 (80.4%)
Total Losses @ 50 % LF (W)		1,675 (100%)	1,075 (64.2%)

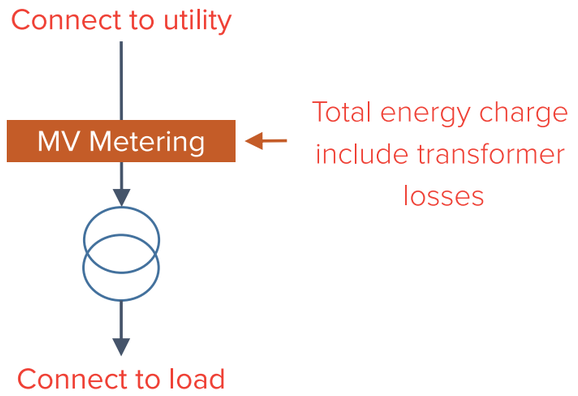
How do the transformer losses effected to your monthly electricity bill?

No-load loss are continuously present 24hr a day, 365 days of the year. So reducing the no-load loss down to 70% and total losses (at load factor 50%) down to 49% when compare with conventional transformer. By using Amorphous Transformer cause significantly saving monthly electricity bill, especially for Power Producer who gain adder from utility, customer who have to pay high electricity tariff.

AMORPHOUS METAL DISTRIBUTION TRANSFORMER (AMDT)

High efficiency and High performance Amorphous Transformer

PRCISE's Amorphous Transformers are design and manufacturing with high quality materials, machines and workmanship lead to received complete type test certificated (Temperature Rise, Impulse Voltage and Short Circuit Withstand Test) The customer can ensure that when using PRECISE's Amorphous Transformer, not only saving energy but also longer service life time will be achieved.



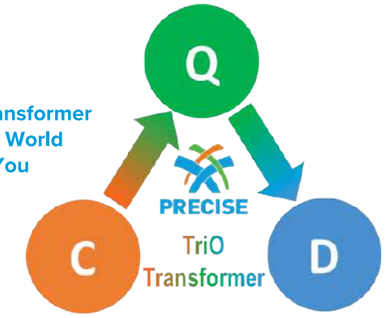
Characteristic Table for 3 Phase 24 kV 416/240 V 50Hz

Capacity	No-load losses at 75C (W)	Load losses at 75C (W)	Total loss at 75C (W)	Impedance at 75C	Efficiency (P.F.=1)		Voltage regulation at full load and P.F.=1 (%)	Outline Dimension Approx. In mm.			Oil Volume (Litres)	Total Weight (kg.)
					50% load(%)	100% load(%)		Ltr	Btr	Htr		
150	80	1000	1080	3.6 - 4.4	99.56	99.29	0.76	1330	950	1365	300	1510
225	110	1450	1560		99.58	99.31	0.74	1580	900	1510	370	1800
300	130	1860	1990		99.60	99.34	0.71	1515	905	1560	435	2450
500	180	3030	3210	5.75 - 7.15	99.63	99.36	0.86	1677	952	1578	560	3170
750	230	4370	4600		99.65	99.39	0.84	2068	1155	1273	612	4008
1000	270	6400	6670		99.63	99.34	0.89	2244	1276	1306	680	4490

Note: * % Saving from Std. Tr. based on total losses @ 50% LF
** CO2 reduction in Metric Tons based on saving electricity in kW-Hr @ 50% LF 24 hrs. per day and 365 days a year. (by using calculator @ https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator)
*** Cold Rolled Grain-oriented

Innovation for green and sustainable society

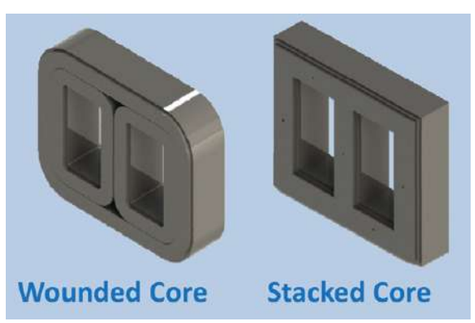
TRIO Distribution Transformer
Innovating for the World
Designed for You

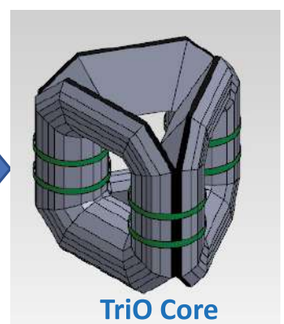


Introduction

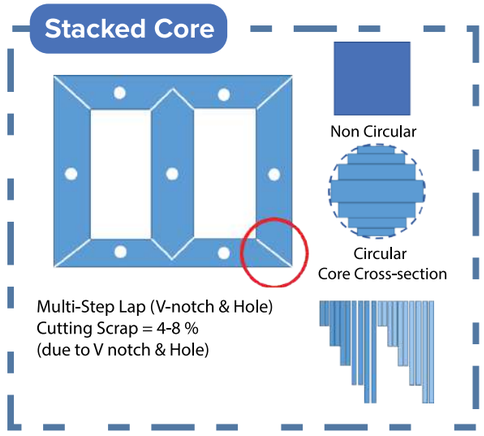
Usually, three phase distribution transformers core is planar core types that are legs and the yokes of the core are flat. Traditional transformer cores can be built by either wound core or cut and stacked standard technologies. However, these planar core configurations cause an asymmetrical component for distribution system, due to unbalance of electromagnetic properties in each phase.

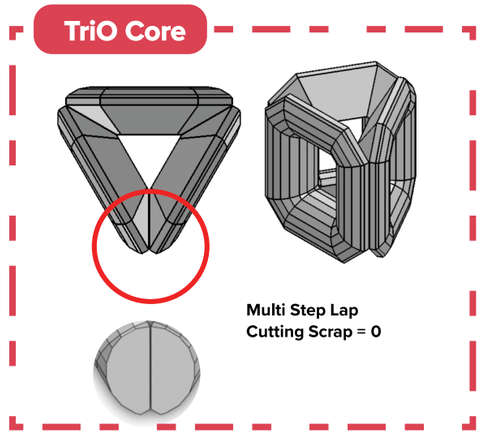
While TriO cores represented here consist of three identical core rings. each core rings are arranged in an equilateral triangular to assemble the transformer TriO core. All core legs, which are formed by two adjacent rings are positioned at the corners of the equilateral triangle. Then magnetically symmetric transformer configuration is achieved as a result.





Advantages of TriO Core over to planar stacked core





Item	Stacked Planar Core	TriO Core
No-load Loss	Higher by following factors	Lower by following factors
1	There are totally 6 joints with air gap between legs and yokes.	There are only 3 joints with air gap between legs and yokes.
2	The asymmetric electromagnetic distribution and cause higher stray magnetic field	The symmetric electromagnetic distribution that minimize stray magnetic field
3	Effective cross section area is between 90 – 93 % of total area, then lower utilization of magnetic flux.	Effective cross section area is between 95 – 98 % of total area, then higher utilization of magnetic flux.
4	3 phase magnetic paths are unequal, then cause to unbalance magnetic circuit and higher exciting current	Magnetic path of all 3 phase are equal so magnetic circuits are balanced and cause lower exciting current
Noise Level	Due to using more core mass, a lot of joints, and the higher harmonics due to unbalance magnetic field, the sound level of the transformer is higher	Due to the reduced core mass, less of joints, and the lower harmonics, the sound level of the transformer is reduced by 5 – 10 dB.
Dimension and Weight	Bigger and heavier due to using more material	Smaller and lighter due to using less material

TECHNICAL DATA OF TRIO TRANSFORMER

Technical Specifications of TRIO Distribution Transformer.

Accessories

1. H.V. bushing
2. H.V. terminal connector
3. L.V. bushing
4. L.V. terminal connector
5. Nameplate
6. Company plate & logo
7. kVA rated
8. Lifting eyes
9. Tap changer
10. Thermometer pocket
11. Oil filling pipe
12. Automatic pressure relief
13. Drain valve
14. Sludge drain plug
15. Earthing terminal
16. Bird guard cap
17. Oil level guage
18. Lifting lugs
19. Mounting bracket for surge arrester
20. Earthing terminal for surge arrester

TriO Transformer 3 Phase 33kV, 416/240V

Capacity (kVA)	No-Load Loss at 75°C (W)	Load Loss at 75°C (W)	Impedance at 75°C (%)	Efficiency (P.F.=1)		Voltage Regulation at Full Load and P.F.=1	Dimension (mm.)			Oil Volume (Litre)	Total Weight (kg)
				50% Load (%)	100% Load (%)		Ltr	Btr	Htr		
50	110	875	3.6 - 4.4	98.70	98.07	1.89	910	1005	1130	112	451
100	180	1450		98.93	98.40	1.54	980	1030	1205	142	634
160	260	2000		99.06	98.61	1.34	1080	1065	1310	213	935
250	360	2750		99.17	98.77	1.19	1160	1120	1340	222	1178

TECHNICAL DATA OF TRIO TRANSFORMER

Technical Specifications of TRIO Distribution Transformer.

Specification

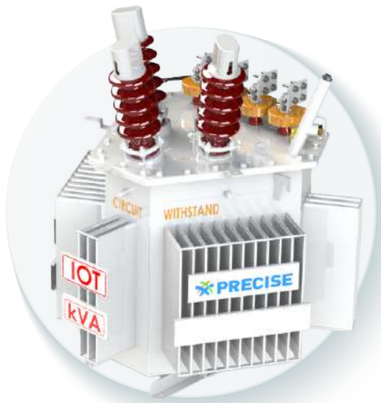
Type of cooling		ONAN
Type of oil		Mineral Oil (Non PCB's)
Number of phase		3
Rated frequency	Hz	50
Connection symbol		Dyn11
Relative humidity (Maximum)	%	95
Altitude	m	Not exceeding 1000m above sea level
Class of insulation		Class A
Ambient operating temperature	deg. C	0 to 45
Maximum temperature rise		
Top oil	deg. C	50
Winding	deg. C	55
Applied standard		IEC 60076

TriO Transformer 3 Phase 22kV, 416/240V

Capacity (kVA)	No-Load Loss at 75°C (W)	Load Loss at 75°C (W)	Impedance at 75°C (%)	Efficiency (P.F.=1)		Voltage Regulation at Full Load and P.F.=1	Dimension (mm.)			Oil Volume (Litre)	Total Weight (kg)
				50% Load (%)	100% Load (%)		Ltr	Btr	Htr		
50	170	875	3.6 - 4.4	98.47	97.95	1.83	910	1100	1310	138	492
100	260	1450		98.77	98.32	1.54	1020	1100	1380	178	684
160	370	2000		98.92	98.54	1.34	1110	1130	1485	248	937
250	520	2750		99.04	98.71	1.19	1210	1170	1520	253	1169

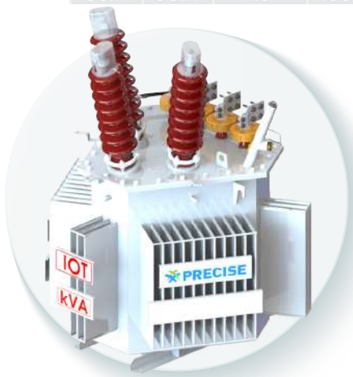
Note: The characteristics are for information only. Please contact to confirm actual data.

THREE PHASE DISTRIBUTION TRANSFORMER + IOT



Three-phase distribution transformer with IoT, 22 kV / 416–240 V.

Capacity (kVA)	No-Load Loss at 75°C (W)	Load Loss at 75°C (W)	Impedance at 75°C (%)	Efficiency (P.F.=1)		Voltage Regulation at Full Load and P.F.=1	Outline Dimension Approx. In mm.			Oil Volume (Litres)	Total Weight (kg)
				50% Load (%)	100% Load (%)		Ltr	Btr	Htr		
50	110	875	3.6 - 4.4	98.70	98.07	1.83	910	1005	1130	112	466
100	180	1450		98.93	98.40	1.54	980	1030	1205	142	649
160	260	2000		99.06	98.61	1.34	1080	1065	1310	213	950
250	360	2750		99.17	98.77	1.19	1160	1120	1340	222	1193

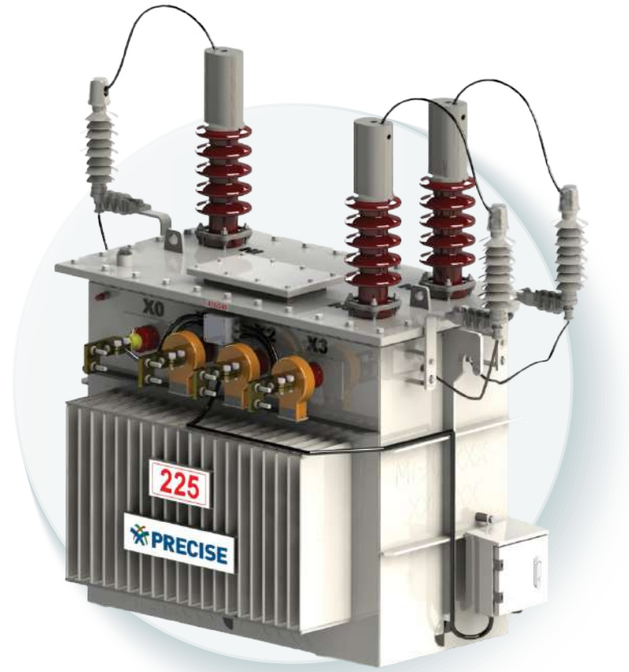


Three-phase distribution transformer with IoT, 33kV, 416/240V

Capacity (kVA)	No-Load Loss at 75°C (W)	Load Loss at 75°C (W)	Impedance at 75°C (%)	Efficiency (P.F.=1)		Voltage Regulation at Full Load and P.F.=1	Outline Dimension Approx. In mm.			Oil Volume (Litres)	Total Weight (kg)
				50% Load (%)	100% Load (%)		Ltr	Btr	Htr		
50	170	875	3.6 - 4.4	98.47	97.95	1.83	910	1100	1310	138	507
100	260	1450		98.77	98.32	1.54	1020	1100	1380	178	699
160	370	2000		98.92	98.54	1.34	1110	1130	1485	248	952
250	520	2750		99.04	98.71	1.19	1210	1170	1520	253	1184

Note: The characteristics are for information only. Please contact to confirm actual data.

THREE PHASE DISTRIBUTION TRANSFORMER + IOT



Three-phase distribution transformer with IoT, 12/24 , 24kV, 416/240V

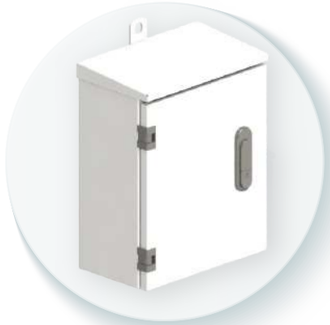
Capacity (kVA)	No-Load Loss at 75°C (W)	Load Loss at 75°C (W)	Total Loss at 75°C (W)	Impedance at 75°C (%)	Efficiency (P.F.=1)		Voltage Regulation at Full Load and P.F.=1	NOISE LEVEL dB (A) : 0.3m	Outline Dimension Approx. In mm.			Oil Volume (Litres)	Total Weight (kg)
					50% Load (%)	100% Load (%)			Ltr	Btr	Htr		
150	300	1000	1300	3.6 - 4.4	99.27	99.14	0.76	55	1351	775	1385	235	1250
225	420	1530	1950		99.29	99.14	0.77	55	1530	872	1371	300	1560
300	480	1860	2340		99.37	99.23	0.71	55	1432	770	1485	315	1806
500	670	3030	3700	5.85 -7.15	99.43	99.27	0.86	56	1615	1010	1485	470	2620
750	840	4370	5210		99.49	99.31	0.84	57	1897	1326	1660	760	3790
1000	1000	6400	7400		99.48	99.27	0.89	58	2225	1415	1638	830	3930

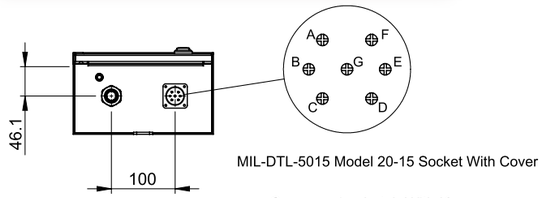
Note: The characteristics are for information only. Please contact to confirm actual data.

TERMINAL BOX FOR IOT TRANSFORMER

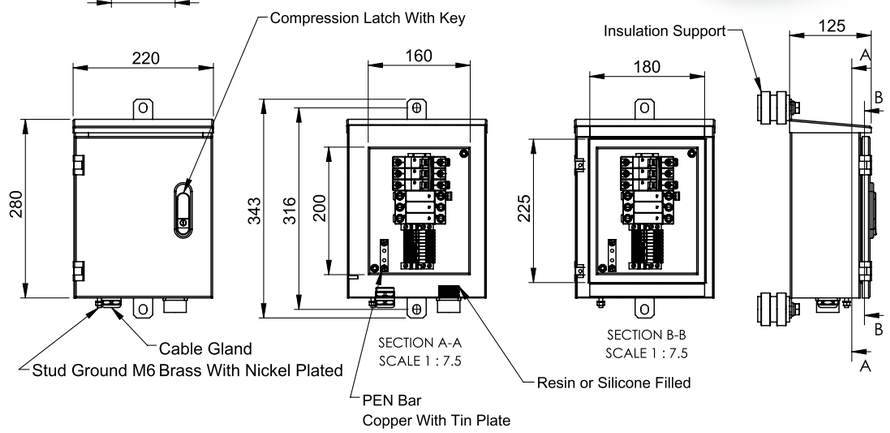
FOR MEA IOT DISTRIBUTION TRANSFORMER

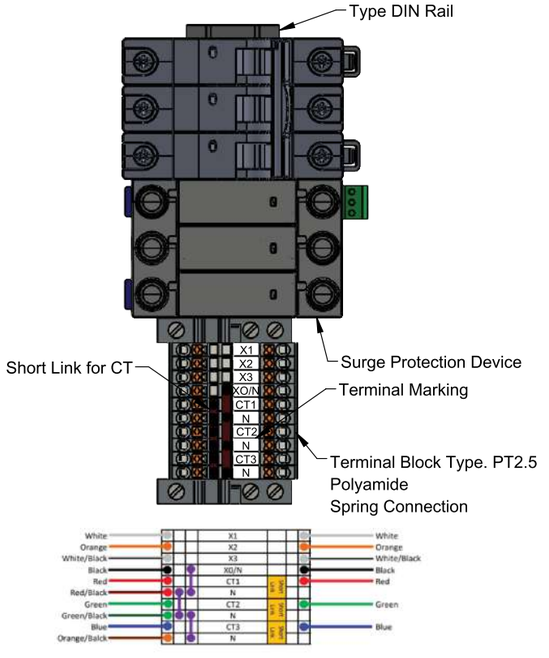
Control Cable Colors	White	Orange	White/ Black	Red	Red/ Black	Green	Green/ Black	Blue	Orange/ Black	Black
Terminal Connection	X1	X2	X3	CT1	N	CT2	N	CT3	N	X0/N
Pin name	A	B	C	D	G	E	G	F	G	G
Description	Phase X1 Voltage	Phase X2 Voltage	Phase X3 Voltage	Phase X1 Current		Phase X2 Current		Phase X3 Current		Common





MIL-DTL-5015 Model 20-15 Socket With Cover





CONSTRUCTION

TYPE OUTDOOR TYPE

BODY

- BODY CASE STEEL SHEET : 1.2 mm. THICKNESS
- FRONT DOOR STEEL SHEET : 1.2 mm. THICKNESS
- PANEL STEEL SHEET : 1.2 mm. THICKNESS
- ROOF STEEL SHEET : 1.2 mm. THICKNESS
- LIFTING EYES STEEL SHEET : 3 mm. THICKNESS

MATERIAL

ELECTRO GALVANIZED STEEL SHEET

BODY COLOR

☑ GREEN RAL6035V ○ TEXTURE ☑ SMOOTH

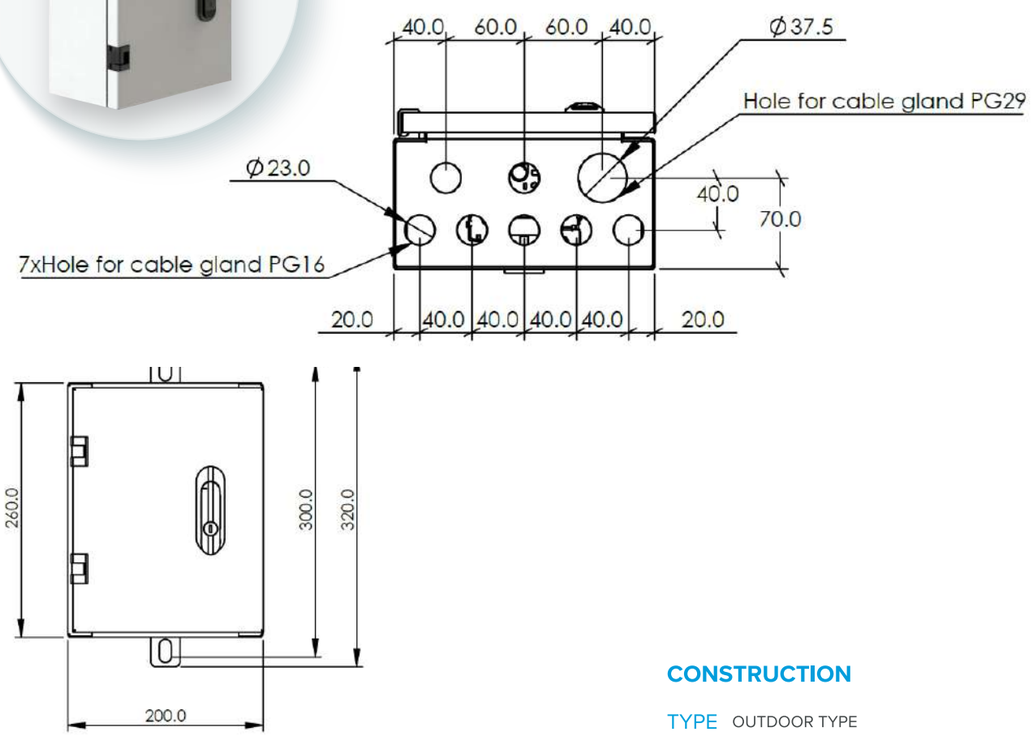
COLOR THICKNESS

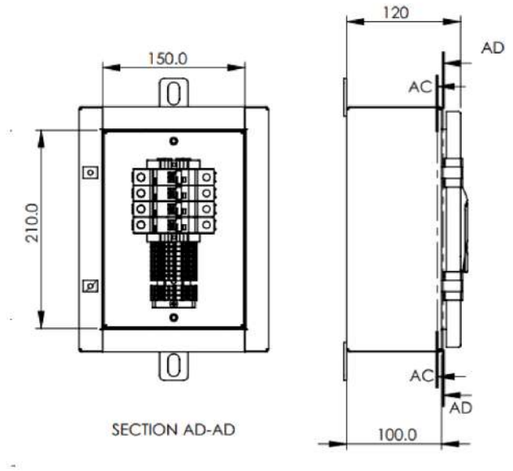
OUTDOOR (TEXTURE & SMOOTH) ≥ 96 μm

No.	Item Description	Manufacturer
1.	Surge Protection Device (SPD)	CHINT
2.	Miniature Circuit Breaker (MCB)	CHINT
3.	Feed-through Terminal Block – PT 2 Series	PHOENIX CONTACT

TERMINAL BOX FOR IOT TRANSFORMER

FOR PEA IOT DISTRIBUTION TRANSFORMER





CONSTRUCTION

TYPE OUTDOOR TYPE

BODY

- BODY CASE STEEL SHEET : 1 mm. THICKNESS
- FRONT DOOR STEEL SHEET : 1 mm. THICKNESS
- PANEL STEEL SHEET : 1 mm. THICKNESS
- ROOF STEEL SHEET : 1 mm. THICKNESS
- LIFTING EYES STEEL SHEET : 3 mm. THICKNESS

MATERIAL

STAINLESS SHEET

BODY COLOR

☑ GREYRAL7036 ○ TEXTURE ☑ SMOOTH

COLOR THICKNESS

OUTDOOR (TEXTURE & SMOOTH) ≥ 160 μm

No.	Item Description	Manufacturer
1.	Surge Protection Device (SPD)	CHINT
2.	Miniature Circuit Breaker (MCB)	CHINT
3.	Feed-through Terminal Block – PT 2 Series	PHOENIX CONTACT

PRECISE

TRANSFORMER MONITORING SYSTEM (TMS)

Benefit

- Reduces Operational Costs
- Prevents Damage & Extends Lifespan
- Optimizes Energy Efficiency

Transformers are the heart of power distribution for both commercial and residential sectors. To ensure reliability, professional maintenance should be performed at least once a year.Furthermore, advanced performance analysis and monitoring are essential to optimize energy consumption and detect potential faults before they cause system damage. This proactive approach is key to ensuring maximum safety and cost-efficiency.

PRECISE has developed an advanced Energy Management & Monitoring System specifically for transformers. This solution enables comprehensive performance analysis and health monitoring through 4 core features:

Real Time Monitor
Monitors power consumption and critical parameters of every transformer in real-time via a web-based Dashboard. Key metrics include oil temperature/pressure, Power Quality, and SCADA control status.

Alarm & Notification
Sends instant alerts regarding system abnormalities directly via Email and the message application.

Dashboard and Report
Visualizes usage data through intuitive graphs, tables, and infographics, ensuring data is easy to read and quick to analyze.

Mapping Position
The GPS tracking system precisely locates transformers across the network, displaying their positions on an interactive map for efficient monitoring and maintenance.

PRECISE

LV & MV SWITCHGEARS

AC/DC DISTRIBUTION BOARD

AC / DC Distribution Board is used in substation of the PEA, MEA and EGAT. Precise has designed and manufactured according to the standards of three institutions.

AC Distribution Board

AC Distribution Board gets power from the Station Service Transformer and supplies power to AC loads in substation such as lighting, air conditioning and

Technical data

Description	AC Distribution board
Rated voltage (VAC)	400/230, 416/240
Rated frequency (Hz)	50
Rated current (A)	Up to 1,000
Degree of protection	IP4X
Standard thickness (mm.)	2.0 – 2.5
Standard	IEC Standard or Requirement customer

DC Distribution Board

DC Distribution Board gets power from the charger and battery. And thensupplies power to DC loads on DC in substation such as Protection Relay and devices in the control system and protection systems.

Technical data

Description	DC Distribution board
Rated voltage (VDC)	220, 125, 110, 48
Rated current (A)	Up to 630
Degree of protection	IP4X
Standard thickness (mm.)	2.0 – 2.5
Standard	IEC Standard or Requirement customer

MAIN DISTRIBUTION BOARD (MDB)

Main Distribution Board (MDB) is the main board used in electricity distribution system by connecting many units form a large-scale structure which is able to disassemble separately as parts at the side of the board both in upper part and lower part, it is very convenient to lift or to remove. Moreover ventilation channel is prepared for heat dissipation. The Main Distribution Board is made of thick steel sheet, which is run through forming process; size 1.5-3 millimeter and the board can be designed according to customer's requirement which installation of indoor type and outdoor type are both available.

MAIN DISTRIBUTION BOARD (MDB)

Main Distribution Board Indoor-Outdoor type

It is the main board which receives input power from low voltage side of the transformer. Rated voltage not exceeding 800 VAC which installed indoor-outdoor and it is suitable for power control system-switch control such as water pump control, sports complex power systems street lighting systems or general works which require Main Distribution Board installed near transformer.

Technical data

Description	Indoor-Outdoor type
Rated voltage (VAC)	Up to 800
Rated frequency (Hz)	50
Rated current (A)	Up to 6,300
Degree of protection	IP4X-IP65
Standard thickness (mm.)	1.5 – 3.0
Material	Steel or Stainless Steel

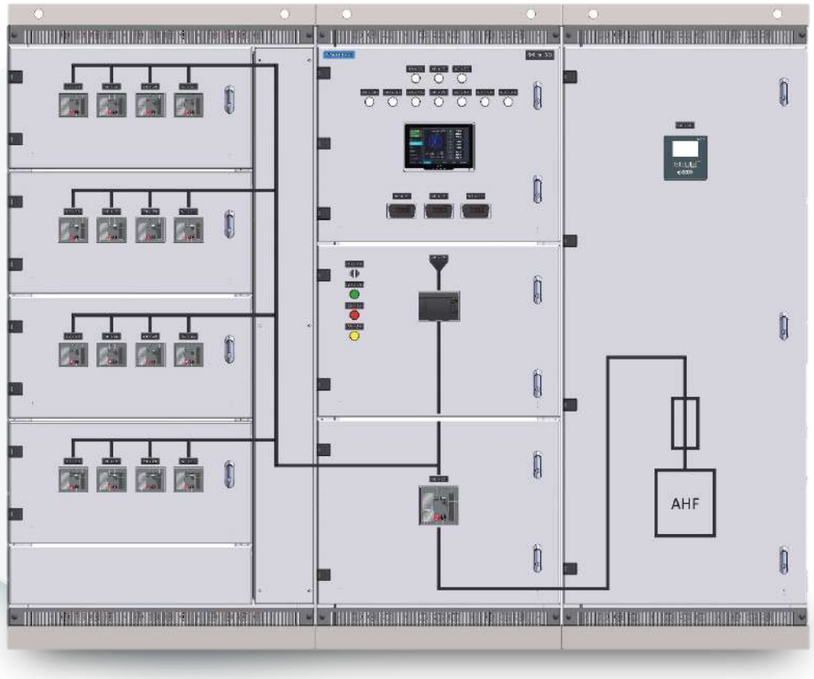
SMART MAIN DISTRIBUTION BOARD (SMDB)

Smart Main Distribution Board

volutionize your power distribution with the Smart Main Distribution Board (SMDB). This advanced system integrates IoT (Internet of Things) and wireless communication technologies to enable intelligent, real-time monitoring and control. The SMDB provides deep insights into your electrical system, ensuring maximum efficiency, reliability, and safety.

Technical data

Description	Indoor-Outdoor type
Rated voltage (VAC)	Up to 800
Rated frequency (Hz)	50
Rated current (A)	Up to 6,300
Degree of protection	IP4X-IP65
Standard thickness (mm.)	1.5-3.0
Material	Steel or Stainless Steel



MAIN DISTRIBUTION BOARD (MDB)

Main Distribution Board Type tested certificate by LS electric

PRECISE is officially licensed by LS Electric Co., Ltd. to manufacture the Susol Series Main Distribution Board. This product is fully Type-Tested and certified in compliance with IEC 61439-1&2 standards. It exclusively utilizes LS Electric circuit breakers, ensuring superior performance and safety according to IEC 60947-2 and IEC 60898-1.

Design & Applications: Engineered with a flexible Modular Design, the Susol MDB allows for seamless connection and expansion from both the front and sides. This versatility optimizes space utilization, making it ideal for constrained installation areas. It is the preferred solution for diverse sectors, including Large-scale Industrial Plants, Mass Transit Systems, Hospitals, Shopping Complexes, Educational Institutions, and Commercial Buildings.

Specification

Description	Susol MDB
Rated operating voltage	690 V
Rated Frequency	50/60 Hz
Rated current	Up to 5000A
Rated short time withstand current	Up to 100 kA/1sec
Rated insulated voltage	1000 V
Rated impulse withstand voltage	8 kV
Form of Internal separation	Form 1, 2, 3, 4
Degree of protection	IP43
Standard	IEC61439-1&2

JUNCTION BOX

Junction Box

The Junction Box serves as a terminal connection point for secondary wiring from Instrument Transformers (CT, VT) located in the switchyard. It consolidates cabling for efficient transmission to the Control Room. The enclosure is robustly designed specifically for outdoor installation, ensuring protection against environmental elements.

Overall Dimension

Type of Junction Box	Dimension (mm.)		
	W	L	H
PT1 : PT 3 ph 3 Cores	800	250	550
PT2 : PT 3 ph 2 Cores	800	250	550
PT3 : PT 1 ph 3 Cores	450	250	400
PT4 : PT 1 ph 2 Cores	450	250	400
CT1 : CT 3 ph 6 Cores	1,000	250	900
CT2 : CT 3 ph 5 Cores	1,000	250	900
CT3 : CT 3 ph 4 Cores	1,000	250	900
CT4 : CT 1 ph 6 Cores	550	250	400
CT5 : CT 1 ph 5 Cores	550	250	400
CT6 : CT 1 ph 4 Cores	550	250	400

24 KV METAL-CLAD SWITCHGEAR

24kV Metal-Clad Switchgear

Engineered for critical power distribution, our 24kV Metal-Clad Switchgear represents the pinnacle of medium-voltage protection. Designed, manufactured, and tested in strict accordance with the latest IEC standards, this switchgear features a robust compartmentalized metal enclosure that ensures maximum operational continuity and personnel safety.

Key Features & Benefits:

- Ultimate Protection (Metal-Clad Design): Features fully segregated metal compartments for the circuit breaker, busbars, and cables. This design minimizes the risk of arc flash propagation, ensuring the highest level of safety for personnel and equipment.
- IEC Certified Compliance: Fully type-tested and certified to meet rigorous IEC international standards, guaranteeing global-class performance and quality.
- High Reliability: Built to withstand the demands of 24kV high-voltage networks, ensuring stable power distribution for industries, infrastructure, and utility substations.
- Operational Efficiency: The robust construction reduces maintenance downtime and extends the operational lifespan of your electrical infrastructure.

SERVICE CONDITION

3.1 Ambient temperature : Max.40°C, Min.-5°C (without ice and frost)
3.2 Humidity : 45% to 85% (without condensation)
3.3 Altitude : From sea level up to 1000m
3.4 Service location : Indoor (without flammable or corrosive gas, oil and dirt)

Metal clad switchgear	IEC 62271-200
Circuit breaker	IEC 62271-100
Earthing switch	IEC 62271-102
Current Transformer	IEC 61869-2
Voltage Transformer	IEC 61869-3

METAL CLAD SWITCHGEAR

Switchgear and VCB Ratings

Classification		24(25.8)kV 12.5kA 630/1250A		24(25.8)kV 16kA 630/1250A	
Model Name		PMW-AIS-MCSG-24			
Applied standard		IEC 62271-200			
LSC (Loss of service continuity category)		LSC2B-PM			
Power Frequency(1min)/ Impulse(1.2x50us)	Main Circuit	50kV/125kV BIL			
	Auxiliary Circuit	2kV/5kV BIL			
Rated short time withstand current	Main Circuit	12.5kA/3s		16kA/3s	
	Earthing Switch	12.5kA/3s		16kA/3s	
Protection Degree		IP4X			
VCB Specification	VCB type	VL-H1306	VL-H1313	VL-H1606	VL-H1613
	Rated Current	630A	1250A	630A	1250A
	Phase distance (mm)	210/275		210/275	
	Rated Frequency (Hz)	50/60Hz		50/60Hz	

Classification		24(25.8) kV 25kA 630/1250/2000/2500A				
Model Name		PMW-AIS-MCSG-24				
Applied standard		IEC 62271-200				
LSC (Loss of service continuity category)		LSC2B-PM				
Power Frequency(1min)/ Impulse(1.2x50us)	Main Circuit	50kV/125kV BIL				
	Auxiliary Circuit	2kV/5kV BIL				
Rated short time withstand current	Main Circuit	25kA/3s				
	Earthing Switch	25kA/3s				
Protection Degree		IP4X				
VCB Specification	VCB type	VL-H2506	VL-H2513	VL-H2520	VL-H2520	VL-H2525
	Rated Current	630A	1250A	2000A	2000A	2500A
	Phase distance (mm)	210/275		210	275	275
	Rated Frequency (Hz)	50/60Hz		60Hz	50/60Hz	

UNIT SUBSTATION

Construction and Feature

Unit Substation is engineered to fully comply with the specifications of the Metropolitan Electricity Authority (MEA) and the Provincial Electricity Authority (PEA), supporting voltage levels of 12 kV, 24 kV, and 36 kV. Designed for durability, the enclosure is completely weatherproof, making it ideal for outdoor installation in tropical climates. It ensures protection against moisture, dust, and condensation, and features a vermin-proof design. The cubicle is fabricated from high-quality steel sheets with a thickness of 3–4 mm. The metal surface is coated with polyester powder paint for enhanced corrosion resistance.

Unit Substation is separated by steel partition on the three section:

1. HV Switchgear with SF6 Ring Main Unit section
2. Distribution Transformer section
3. Low Voltage Switchgear section

Enclosure Features:

- Outdoor type, compact design, prefabricated (fully factory assembled)
- Installation, connection and commissioning in a short time
- Protection Class HV/LV IP43 and TR IP33 for Compact Unit Substation using Transformer 24kV up to 1,000 kVA MEA Spec. NO.105
- Protection Class HV/LV/TR IP34 for Compact Unit Substation using Transformer 24-36 kV up to 1,000 kVA PEA Spec.
- Oil collecting pan is provided to be able to collect 100% amount of coolant of the transformer
- Internal arc classification: Class IAC-B-16 kA 1s
- Class of enclosure 15K
- Access doors for each compartment are equipped with separate handles and locks (master keys are provided)
- Three earthing points for each compartment
- Suitable for mounting on concrete pad or foundation, prepared by customer

UNIT SUBSTATION

Compact Unit Substation Type MGS20-A-YQ1 for Transformer 24kV 500 kVA MEA SPEC. NO. 105

Weight & Dimension

Description	MGS20-A-YQ1
Length (mm.)	2,780
Width (mm.)	1,200
Height (mm.)	2,700
Weight (kg.)	Approx. 5,000

Technical data

Description	MGS20-A-YQ1
Rated voltage (kV)	24
Frequency (Hz)	50
Transformer	PRECISE
Power rating (kVA)	500
HV switchgear	TOGAMI/SIEMENS
Rated current	
- Busbars (A)	630
- Feeders (A)	630 (L), 200 (P)
Short time current (kA)	16,20
Power frequency (kV)	50/60
Lightning impulse (kVpeak)	125/145
LV switchgear	PRECISE/SIEMENS
Rated voltage (V)	400
Rated current (A)	250/400/800

PQM PANEL & ZERO EXPORT PANEL

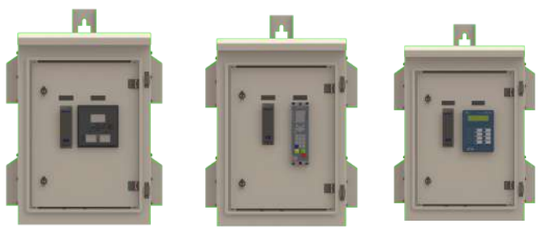
PQM & Zero Export panel solution that combines two key functions.

1. System Protection: Equipped with high-precision protective relays to detect anomalies such as overcurrent, voltage irregularities, and phase imbalance. It automatically isolates faulty circuits to prevent equipment damage.
2. Zero Export Function: Effectively manages solar inverter output to prevent reverse power flow into the grid, ensuring full compliance with local utility regulations.

PQM Panel & Zero Export Panel
(For indoor and outdoor installation)

PQM & Relay Panel
(For indoor and outdoor installation)

Relay Panel



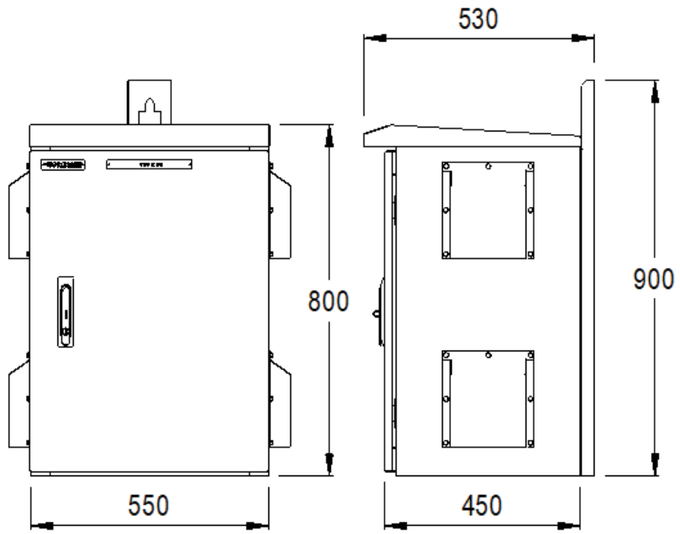
Note: The selection and application depend on the system design of each individual project.

Panel

Technical data

Panel Model	Description
PQM	PQM panel (Outdoor) UMG512PRO
	PQM panel (Outdoor) UMG512PRO & UMG96RM
Zero Export Panel	Zero Export Panel (Outdoor) UMG96RM
PQM & RELAY	PQM & RELAY panel (Outdoor) UMG512PRO & Schneider P3U
	PQM & RELAY panel (Outdoor) UMG512PRO & SIEMENS 7SJ80
	PQM & RELAY panel (Outdoor) UMG512PRO & SEL751 (FOR PEA)
	PQM & RELAY panel (Outdoor) UMG512PRO & SEL751 (FOR MEA)
	PQM & RELAY panel (Outdoor) UMG512PRO & SEL751 & UMG96RM (FOR PEA)
	PQM & RELAY panel (Outdoor) UMG512PRO & SEL751 & UMG96RM (FOR MEA)
RELAY	RELAY panel (Outdoor) Schneider P3U
	RELAY panel (Outdoor) SIEMENS 7SJ80
	RELAY panel (Outdoor) SEL751 (FOR PEA)
	RELAY panel (Outdoor) SEL751 (FOR MEA)
OPTION	COMMUNICATION SET FOR METERING
	COMMUNICATION SET FOR METERING & PROTECTION
	COMMUNICATION SET FOR PROTECTION

LV & MV Switchgears
PQM PANEL & ZERO EXPORT PANEL



General Specification

Material	Cold-Roll Steel Sheet (SPCC)
Sheet Thickness	1.5 mm.
Surface Treatment	Powder-Coated
Color	RAL 7032
Overall Dimension (W x D x H)	550 x 530 x 900 mm.
IP Rating	IP54
Standards	IEC61439-1

PRECISE

INSTRUMENT TRANSFORMERS

GENERAL DESCRIPTION

The instrument transformer are functionally used for measuring current and voltage transformers to be used in combination with meters, electric meters and measuring devices. The main tasks of instrument transformers are transform currents or voltages from a high value to a low value for using together with measuring device and protection device. Instrument transformer was designed for using in single phase & 3 phase voltage system and was produce by new technology, high quality production besides environmentally friendly products

DRY TYPE INSTRUMENT TRANSFORMERS

Low Voltage Current Transformer Window Type LExM/ Type LEM

Type LExM / LEM

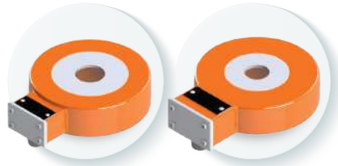
Technical data

Description	LExM-35	LExM-55	LEM
Highest system voltage (kV)	0.72		
Power frequency withstand voltage on secondary winding (r.m.s.) (kV)	3		
Rated frequency (Hz)	50		
Insulating material	Cycloaliphatic epoxy resin		
Rated primary current (A)	200	400	150-5,000
Rated secondary current (A)	1 , 5		
Primary terminal marking	P1-P2 , H1-H2		
Secondary terminal marking	s1-s2 , x1-x2		
Number of core (Core)	1		Up to 3
Accuracy class & Burden	0.6 (B-0.1, B-0.2 & B-0.5) IEEEC57.13 25VA Class 0.5 (IEC61869-2)		On request
Rated continuous thermal current (%)	120		N/A
Weight (approx.) (kg.)	< 3		< 10
Installation	Outdoor		Indoor
Standard	IEC61869-2 / IEEEC57.13-2008		

Low Voltage Current Transformer Window Type LExM/ Type LEM

For MEA/PEA IoT Distribution Transformer

LExM-130 for PEA & MEA Spec



LExM-155,175 for PEA & MEA Spec

Technical data

Description	LExM-130	LExM-155	LExM-175
Highest system voltage (kV)	0.72		
Power frequency withstand voltage on secondary winding (r.m.s.) (kV)	3		
Rated frequency (Hz)	50		
Insulating material	Cycloaliphatic Epoxy Resin/Outdoor Type		
Rated primary current (A)	150-600	800-1000	1200-3000
Rated secondary current (A)	1 , 5		
Primary terminal marking	P1-P2		
Secondary terminal marking	s1-s2 , v		
Accuracy class & Burden	5VA Class 0.5 Fs<5		
Rated continuous thermal current (%)	120		
Short time current rating (Ith,1 sec) (kA)	60xIn or 25 kA Max.		
Dynamic Current (Idyn) (kA)	2.5xIth		
Weight (approx.) (kg.)	<1.5	<2.5	< 3
Standard	IEC 61869-1/IEC61869-2, MEA Spec No.233:02-2024,PEA Spec No.RTRN-051/2565		

DRY TYPE INSTRUMENT TRANSFORMERS

Technical data

Customer Specification	TRANSFORMER RATED (kVA)	Current Ratio (A)	LV transformer Bushing Current (A) EN50 386	LV transformer Bushing THREAD DIN42 530	LV transformer Bushing THREAD SIZE	Model Type
MEA Spec No.233:02-2024	15-112.5	300/1A 5VA CL.0.5 Fs<5	250	DT250	M12	LExM-130
	150					
	225	600/1A 5VA CL.0.5 Fs<5	630	DT630	M20	LExM-155
	300					
	500	1000/1A 5VA CL.0.5 Fs<5	1000	DT1000	M30	LExM-175
	750	2000/1A 5VA CL.0.5 Fs<5	2000	DT2000	M42	LExM-175
	1000	2000/1A 5VA CL.0.5 Fs<5	2000	DT2000	M42	LExM-175
	1500	3000/1A 5VA CL.0.5 Fs<5	3150	DT3150	M48	LExM-175
PEA Spec No.RTRN-051/2565	50	150/5A 5VA CL.0.5 Fs<5	250	DT250	M12	LExM-130
	100					
	160	250/5A 5VA CL.0.5 Fs<5				
	250	400/5A 5VA CL.0.5 Fs<5	630	DT630	M20	
	315	500/5A 5VA CL.0.5 Fs<5				
	400	600/5A 5VA CL.0.5 Fs<5				
	500	800/5 A 5VA CL.0.5 Fs<5	1250	DT1000	M30	LExM-155
	630	1000/5A 5VA CL.0.5 Fs<5				
	800	1200/5A 5VA CL.0.5 Fs<5	2000	DT2000	M42	LExM-175
	1000	1500/5A 5VA CL.0.5 Fs<5				

Low Voltage Current Transformer Indoor Window Type LDB

Type LDB

Technical data

Description	LDB-35		
Highest system voltage (kV)	0.72		
Power frequency withstand voltage on secondary winding (r.m.s.) (kV)	3		
Rated frequency (Hz)	50		
Insulating material	ABS insulation		
Rated primary current (A)	100	150-400	450-800
Rated secondary current (A)	1 , 5		
Primary terminal marking	P1-P2 , K-L		
Secondary terminal marking	s1-s2 , k-l		
Number of core (Core)	1		
Accuracy class & Burden	5VA Class 0.5, 7. 5VA Class 1,	5VA Class 0.5, 15VA Class 1, 20VA Class3	15VA Class 0.5, 25VA Class 1, 30VA Class3
Rated continuous thermal current (%)	120		
Weight (approx.) (kg.)	< 1.2		
Standard	IEC61869-2		

DRY TYPE INSTRUMENT TRANSFORMERS

Low Voltage Current Transformer: Ring type for Power Transformer/ MDB Type CDB

Type CDB

Technical data

Description	CDB for power transformer/MDB
Highest system voltage (kV)	0.72
Power frequency withstand voltage on secondary winding (r.m.s.) (kV)	3
Rated frequency (Hz)	50
Insulating material	Cotton tape
Rated primary current (A)	150-5,000
Rated secondary current (A)	1 , 5
Primary terminal marking	P1-P2 , H1-H2
Secondary terminal marking	s1-s2 , x1-x2
Number of core (Core)	On request
Accuracy class & Burden	
- Metering	2.5 VA Up to 40 VA ,Class 0.2 Up to Class 3 ,Special on request
- Protection	2.5 VA Up to 40VA ,Class 5P10 Up to Class 5P20, Special on request
Rated continuous thermal current (%)	120
Dimension	On request
Standard	IEC61869-2 / IEEEC57.13-2008

Medium Voltage Current Transformer Outdoor up to 36 kV: Support Type Current Transformer for Pole Mount Installation Type CExL

Type CExL

Technical data

Description	CExL-7.2	CExL-12	CExL-24	CExL-36
Highest system voltage (kV)	7.2	12	24	36
Power frequency withstand voltage (r.m.s.) (kV)	20	28	50	70
Lightning impulse withstand voltage (peak) (kV)	60	75	125	170
Rated frequency (Hz)	50			
Insulating material	Cycloaliphatic epoxy resin			
Rated primary current (A)	5 –800			
Rated secondary current (A)	1 , 5			
Primary terminal marking	P1-P2 , H1-H2			
Secondary terminal marking	s1-s2 , x1-x2			
Number of core (Core)	1			
Accuracy class & Burden				
- Metering	30VA Class 0.2 Up to 0.5, Special on request			
Rated short-time thermal current Ith, r.m.s. (1 sec) (kA)	100xIn or 25 kA Max.			
Rated dynamic current Idyn, r.m.s. (1 sec) (kA)	2.5 x Ith			
Rated continuous thermal current (%)	120 , 150			
Weight (approx.) (kg.)	25			40
Standard	IEC61869-2 / IEEEC57.13-2008			

DRY TYPE INSTRUMENT TRANSFORMERS

Medium Voltage Current Transformer Indoor up to 36 kV : Support Type for Switchgear type CEL

Type CEL

Technical data

Description	CEL-7.2	CEL-12	CEL-24	CEL-36
Highest system voltage (kV)	7.2	12	24	36
Power frequency withstand voltage (r.m.s.) (kV)	20	28	50	70
Lightning impulse withstand voltage (peak) (kV)	60	75	125	170
Rated frequency (Hz)	50			
Insulating material	Epoxy resin			
Rated primary current (A)	10-1,200			
Rated secondary current (A)	1 , 5			
Primary terminal marking	P1-P2 , K-L		P1-P2 , H1-H2	
Secondary terminal marking	s1-s2 , k-l		s1-s2 , x1-x2	
Number of core (Core)	Up to 2		Up to 3	
Accuracy class & Burden				
- Metering	2.5VA Up to 30 VA, Class 0.2 Up to Class 3, Special on request			
- Protection	2.5VA Up to 30VA, Class 5P10 Up to Class 5P20, Special on request			
Rated short-time thermal current Ith, r.m.s. (1 sec) (kA)	100 x In or 25 kA Max.			
Rated dynamic current Idyn, r.m.s. (1 sec) (kA)	2.5 x Ith			
Rated continuous thermal current (%)	120 , 150			
Weight (approx.) (kg.)	25		34	50
Standard	IEC61869-2 / IEEEC57.13-2008			

Medium Voltage Current Transformer Indoor type CELR

Type CELR

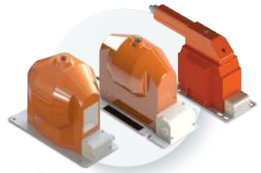
Technical data

Description		CELR-7.2	CELR-12
Highest system voltage	kV	7.2	12
Power frequency withstand voltage(r.m.s)	kV	20	28
Lightning impulse withstand voltage (peak)		60	75
Standard		IEC61869-2, IEEE C57.13-2008	
Rated frequency	Hz	50/60	
Insulating material		Epoxy Resin	
Rated primary current	A	10-1250	
Rated secondary current	A	1,5	
Primary terminal marking		P1-P2,K-L,H1-H2	
Secondary terminal marking		s1-s2,k-l,x1-x2	
Number of core	Core	up to 3	
Accuracy class&Burden			
-Metering		2.5 VA Up to 30 VA Class 0.2 Up to Class 0.5 , Special on request	
-Protection		2.5 VA Up to 30 VA ,Class 5P10 Up to 5P20 ,Special on request	
Rated short-time thermal current Ith, r.m.s(1sec)	kA	100 x In or 25 kA Max.	
Rated dynamic current Idyn, r.m.s(1sec.)	kA	2.5xIth	
Rated continuous thermal current	%	120	
Weight (approx.)	kg	25	

Notice: Due to constant improving of our products, data in this brochure are informative only and we reserve the right of change.

DRY TYPE INSTRUMENT TRANSFORMERS

Medium Voltage Voltage Transformer Indoor up to 36 kV: Single Pole for Switchgear type VEG

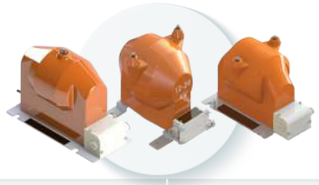


Type VEG / VEGF

Technical data

Description		VEG-7.2/ VEGF-7.2	VEG-12/ VEGF-12	VEG-24/ VEGF-24	VEG-36
Highest system voltage (kV)	kV	7.2	12	24	36
Power frequency withstand voltage (r.m.s.) (kV)	kV	20	28	50	70
Lightning impulse withstand Voltage (peak) (kV)		60	75	125	170
Rated frequency (Hz)	Hz	50/60			
Insulating material		Epoxy resin			
Rated primary voltage (kV)	V	6.6/√3	11/√3	22/√3	33/√3
Rated secondary voltage (V)	V	100/√3, 110/√3, 120/√3			
Primary terminal marking		A-N			
Secondary terminal marking		1a-1n,2a-2n			
Number of winding (winding)	Winding	Up to 2			
Accuracy class & Burden (Max)		50VA Class 0.5/3P, 80VA Class 1/6P, 100 VA Class 3/6P			
Voltage factor		1.2 Cont /1.9, 8hInsulation Class B.			
Maximum temperature rise of winding (°K)		Insulation Class B			
Maximum ambient temperature (°C)		40			
Weight (approx.) (kg.)	kg	28		40	
Standard		IEC61869-3 / IEEEC57.13-2008			
*** For VEGF type, the fuse can be included or excluded as needed		The fuse size supplied is 2A			

Double Pole for Switchgear Type VEL



Type VEL

Technical data

Description	VEL-7.2	VEL-12	VEL-24
Highest system voltage (kV)	7.2	12	24
Power frequency withstand voltage (r.m.s.) (kV)	20	28	50
Lightning impulse withstand voltage (peak) (kV)	60	75	125
Rated frequency (Hz)	50		
Insulating material	Epoxy resin		
Rated primary voltage (kV)	6.6	12	22, 24
Rated secondary voltage (V)	100 , 110 , 120		
Primary terminal marking	H1-H2 , A-B		
Secondary terminal marking	x1-x2 , a-b		
Number of winding (Winding)	Up to 2		
Accuracy class & Burden (Max)	0.6 (W, X, Y) & 1.2Z (IEEEC57.13) 75VA Class 0.5, 200VA Class 1 (IEC61869-3)		
Voltage factor	1.2 Cont /1.5, 30 sec.		
Maximum temperature rise of winding (°K)	Insulation Class B		
Maximum ambient temperature (°C)	40		
Weight (approx.) (kg.)	20		35
Standard	IEC61869-3 / IEEEC57.13-2008		

DRY TYPE INSTRUMENT TRANSFORMERS

Medium Voltage Voltage Transformer Outdoor up to 36 kV: Single Bushing for Pole Mount Installation type VExG

Type VExG

Type VExG

Technical data

Description	VExG-7.2	VExG-12	VExG-24	VExG-36
Highest system voltage (kV)	7.2	12	24	36
Power frequency withstand voltage (r.m.s.) (kV)	20	28	50	70
Lightning impulse withstand voltage (peak) (kV)	60	75	125	170
Rated frequency (Hz)	50			
Insulating material	Epoxy resin			
Rated primary voltage (kV)	6.6/√3	11/√3, 12/√3	22/√3, 24/√3	33/√3, 35/√3
Rated secondary voltage (V)	100/√3, 110/√3, 120/√3			
Primary terminal marking	H1 -N, A-N			
Secondary terminal marking	a - n			
Number of winding	1			
Accuracy class & Burden (Max)	50VA Class 0.5			
Voltage factor	1.2 Cont /1.9, 8h Insulation Class B.			
Maximum temperature rise of winding (°K)	Insulation Class B			
Maximum ambient temperature (°C)	40			
Weight (approx.) (kg.)	35		35	35
Standard	IEC61869-3			

Double Bushing for Pole Mount Installation Type VExL

Type VExL

Technical data

Description	VExL-7.2	VExL-12	VExL-24
Highest system voltage (kV)	7.2	12	24
Power frequency withstand voltage (r.m.s.) (kV)	20	28	50
Lightning impulse withstand voltage (peak) (kV)	60	75	125
Rated frequency (Hz)	50		
Insulating material	Cycloaliphatic epoxy resin		
Rated primary voltage (kV)	6.6	11 , 12	22, 24
Rated secondary voltage (V)	100 , 110 , 120		
Primary terminal marking	H1-H2 , A-B		
Secondary terminal marking	x1-x2 , a-b		
Number of winding (Winding)	1		
Accuracy class & Burden (Max)	0.6 (W, X, Y) & 1.2Z (IEEEC57.13) 75VA Class 0.5, 200VA Class 1 (IEC61869-3)		
Voltage factor	1.2 Cont /1.5, 30 sec.		
Maximum temperature rise of winding (°K)	Insulation Class B		
Maximum ambient temperature (°C)	40		
Weight (approx.) (kg.)	38		
Standard	IEC61869-3 / IEEEC57.13-2008		

DRY TYPE INSTRUMENT TRANSFORMERS

For Power Supply Type VExL-24/ Type VExL-36

VExL-24

VExL-36

Technical data

Description	VExL-24 For Power Supply	VExL-36 For Power Supply
Highest system voltage (kV)	24	38
Power frequency withstand voltage on secondary winding (r.m.s.) (kV)	50	70
Lightning impulse withstand voltage (peak) (kV)	125	170
Rated frequency (Hz)	50	
Insulating material	Cycloaliphatic epoxy resin/Outdoor Type	
Rated primary voltage (V)	24000,22000	33000,35000
Rated secondary voltage (V)	240,220,230	220,230
Primary terminal marking	A-B	
Secondary terminal marking	a-b	
Accuracy class & Burden	500 VA Class 3	
Voltage factor	1.2 Cont/ 1.9 30 Sec	
Insulating material	Class E	
Maximum temperature rise of winding (K)	75	
Maximum ambient temperature (C)	45	
Weight (approx.) (kg.)	40	75
Standard	IEC 61869-1,IEC 61869-3	

OIL TYPE INSTRUMENT TRANSFORMERS

Medium Voltage Outdoor System up to 36 kV : Single phase Voltage Transformer Type VOL

Type VOL

Technical data

Description	VOL-12	VOL-24	VOL-36
Highest system voltage (kV)	12	24	36
Power frequency withstand voltage (r.m.s.) (kV)	28	50	70
Lightning impulse withstand voltage (peak) (kV)	75	125	170
Rated frequency (Hz)	50		
Insulating material	Oil immersed insulation Class A		
Rated primary voltage (kV)	11	22	33
Rated secondary voltage (V)	100 , 110 , 120 , 230		
Primary terminal marking	U-V , A-B , H1-H2		
Secondary terminal marking	u-v , a-b , x1-x2		
Number of winding (Winding)	Up to 2		
Accuracy class & Burden (Max)			
- Metering	50VA Class 0.5, 100VA Class 1, 500VA Class 3		
- Protection	500VA Class 3P		
Voltage factor	1.2 Cont /1.5, 30 sec.		
Weight (approx.) (kg.)	50		70
Standard	IEC61869-3 / IEEEC57.13-2008		

OIL TYPE INSTRUMENT TRANSFORMERS

Three Phase Voltage Transformer for LBS Type VOG

Type VOG

Technical data

Description	VOG-242	VOG-362
Highest system voltage (kV)	24	36
Power frequency withstand voltage (r.m.s.) (kV)	50	70
Lightning impulse withstand voltage (peak) (kV)	125	170
Rated frequency (Hz)	50	
Insulating material	Oil immersed insulation Class A	
Rated primary voltage (kV)	22/√3	33/√3
Rated secondary voltage (V)	110√3, 110	
Primary terminal marking	A-B-C , H1-H2-H3	
Secondary terminal marking	a-b-c , x1-x2-x3	
Number of winding (Winding)	Up to 2	
Accuracy class & Burden		
- Metering	50VA Class 0.5, 500VA Class 3	
- Protection	500VA Class 3P	
Voltage factor	1.2 Cont / 1.9, 8h	
Weight (approx.) (kg.)	135	180
Standard	IEC61869-3 / IEEEC57.13-2008	

Medium Voltage Outdoor System up to 36 kV : Voltage Transformer for Substation Type VOG for EGAT

Type VOG

Technical data

Description	VOG-12	VOG-24	VOG-36
Highest system voltage (kV)	12	24	36
Power frequency withstand voltage (r.m.s.) (kV)	28	50	70
Lightning impulse withstand voltage (peak) (kV)	75	125	170
Rated frequency (Hz)	50		
Insulating material	Oil immersed insulation Class A		
Rated primary voltage (kV)	11/√3	22/√3	33/√3
Rated secondary voltage (V)	110/√3 , 110		
Primary terminal marking	A-B , H1-H0		
Secondary terminal marking	a-b , x1-x2		
Number of winding (Winding)	Up to 2		
Accuracy class & Burden			
- Metering	50VA Class 0.2, 0.3WXY		
- Protection	On request		
Voltage factor	1.2 Cont / 1.9, 8h		
Oil expansion	Metalic bellow		
Weight (approx.) (kg.)	90		
Standard	IEC61869-3 / IEEEC57.13-2008		

OIL TYPE INSTRUMENT TRANSFORMERS

Current Transformer for Pole mount installation Type COL

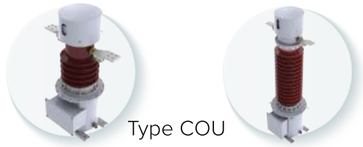
Type COL

Technical data

Description	COL-12	COL-24	COL-36
Highest system voltage (kV)	12	24	36
Power frequency withstand voltage (r.m.s.) (kV)	28	50	70
Lightning impulse withstand voltage (peak) (kV)	75	125	170
Rated frequency (Hz)	50		
Insulating material	Oil immersed insulation Class A		
Rated primary current (A)	10 -800		
Rated secondary current (A)	1 , 5		
Primary terminal marking	P1-P2 , H1-H2		
Secondary terminal marking	s1-s2 , x1-x2		
Number of winding (Winding)	1 , 2		
Accuracy class & Burden (Max)			
- Metering	30VA Class 0.5, 50VA Class 1, 60VA Class 3		
- Protection	30VA Class 5P20, 50VA Class 5P10, 60VA Class 10P10		
Rated short-time thermal current Ith, r.m.s. (1 sec) (kA)	40 (Max)		
Rated dynamic current Idyn, r.m.s. (1 sec) (kA)	2.5 x Ith		
Rated continuous thermal current (%)	120		
Weight (approx.) (kg.)	30		35
Standard	IEC61869-2 / IEEEC57.13-2008		

Medium Voltage Outdoor System up to 36 kV: High Voltage Outdoor System up to 123 kV:

Current Transformer for Substation Type COU



Type COU

Technical data

Description	COU-12	COU-24	COU-36	COU-123
Highest system voltage (kV)	12	24	36	123
Power frequency withstand voltage (r.m.s.) (kV)	28	50	70	230
Lightning impulse withstand voltage (peak) (kV)	75	125	170	550
Rated frequency (Hz)	50			
Insulating material	Oil immersed insulation Class A			
Rated primary current (A)	100 –2,000			
Rated secondary current (A)	1 , 5			
Primary terminal marking	P1-P2 , H1-H2			
Secondary terminal marking	s1-s2 , x1-x2			
Number of winding (Winding)	2 ,Up to 4*special on request			
Accuracy class & Burden (Max)				
- Metering	30VA Class 0.5, 50VA Class 0.5, 100VA Class 1, 200VA Class 3			
- Protection	30VA Class 5P20, 50VA Class 5P20, 100VA Class 5P10, 200VA Class 10P10			
Rated short-time thermal current Ith, r.m.s. (1 sec) (kA)	13 (Max)			
Rated dynamic current Idyn, r.m.s. (1 sec) (kA)	2.5 x Ith			
Rated continuous thermal current (%)	120			
Oil expansion	Metallic Bellow			
Weight (approx.) (kg.)	230			700
Standard	IEC61869-2 / IEEEC57.13-2008			

OIL TYPE INSTRUMENT TRANSFORMERS

Medium Voltage Outdoor System up to 36 kV:

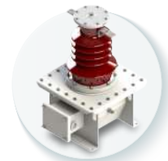
Current Transformer and Voltage Transformer for Solar Farm / Solar Roof Type VOG

Type VOG

Technical data

Description	VOG-122	VOG-242	VOG-362
Highest system voltage (kV)	12	24	36
Power frequency withstand voltage (r.m.s.) (kV)	20	50	70
Lightning impulse withstand Voltage (peak) (kV)	75	125	170
Rated frequency (Hz)	50/60		
Insulating material	Oil immersed insulation Class A		
Rated primary voltage (kV)	11/√2	22/√3	33/√3
Rated secondary voltage (V)	110/√3, 110		
Primary terminal marking	A-B-C		
Secondary terminal marking	1a-1b-1c, 2a-2b-2c-2n		
Number of winding (winding)	Up to 2		
Accuracy class & Burden (Max)			
- Metering	50VA Class0.5		
- Protection	50VA Class 3P		
Voltage factor	1.2 Cont / 1.9, 8h		
Oil expansion	-		
Weight (approx.) (kg.)	135		180
Standard	IEC61869-3		

Current Transformer and Voltage Transformer for Solar Farm / Solar Roof Type COL



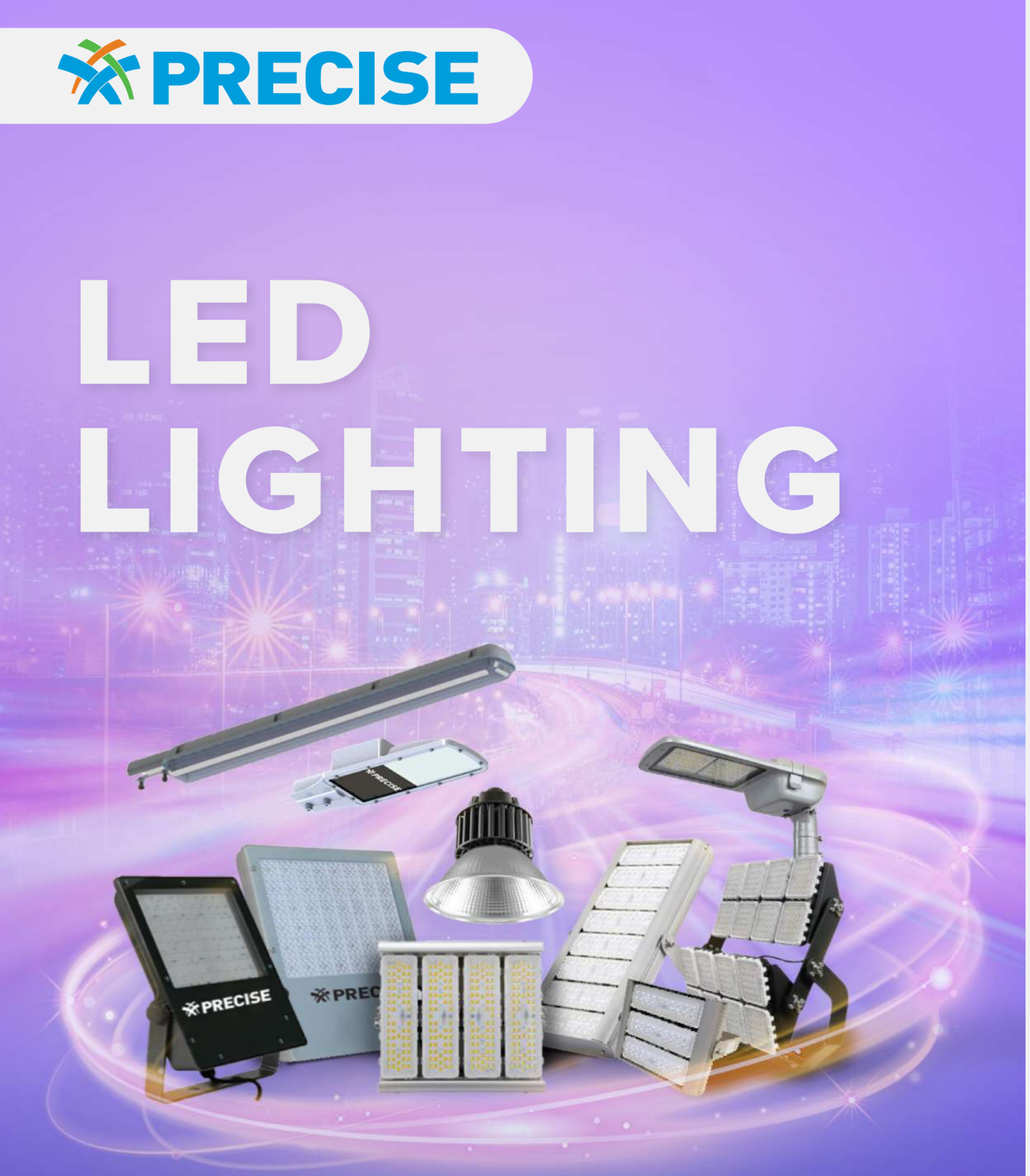
Type COL

Technical data

Description	COL-12	COL-24	COL-36
Highest system voltage (kV)	12	24	36
Power frequency withstand voltage (r.m.s.) (kV)	28	50	70
Lightning impulse withstand Voltage (peak) (kV)	75	125	170
Rated frequency (Hz)	50/60		
Insulating material	Oil immersed insulation Class A		
Rated primary current (A)	10-600A		
Rated secondary current (A)	1A or 5A		
Primary terminal marking	P1-P2		
Secondary terminal marking	1S1-1S2, 2S1-2S2		
Number of Core (Core)	Up to 2		
Accuracy class & Burden (Max)			
- Metering	30VA Class0.5		
- Protection	30VA Class 5P20		
Rated continuous thermal current (%)	120		
Oil expansion	-		
Weight (approx.) (kg.)	7.5		
Standard	IEC61869-2		

LED STREET LIGHT

LED LIGHTING



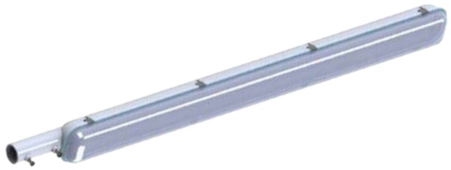
Property of Lighting LED under PRECISE Brand:

- Reducing electricity consumption ≥ 50% -75% and expenditure will be reduced in long term
- There is not any hazardous substance affected to our health such as lead and mercury
- There is not UV Ray which is affected to fatigued eyesight and dark skin
- Durability is the longest
- Better resistance to vibration
- Product warranty is provided
- Design and development of LED constitutes light according to its direction / without any loss of light
- LED lighting can be functional rapidly after switch-on without blinking
- Temperature of the room is reduced as heat generated by LED is lower than other electric bulbs
- Being friendly to environment

One Stop Solution Provider

Survey	Site survey to know the customer requirment by our expert team.
Design	Lighting design service as the customer requirement.
Economic Feasibility	Break-even point calculation service for the customer to make an investment decision.
Installation	Installation service by electrical and lighting specialist.
After Sales Service	Illuminance measurement service after installation and would be glad to advise about energy savings, instruction and maintenance.

LED streetlight, 2×20 W



The LED street light is designed to replace conventional fluorescent street lighting. The luminaire features a lightweight, die-cast aluminum housing, providing high strength and excellent heat dissipation. This design helps prevent damage to the LED chips and ensures long-lasting performance.

Model	LED Street Light 2x20W
Power Consumption	40 W
Luminous Flux	4,000 lm
Luminous Efficiency	100 lm/W
CCT	6,500K ± 500K
Input Voltage & Frequency	Single-phase 230 V (AC) ±10%, 50 Hz
Beam angle	>120°
THDi	≤ 15%
Power Factor	≥ 0.90
Ingress Protection	IP65
Surge protection	6kV
Operation life	>40,000 hours
Ambient temperature range	-20 to +40°C
Housing Material	Die-cast aluminum, 3 mm thick
Optical cover	Polycarbonate, 1.2 mm thick
Weight	2.5 kg
Quality warranty for the LED street lighting unit and its accessories (effective from the date of acceptance)	3 years
Quality warranty for the LED lamp (effective from the date of acceptance).	5 years

Standard Test	LED Street Light 2x20W
TIS 902 Part 2(3)-2014	Road Lighting Luminaire
ANSI/IES LM-79-19	Approved Method: Optical And Electrical Measurements Of Solid-State Lighting Products (LED and OLED)
IEC 61000-4-5	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test
RoHS	Restriction of Hazardous Substances

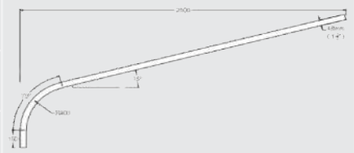
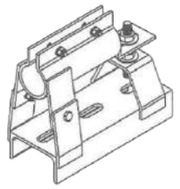
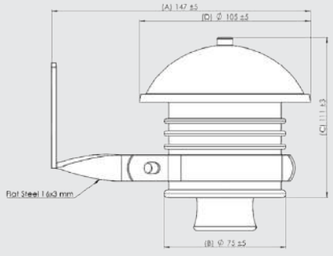
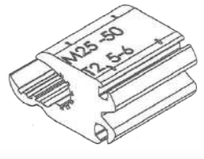
MODEL : LED STREET LIGHT 20W

The LED street light is designed to replace conventional fluorescent street lighting. The luminaire features a lightweight, die-cast aluminum housing, providing high strength and excellent heat dissipation. This design helps prevent damage to the LED chips and ensures long-lasting performance.

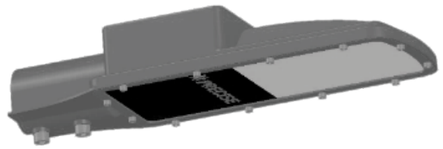
Model	LED Street Light 20W
Power Consumption	≤ 20 W
Luminous Flux	≥ 2,200 lm
Luminous Efficiency	≥ 110 lm/W
CRI	≥ 60
CCT	5,310K ± 7,040K
Optic	Narrow, Intermediate and Semi-Cut-off
Input Voltage & Frequency	120 – 277 W (AC) : 50-60 Hz
THDi	≤ 15%
Power Factor	≥ 0.90
Surge Voltage Protection	6 kV
LED Chip Brand	LUMILED
LED Chip Quantity	8 LEDs
Ingress Protection	IP66, IK08
Ambient temperature range	-20 to +40°C
Housing Material	Die-cast aluminum, 1.8 mm thick
Optical cover	Heat-resistant clear glass
Weight	3.04 kg
LED driver	Supports new technology
Warranty	3 year

Standard Test	LED Street Light 2x20W
IEC 60598-2-3	Luminaires – Part 2-3: Particular requirements – luminaires for road and street lighting
IEC 62031	LED modules for general lighting, safety specifications
IEC 62471	Photobiological safety of lamps and lamp systems
TIS 1955-2551	Lighting equipment and similar apparatus: Limits of radio disturbance characteristics
ANSI/IES LM-79-19	Approved Method: Optical And Electrical Measurements Of Solid-State Lighting Products (LED and OLED)
IEC 61000-4-5	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test
IEC 60529	Degrees of protection provided by enclosures (IP Code)

Pole Mount Accessories

Product List	Product Description	Drawing
Mounting accessories for street light as follows		
Arm	Steel pipe No. 40 refer to TIS 276, type 1	
	Length 2.5 m.	
	Hot dib galvanizing provides over 65 micro	
	NYY Cable or VCT 2.5 sq.mm.	
	Dimension according to PEA Standard	
Support for arm	C-channel, hot dip galvanizing provides over 75 micron	
	Support for pipe, OD = 48 mm. (1 ½")	
	Dimension according to PEA Standard	
D-Cartridge Fuse	Maximum current 25A according to PEA standard	
	Maximum voltage 500V according to PEA standard	
	Porcelain fuse base according to PEA standard	
	Nickel plating on copper contact according to PEA standard	
	Flat steel 16x3 mm. refer TIS. 55 and hot dip galvanizing according to PEA standard	
	Flat steel 30x5 mm. refer TIS. 55 and hot dip galvanizing according to PEA standard	
	Fuse 2-10 A	
Connector	Aluminum H-TYPE	
	M25-50, T2, 5-6	
	Dimension according to PEA standard	

MODEL : 435M



Voltage	Power Factor	%THDi	Surge Protection (kV)	CCT (K)*	CRI (Ra)**	Ingress Protection	Ambient temperature range (C°)
230	≥ 0.9	≤ 15	10kV / 5kA	3000/4000/5700	≥ 70	IP66	0 ~ +50

Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Product Size (L x W x H) mm.	Net Weight (kg)
435M	20	2,400	120	435 X 160 X 87	3.0
	30	3,600	120		
	40	4,800	120		
	50	6,000	120		

MODEL : FFLDS

Voltage	Power Factor	%THDi	Surge Protection (kV)	CCT (K)*	CRI (Ra)**	Ingress Protection	Ambient temperature range (C°)
230	≥ 0.9	≤ 15	10kV / 5kA	3000/4000/5700	≥ 70	IP66	0 ~ +50

Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Product Size (L x W x H) mm.	Net Weight (kg)
FFLDS	40	5,600	140	380 X 190 X 126	3.5
	50	7,000	140		
	60	8,400	140		
	70	9,800	140		

LED STREET LIGHT

MODEL : T65

Voltage	Power Factor	%THDi	Surge Protection (kV)	CCT (K)*	CRI (Ra)**	Ingress Protection	Ambient temperature range (C°)
230	≥ 0.9	≤ 15	10kV / 5kA	3000/4000/5700	≥ 70	IP66	-40 ~ +50

Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Product Size (L x W x H) mm.	Net Weight (kg)
T65N1	50	7,000	140	540 X 240 X 165	4.5
	70	9,800	140		
T65N2	90	12,600	140	670 X 240 X 165	5.4
	120	16,800	140		
T65N3	150	21,000	140	735 X 310 X 165	7.1
	180	25,200	140		

MODEL : TGD18

Voltage	Power Factor	%THDi	Surge Protection (kV)	CCT (K)*	CRI (Ra)**	Ingress Protection	Ambient temperature range (C°)
230	≥ 0.9	≤ 15	10kV / 5kA	3000/4000/5700	≥ 70	IP66	0 ~ +50

Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Product Size (L x W x H) mm.	Net Weight (kg)
TGD18-B	100	14,500	145	368 X 295 X 52	4.8
	150	21,750	145		
	200	28,000	140		
TGD18-D	300	40,500	135	535 X 479 X 52	12.0
	350	45,500	130		
	400	52,000	130		

LED FLOOD LIGHT

MODEL : FL2C

Voltage	Power Factor	%THDi	Surge Protection (kV)	CCT (K)*	CRI (Ra)**	Ingress Protection	Ambient temperature range (C°)
230	≥ 0.9	≤ 15	10kV / 5kA	3000/4000/5700	≥ 70	IP68	-40 ~ +50

Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Product Size (L x W x H) mm.	Net Weight (kg)
FL2C-3	120	13,200	110	430 x 335 x 330	6.0
	150	16,500	110		
	180	19,800	110		
FL2C-7	280	30,800	110	695 x 430 x 210	12.0
	350	38,500	110		
	420	46,200	110		
FL2C-16	640	70,400	110	770 x 750 x 335	36.4
	800	88,000	110		
	960	105,600	110		

MODEL : FL40A

Voltage	Power Factor	%THDi	Surge Protection (kV)	CCT (K)*	CRI (Ra)**	Ingress Protection	Ambient temperature range (C°)
230	≥ 0.9	≤ 15	10kV / 5kA	3000/4000/5700	≥ 70	IP68	-40 ~ +50

Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Product Size (L x W x H) mm.	Net Weight (kg)
FL40A-2	300	42,000	140	335 X 600 X 200	9.6
	500	70,000	140		
FL40A-4	600	84,000	140	750 X 645 X 200	19.3
	900	126,000	140		

MODEL : ECONO

Voltage	Power Factor	%THDi	Surge Protection (kV)	CCT (K)*	CRI (Ra)**	Ingress Protection	Ambient temperature range (C°)
230	≥ 0.9	≤ 15	10kV / 5kA	4000/5700/6500	≥ 70	IP34	0 ~ +50

Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Product Size (Ø x L) mm.	Net Weight (kg)
ECONO	100	12,000	120	Ø345 x 420	3.2
	150	18,000	120		
	200	24,000	120		

MODEL : UFO

Voltage	Power Factor	%THDi	Surge Protection (kV)	CCT (K)*	CRI (Ra)**	Ingress Protection	Ambient temperature range (C°)
230	≥ 0.9	≤ 15	10kV / 5kA	4000/5700/6500	≥ 70	IP65	0 ~ +50

Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Product Size (Ø x L) mm.	Net Weight (kg)
UFO	100	12,000	120	Ø389 x 150	3.2
	150	18,000	120		
	200	24,000	120		

MODEL : TF2H

Voltage	Power Factor	%THDi	Surge Protection (kV)	CCT (K)*	CRI (Ra)**	Ingress Protection	Ambient temperature range (C°)
230	≥ 0.9	≤ 15	10kV / 5kA	4000/5700/6500	≥ 70	IP68	0 ~ +50

Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Product Size (L x W x H) mm.	Net Weight (kg)
TF2H-3	120	14,400	120	270 X 300 X 290	5.2
	150	18,000	120		
	180	21,600	120		
TF2H-4	200	24,000	120	350 X 300 X 290	6.2
	240	28,800	120		

MODEL : TF9

Voltage	Power Factor	%THDi	Surge Protection (kV)	CCT (K)*	CRI (Ra)**	Ingress Protection	Ambient temperature range (C°)
230	≥ 0.9	≤ 15	10kV / 5kA	4000/5700/6500	≥ 70	IP65	0 ~ +50

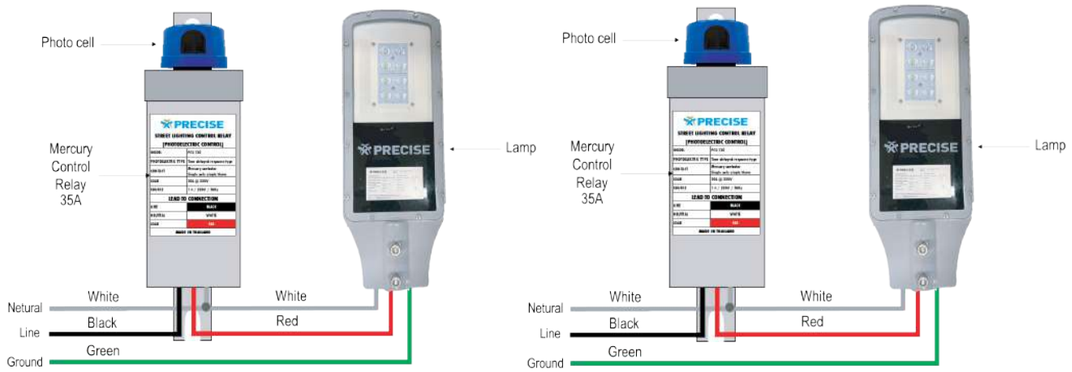
Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Product Size (Ø x L) mm.	Net Weight (kg)
TF9C	100	12,000	120	Ø315 x220	4.6
	120	14,400	120		
	150	18,000	120		

PHOTOELECTRIC CONTROL

MODEL : PCS-130

Model	PCS-130
Electronics type	-
Time delayed response type	-
Input source	1Ø / 220 - 240V~ / 50Hz / 1,000W (resistive load)
Closed circuit approximate	20 lux
Opened circuit	≤ 60 lux
On-off cycle	> 5,000 cycle
Three prong turn-lock	NEMA type)
Surge arrester inside	-
Service condition temp	50°C
Service condition humidity	90%
Control relay detail	• Magnetically activated type • Mercury contact single pole single throw
Cable detail	• Cable450/750V 70°C TIS.11 2.5mm2 1.5m. • Cable 450/750V 70°C TIS.11 16mm2 1.5m.
Fuse & Base detail	• D-cartridge fuse type • Maximum voltage 500V~ • Maximum current 35A • Thread type E33 • Base fuse can be using with fuse 63A with thread type E33

Instruction manual



LED SOLAR STREET LIGHT

CCT (K)*	CRI (Ra)**	Ingress Protection	Beam Angle	Charger Controller	Function	Operating time
4000 , 5700	≥70	IP66	150°	PMW/MPPT Solar Charge with built-in LED Driver	Dimmable with Intelligent mode	12 hrs./days Backup 2 days

Model	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficiency (lm/W)	Battery Type Lifepo4/GEL	Solar panel (W)
SL-435M	30	3,600	120	40Ah / 65Ah	80
	50	6,000	120	80Ah /120Ah	120-150
SL-FFLDS	30	4,200	140	40Ah / 65Ah	80
	50	7,000	140	80Ah /120Ah	120-150

Solar Street Lighting System Specifications

1. Solar street lighting system works 12 hours per night.
2. Batteries can support power for at least 24 hours without charge from solar cell system.
3. Solar street lighting control unit can operate automatically when there is no light and it stop working when it is illuminated.
4. Voltage system 12/24 volts

POWER CAPACITORS

General Description

The main purpose of power capacitor is to solve the power factor problem, voltage control and loss reduction in distribution system.

Outdoor Low Voltage Capacitor Unit: CAP

The container of PRECISE's low voltage capacitors are made of stainless sheet with all joint welded and tested for liquid tightness to ensure that no leakage from both water and dust can destroy the capacitor element inside that suitable for outdoor installation.

Outdoor Medium Voltage Capacitor Unit: CLM

PRECISE's MV capacitors units "CLM" are designed manufactured and tested confirming to IEC 60871-1 and other equivalent standard. These basic units are connected in series and parallel groups to obtain the required power and voltage. The capacitor case is made from stainless steel. Dielectric fluid is environmentally friendly, non PCB with low toxicity, biodegradable.

Capacitor Banks: Pole-Mount Fixed Type Capacitor bank model (PMF-CLM)

Capacitor Banks "PMF-CLM" are available from 150-3,000 kVAR at voltage levels from 11-33 kV systems (other voltage upon request). The banks are completely pre-wired at the factory with a variety of control options and accessories to simplify installation and meet customer control requirements.

OUTDOOR LOW VOLTAGE CAPACITOR

Outdoor Low Voltage Capacitor
Low Voltage Outdoor :: Capacitor type CAP

Dimension

Model	Rated output (kVAR)		Dimension (mm.)		Clamp connector size (sq.mm.)
	1phase	3phase	W	L	
CAP-1	2.5, 5, 7.5	5, 10, 15	80	210	6-25
CAP-2	10, 12.5, 15	20, 25, 30	150	210	6-25

Technical data

Voltage Frequency	Phase	Rated output (kVAR)	Capacitance (µF)	Rated Current (A)	Weight (approx.) (kg.)
230 V 50 Hz	1	2.5	151	10.87	3.0
		5	301	21.74	3.2
		7.5	451	32.61	3.8
		10	602	43.48	5.4
		12.5	753	54.35	6.0
		15	903	65.22	6.6
400 V 50 Hz	3	5	3 x 33.16	7.22	3.2
		10	3 x 66.31	14.43	3.6
		15	3 x 99.47	21.65	4.0
		20	3 x 132.63	28.87	6.0
		25	3 x 165.79	36.08	6.3
		30	3 x 198.94	43.30	6.6
		45	3 x 232.10	64.95	9.6
		50	3 x 331.57	72.17	11.4
		60	3 x 397.89	86.60	11.8
		75	3 x 497.36	108.25	13.6
415 V 50 Hz	3	10	3 x 61.61	13.9	5.4
		15	3 x 92.41	20.9	5.8
		20	3 x 123.21	27.8	6.2
		25	3 x 154.02	36.9	6.4
		30	3 x 184.82	41.8	7.3
		50	3 x 308.04	69.6	8.3
Standard		IEC60831-1 / IEC60831-2			

OUTDOOR MEDIUM VOLTAGE CAPACITOR

Outdoor Medium Voltage Capacitor
Capacitor type CLM

One bushing

Two bushing

Technical data

Rated voltage (kV)	Rated output (kVAR)	Rated Capacitance (µF)	Rated Current (A)	Weight (approx.) (kg.)	Dimension (mm.)					No. of bushing
					W	L	H	Hb	A	
6.35	50	3.95	7.87	15	110	345	220	220	395	2
	100	7.89	15.75	22	135	345	300	220	395	
6.9	400	26.74	57.97	56	175	345	565	270	395	
12.7	100	1.97	7.87	23	138	340	296	270	395	
	200	3.95	15.75	36	135	340	450	270	395	
	400	7.89	31.50	60	175	340	700	270	395	
13.25	200	3.61	15.06	35	135	345	450	270	395	
19	100	0.88	5.26	23.6	138	340	260	370	395	1
Standard		IEC60871-1								

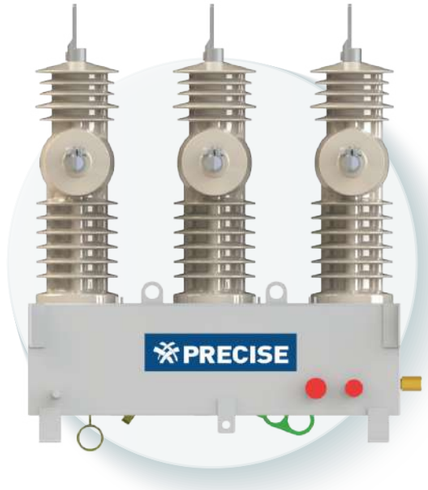
SWITCHING DEVICES

SOLID DIELECTRIC LOAD BREAK SWITCH (SLBS)

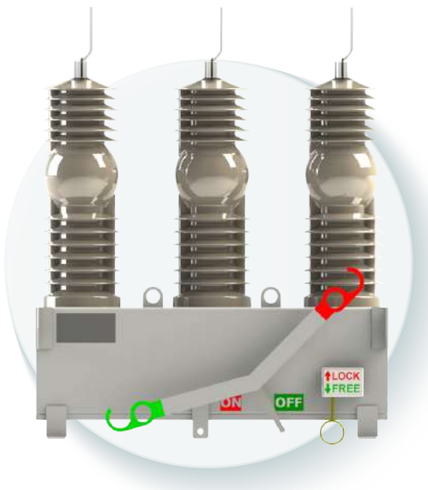
Solid Dielectric Load Break Switch

Engineered for excellence, the PRECISE SLBS-24 is a high-performance 24kV outdoor load break switch designed for modern three-phase AC power distribution networks. By utilizing advanced Vacuum Interrupter technology, we eliminate the need for SF6 gas, offering a sustainable and safer solution for utility providers.

- Eco-Friendly Innovation (SF6 Free): Designed with Solid Dielectric insulation and vacuum arc-exting-uishing technology. No greenhouse gases, no leakage risks.
- Built for Reliability: Perfect for rural power networks and frequency operating locations. The compact, lightweight design allows for easy installation even in rugged environments.
- Maintenance-Free: The vacuum interrupter design ensures a long operational life with minimal to no maintenance required, significantly reducing your operating costs.
- Versatile Operation: Features a robust spring toggle mechanism. Operates seamlessly via manual handle or electrically through a DC motor for remote control capabilities.
- Certified Quality: Fully compliant with IEC 62271-103 and IEC 62271-1 standards. Extensively type-tested and certified by KERI to guarantee maximum reliability and safety.



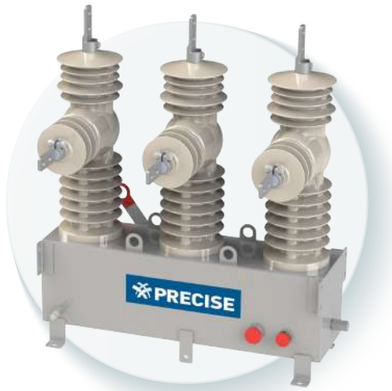
Front View



Back View

SOLID DIELECTRIC LOAD BREAK SWITCH (SLBS)

SLBS-24



SLBS-24

Technical data

Description	Rating		
Model	SLBS-24		
Insulating medium	Vacuum		
Rated voltage (kV)	24		
Rated system voltage (kV)	12	22	24
Number of poles	3		
Rated frequency (Hz)	50/60		
Rated normal Current (A)	630		
Rated symmetrical interrupting current (A)	630		
Rated short–time withstand current, 1 sec (kA r.m.s.)	16		
Rated short–circuit making current (kA peak)	40		
Rated lightning impulse withstand voltage – To earth (kV peak)	125		
Rated power frequency withstand voltage			
- Dry (kV rms), 1 min.	50		
- Wet (kV rms), 10 sec.	50		
Rated mainly active load current (A)	630		
Disconnector type:			
- Mechanical Endurance	M2		
-Electrical Endurance	E3		
Number of operations at rated normal current interruption (Cycle)	400		
Mechanical endurance, in number of operations	5,000		
Arc quenching medium/Type/Material	Vacuum interrupter		
Protection degree of assembled enclosure	IP X8		
Closing/Opening time	< 2 seconds		
Bushing material / Creepage distance	Epoxy resin / 840 mm		
CT ratio (3 CTs)	600:1 A		
CT class	Class 1		
Voltage sensor ratio (6 VSs)	24 kV / sqrt 3 : 2.4 / sqrt 3 V		

SF_6 GAS LOAD BREAK SWITCH (GLBS)

SF_6 Gas Load Break Switch

The PRECISE Load Break Switch (LBS) is designed in full compliance with IEC 62271-103 (2011) and IEC 62271-1 (2017) standards. The product has been extensively type-tested and certified by KERI to ensure maximum reliability. Construction & Durability: The LBS tank is fabricated from high-grade SUS304L stainless steel (3.0 mm thickness), offering superior corrosion resistance suitable for outdoor installations. The tank is robotically welded, rigorously leak-tested, and filled with SF6 gas for effective arc extinguishing. It features an IP67 protection for the LBS tank and IP54 for the control cabinet. Operation Mechanism: This Load Break Switch is capable of on-load switching operations. The contact system utilizes a Puffer-type interrupter (consisting of stationary and moving contacts) housed within the SF6-filled tank. The mechanism employs a Spring Toggle system, allowing for operation either manually via a handle or electrically via a DC motor drive mechanism.

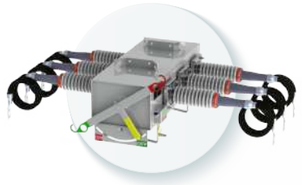
Safety Devices

LBS has two main safety devices

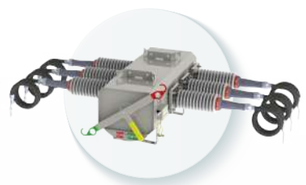
Low-pressure lockout :When the SF_6 gas is below the specified level the LBS will can't operate. Because when SF_6 gas low, capability for arc extinguished will lower. The low-pressure lockout thus helps Prevent damage that might be caused to the user, the device and the quality of the electrical system.

Over-pressure release device :In case of any overpressure condition, a rapture disc (or the Over-pressure release device) will break down and thus release pressure inside the LBS. To prevent an explosion or swelling of the body LBS cause less damage.

SF6 Gas Load Break Switch (GLBS)



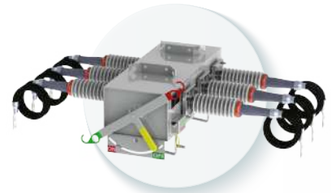
GLBS-24



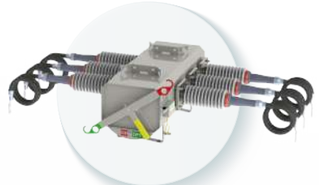
GLBS-36

Technical data

Specification	GLBS-24 Option.1	GLBS-36 Option.1
Standard	IEC62271-103	
Rated voltage. (kV)	24	36
Rated system voltage (kV)	22	33
Rated frequency. (Hz)	50/60	
Rated normal current. (A ,max.)	630	
Rated symmetrical interupt current. (A)	630	
Rated short-time withstand current, 1 sec. (kA r.m.s.)	12.5	16.0
Rated short-time making current. (kA peak)	31.5	40.0
Rated power frequency withstand voltage, 60 sec. (kV r.m.s.)	50	70
Rated impulse withstand voltage. (kV peak)	125	170
Rated mainly active load breaking capacity. (A)	630	
Rated closed - loop breaking current. (A)	630	
Operating time to open	≤ 2	
Operating time to close	≤ 2	
Mechanical endurance,in number of operations	2000	5000
Number of operations at rated normal current interruption	400	
Arc extinghish medium	SF6	
Rated pressure range of SF6 gas pressure gage (PSI)	18	
Protection degree of assembled enclosure	IP 65	
Operation force of handle (N)	≤ 250	
Conductor meterial of main circuit lead	Copper	
Creepage distance of porcelain bushing (mm)	≥ 600	≥ 900
Net weight (kg)	≤ 155	≤ 170
Mechanical part		
Material	304L	
Tank color	RAL7032	
Control part		
Manual operation handle	Yes	
Mechanical indicator	FREE/LOCK, ON/OFF	
Motorized operator	-	
Circle conector for control cable	-	
- Auxiliary contact for switch status	-	
- Auxiliary contact for low-pressure gas lockout status	-	
- Auxiliary contact for low pressure gas alarm status	-	
Current sensors		
Standard	-	
Ratio	-	
Rated Frequency (Hz)	-	
Accuracy	-	
Power rating (burden) (VA)	-	
Voltage sensors		
Type	-	
Voltage calibration board	-	
Ratio	-	
Accessory		
Bird guard	-	
Mounting kit for installation	Yes	



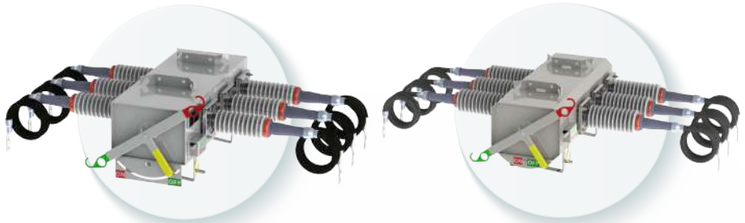
GLBS-24



GLBS-36

GLBS-24 Option.4	GLBS-36 Option.4	GLBS-24 Option.5	GLBS-36 Option.5
IEC62271-103		IEC62271-103	
24	36	24	36
22	33	22	33
50/60		50/60	
630		630	
630		630	
12.5	16.0	12.5	16.0
31.5	40.0	31.5	40.0
50	70	50	70
125	170	125	170
630		630	
630		630	
≤ 2		≤ 2	
≤ 2		≤ 2	
2000	5000	2000	5000
400		400	
SF6		SF6	
18		18	
IP 65		IP 65	
≤ 250		≤ 250	
Copper		Copper	
≥ 600	≥ 900	≥ 600	≥ 900
≤ 155	≤ 170	≤ 155	≤ 170
304L		304L	
RAL7032		RAL7032	
Yes		Yes	
FREE/LOCK, ON/OFF		FREE/LOCK, ON/OFF	
Yes		Yes	
Yes		Yes	
Yes		Yes	
Yes		Yes	
-		-	
-		IEC61869-2	
-		600:1	400:1
-		50	
-		10P20 (±3% at the normal current)	
-		2.5	
-		-	
-		-	
-		-	
-		-	
Yes		Yes	

SF6 Gas Load Break Switch (GLBS)

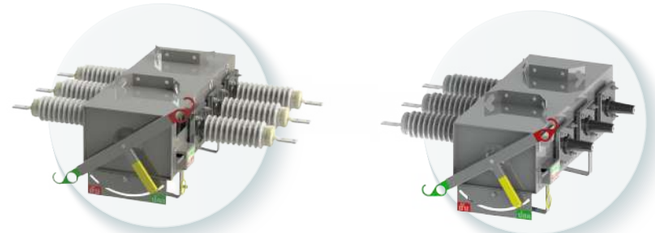


GLBS-24 GLBS-36

Technical data

Specification	GLBS-24 Option.7	GLBS-36 Option.7
Standard	IEC62271-103	IEC62271-103
Rated voltage. (kV)	24	36
Rated system voltage (kV)	22	33
Rated frequency. (Hz)	50/60	
Rated normal current. (A ,max.)	630	
Rated symmetrical interupt current. (A)	630	
Rated short-time withstand current, 1 sec. (kA r.m.s.)	12.5	16.0
Rated short-time making current. (kA peak)	31.5	40.0
Rated power frequency withstand voltage, 60 sec. (kV r.m.s.)	50	70
Rated impulse withstand voltage. (kV peak)	125	170
Rated mainly active load breaking capacity. (A)	630	
Rated closed - loop breaking current. (A)	630	
Operating time to open	≤ 2	
Operating time to close	≤ 2	
Mechanical endurance,in number of operations	2000	5000
Number of operations at rated normal current interruption	400	
Arc extinghish medium	SF6	
Rated pressure range of SF6 gas pressure gage (PSI)	18	
Protection degree of assembled enclosure	IP 65	
Operation force of handle (N)	≤ 250	
Conductor meterial of main circuit lead	Copper	
Creepage distance of porcelain bushing (mm)	≥ 600	≥ 900
Net weight (kg)	≤ 155	≤ 170
Mechanical part		
Material	304L	
Tank color	RAL7032	
Control part		
Manual operation handle	Yes	
Mechanical indicator	FREE/LOCK, ON/OFF	
Motorized operator	Yes	
Circle conector for control cable	Yes	
- Auxiliary contact for switch status	Yes	
- Auxiliary contact for low-pressure gas lockout status	Yes	
- Auxiliary contact for low pressure gas alarm status	-	
Current sensors	IEC61869-2	
Standard		
Ratio	600:1	400:1
Rated Frequency (Hz)	50	
Accuracy	10P20 (±3% at the normal current)	
Power rating (burden) (VA)	2.5	
Voltage sensors		
Type	-	
Voltage calibration board	-	
Ratio	-	
Accessory		
Bird guard	-	
Mounting kit for installation	Yes	

SF6 Gas Load Break Switch (GLBS)



Type I Type II

Technical data

Specification	GLBS-24 Type I	GLBS-24 Type II
Standard	IEC62271-103	
Rated voltage. (kV)	24	
Rated system voltage (kV)	12/24	
Rated frequency. (Hz)	50/60	
Rated normal current. (A ,max.)	630	
Rated symmetrical interupt current. (A)	630	
Rated short-time withstand current, 1 sec. (kA r.m.s.)	> 10	
Rated short-time making current. (kA peak)	> 25	
Rated power frequency withstand voltage, 60 sec. (kV r.m.s.)	50	
Rated impulse withstand voltage. (kV peak)	125	
Rated mainly active load breaking capacity. (A)	630	
Rated closed - loop breaking current. (A)	630	
Operating time to open	≤ 2	
Operating time to close	≤ 2	
Mechanical endurance,in number of operations	2000	
Number of operations at rated normal current interruption	400	
Arc extinghish medium	SF6	
Rated pressure range of SF6 gas pressure gage (PSI)	18	
Protection degree of assembled enclosure	IP 65	
Operation force of handle (N)	≤ 250	
Conductor meterial of main circuit lead	Copper	
Creepage distance of porcelain bushing (mm)	≥ 600	
Net weight (kg)	≤ 155	≤ 120
Mechanical part		
Material	304L	
Tank color	RAL7036	
Control part		
Manual operation handle	Yes	
Mechanical indicator	FREE/LOCK, ปลด/สับ	
Motorized operator	Yes	
Circle conector for control cable	Yes	
- Auxiliary contact for switch status	Yes	
- Auxiliary contact for low-pressure gas lockout status	Yes	
- Auxiliary contact for low pressure gas alarm status	-	
Current sensors		
Standard	IEC61869-2	
Ratio	600:1	
Rated Frequency (Hz)	50	
Accuracy	Class 1.0	
Power rating (burden) (VA)	2.5	
Voltage sensors		
Type	CVD	
Voltage calibration board	Yes	
Ratio	24 kV / sqrt 3 : 2.4 / sqrt 3 V	
Accessory		
Bird guard	-	
Mounting kit for installation	Yes	

Control Box for SF_6 Load Break Switch / Solid Dielectric Load Break Switch

Option 4

LBS-CON3 Option 5

Technical data

Specification		
Support LBS/SLBS model	GLBS-24 Option.4 GLBS-36 Option.4 SLBS-24 (Private)	GLBS-24 Option.5 GLBS-36 Option.5 SLBS-24 (Private)
Rated supply voltage input (VAC)	110	
Frequency supply voltage output (HZ)	50	
Rated supply voltage output (VDC)	24	
Ambient temparature (°C)	Up to 45	
Humidity (%)	Up to 94	
IP class	54	54
Net weight (kg)	80	106
Mechanical part		
Material	Steel sheet	Steel sheet, 304L (Optional)
Dimension cabinet (WxLxH) (mm.)	565 x 370 x 880	704 x 350 x 1080
Tank color	RAL7032	
Key lock	Support pad lock hole	
Number of door	1	1
Space for installation FRTU	-	Yes
Control part		
Circle conector for control cable		
- Auxiliary contact for switch status	Yes	
- Auxiliary contact for low-pressure gas lockout status	Yes	
- Auxiliary contact for low pressure gas alarm status	-	
- Auxiliary contact for free/lock status	Yes	
Battery & Charger		
Battery type	Seal lead acid battery	
Battery capacity (Ah)	17.0	
Charger voltage input/output	100-220 V_{AC} / 27.5 V_{DC}	
Charger current output (A)	2.5	
Status battery & charger		
- Low battery	Yes	Yes
- High battery	Yes	Yes
- Charger over voltage	Yes	Yes
- Battery fail	-	Yes
- Ground battery	Yes	Yes

LBS-CON3 Option 7

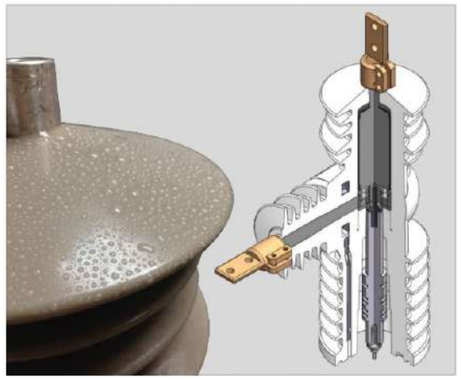
LBS-CON4

Technical data

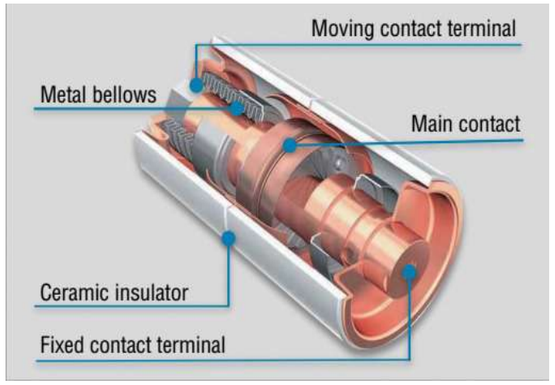
Specification		
Support LBS/SLBS model	GLBS-24 Option.7 GLBS-36 Option.7 SLBS-24 (Private)	GLBS-24 type I GLBS-24 type II SLBS-24
Rated supply voltage input (VAC)	220	240
Frequency supply voltage output (HZ)	50	50
Rated supply voltage output (VDC)	24	
Ambient temparature (°C)	Up to 45	
Humidity (%)	Up to 94	
IP class	54	54
Net weight (kg)	106	84
Mechanical part		
Material	Steel sheet, 304L (Optional)	304L
Dimension cabinet (WxLxH) (mm.)	704 x 350 x 1080	620 x 350 x 1080
Tank color	RAL7032	RAL7036
Key lock	Support pad lock hole	EuroKey 5333
Number of door	1	2
Space for installation FRTU	Yes	Yes
Control part		
Circle conector for control cable		
- Auxiliary contact for switch status	Yes	Yes
- Auxiliary contact for low-pressure gas lockout status	Yes	-
- Auxiliary contact for low pressure gas alarm status	Yes	Yes
- Auxiliary contact for free/lock status	Yes	Yes
Battery & Charger		
Battery type	Seal lead acid battery	Lithium-Ion
Battery capacity (Ah)	17.0	15.0
Charger voltage input/output	100-220 V_{AC} / 27.5 V_{DC}	100-240 V_{AC} / 29.2 V_{DC}
Charger current output (A)	2.5	3
Status battery & charger		
- Low battery	Yes	-
- High battery	Yes	-
- Charger over voltage	Yes	Yes
- Battery fail	Yes	Yes
- Ground battery	Yes	-

Automatic Circuit Recloser (SREC)

Automatic Circuit Recloser designed for protection and control of 24kV three-phase outdoor power distribution systems. Equipped with advanced metering capabilities, it is fully ready for distribution automation (Smart Grid). Engineered in strict accordance with IEC 62271-111 and IEEE C37.60 standards. Eco-Friendly Technology (SF6-Free) Utilizes Vacuum Interrupters for arc extinguishing, eliminating the need for SF6 gas and making it an environmentally sustainable choice. And enhanced Safety by SF6-free design completely eliminates the risk of explosion caused by internal gas pressure buildup, ensuring maximum safety for personnel and the public. Cost-Effective Operation by Compact and lightweight for easy installation. Its robust design significantly reduces maintenance requirements and costs compared to traditional gas-insulated recloser.



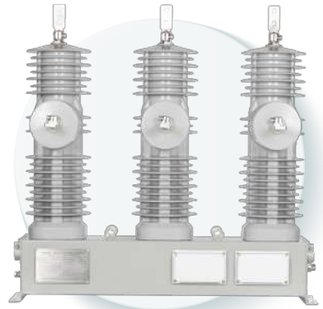
Hydrophobic Cycloaliphatic Epoxy Resin



Vacuum Interrupter

- Type Tested and Certified by KERI (Korea Electrotechnology Research Institute), South Korea
- Fully Automated Operation – Minimizing Power Outages
- Temporary Fault Handling – Prevents Unnecessary Load Disconnection
- SCADA & IoT Compatible – Real-time Remote Monitoring & Control
- Durable and Weather-Resistant – Suitable for Harsh Environments
- Eco-Friendly Design – Free from Oil and SF_6 Gas

With cutting-edge technology and internationally certified performance, our Recloser enhances grid stability, ensures safety, and delivers cost-effective operation.



SREC-24

Specification	
Standard	IEEE C37.60
Rated voltage. (kV)	27
Rated system voltage (kV)	22/24
Rated frequency. (Hz)	50/60
Rated normal current. (A ,max.)	600/800
Rated symmetrical interupt current. (A)	600/800
Rated short-time withstand current, 1 sec. (kA r.m.s.)	16.0
Rated short-time making current. (kA peak)	40.0
Rated power frequency withstand voltage, 60 sec. (kV r.m.s.)	50
Rated impulse withstand voltage. (kV peak)	150
Mechanical endurance,in number of operations	10000
Arc extinghish medium	Vacuum
Protection degree of assembled enclosure	IP 65
Conductor meterial of main circuit lead	Copper
Creepage distance of porcelain bushing (mm)	840
Net weight (kg)	≤ 145
Mechanical part	
Material	304L
Tank color	RAL7032
Control part	
Manual operation handle	Yes
Magnetic actuator	Yes
Circle conector for control cable	Yes
- Auxiliary contact for switch status	Yes
Current sensors	
Standard	IEC61869-2
Ratio	1000:1
Rated Frequency (Hz)	50
Accuracy	5P20
Power rating (burden) (VA)	1.2
Voltage sensors	
Type	Capacitive Voltage Divider
Voltage calibration board	Yes
Ratio	24 kV / sqrt 3 : 4 V (Adjustable)
Accessory	
Bird guard	Yes
Mounting kit for installation	Yes

AUTOMATIC CIRCUIT RECLOSER (SREC)

Control Box for Automatic Circuit Recloser

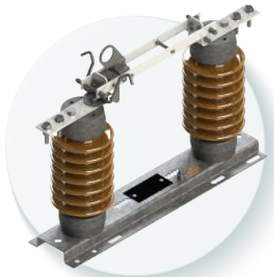
FTU-R200 Recloser control pannel

FTU-R200 Controller

Technical data

Category	Specification
Altitude	< 2,000m
Wind Speed	< 40m/s
Ambient Temperature	-25 ~ +70°C
Storage Temperature	-40 ~ +85°C
Humidity	< 95%RH
Enclosure Protection	IP54
Power Supply Input	DC 24V (20~29V), Max. 15W
Current Measurement	RMS(A) & Phase Angle, Ia, Ib, Ic, In, Accuracy ±1% (2~600A), ±3% (600~12,000A)
Voltage Measurement	RMS(kV) & Phase Angle, Va, Vb, Vc, Accuracy ±1% or ±0.1kV
Power Measurement	Active, Reactive, Apparent Power, Accuracy ±2%
Communication	RS232C, RS232/RS485, TCP/IP
SCADA Protocol	DNP3, IEC60870-5-101, IEC60870-5-104, Modbus RTU/TCP
Protection features	Directional Overcurrent Protection, Inverse Type Overcurrent (OC, GOC, NOC), Definite Time Overcurrent, Sensitive Earth Fault (SEF) Protection, Broken Conduction Protection (I2/I1), Hot Line Fault Protection, Auto-Reclosing

DISCONNECTING SWITCH



Top View

Medium Voltage Disconnecting Switch type SLOC/D

General Description

SLOC/D isolators are single-pole, vertical-break, hookstick operated disconnecting switches. These Isolators are suitable for outdoor installation, in all climates, and are capable of withstanding considerable stresses since they have been design for working in the worst operating conditions, assuring the greatest stability and reliability. SLOC/D isolators can be manufacture according to the most important international standards (CEI, IEC, BS, ANSI, etc.) in order to meet the most different requirements.

Operation

SLOC/D isolators are suitable for mounting in both vertical and horizontal under hung position. By pulling down the special ring with a hookstick, the moving arm is released and, with a further pull, the isolator opens; when open, gravity keeps the arm perpendicular to the base, against a blade stop.

To close the isolator, the arm has to be raised by means of the hookstick; at the end of the operation, the blade automatically hooks to the fixed contact, thus preventing accidental openings due to vibrations or heavy short-circuit faults.

Technical data

Description	SLOC/D				
	27-630	27-1250	127-2000	38-360	38-1250
System voltage (kV)	22			33	
Rated voltage (kVpeak)	27			38	
Rated insulation level, to earth and between pole;					
- Rated impulse withstand voltage (kVpeak)	150	150	150	200	200
- Rated 1-min power frequency withstand voltage, dry (kVrms)	70	70	70	95	95
- Rated 10-sec power frequency withstand voltage, wet (kVrms)	60	60	60	80	80
Rated frequency (Hz)	50/60				
Rated normal (continuous) current (Arms)	630	1,250	2,000	630	1,250
Rated short-time withstand current (kArms)	25	40	44	25	40
Rated duration of short circuit (s)	1				
Rated peak withstand current (kA)	67.5	100	120	67.5	100

High Voltage Disconnecting switch type CBD (Centre-break) phase over phase

General Description

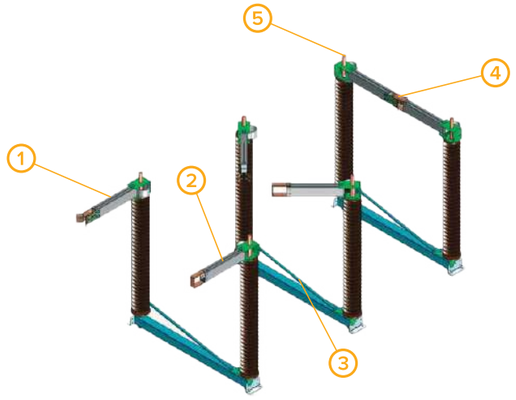
The CBD centre break disconnector is formed by three poles, operated simultaneously either by a single operating mechanism and mechanical linkages between the poles or by one mechanism for each pole. Its versatility and weather ability are considered as a reference: the CBD has been installed in virtually any possible layout throughout the world and under the harshest environmental conditions: from –50°C to +50°C, in icy or desert countries and even in the most seismic regions of the planet.

Operating Principle

The base frame supports two rotating insulators which support and operate the arm.

The live part is very simple in its design and motion. From the open position, the arms (1) and (2) rotate together, synchronized by their linkage bar (3) to join in the middle of the pole, and to close the main contact (4)

The HV terminals (5) are as per the next page future. Customized terminals are also available upon request.



Technical data

Description	CBD 123-2000
Rated voltage, Ur (kV)	123
Rated power frequency withstand voltage	
- To ground, Ud(kV)	230
- Across distance, Ud(kV)	265
Rated lightning impulse withstand voltage	
- To ground, Ud(kV)	550
- Across distance, Ud(kV)	550
Rated normal current, Ir (A)	2,000
Rated short-time withstand current, Ik (kA)	40/3 sec
Rated peak withstand current, Ip (kA)	100
Standard	IEC62271-102 / IEC62271-1

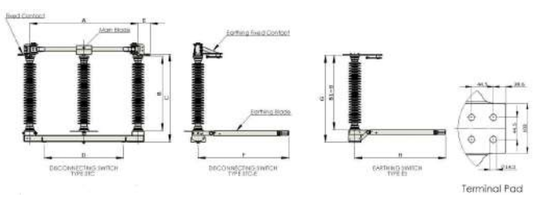
Double side break disconnecting switch

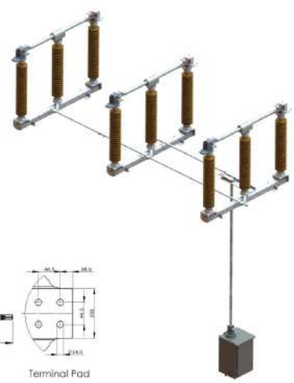
The STC double break disconnector is formed by three poles, operated simultaneously either by a single operating mechanism and mechanical linkages between the poles or by one mechanism for each pole. The main characteristics of the STC disconnector are a reduced phase to phase distance, and a very high capability to withstand terminal loads. At the design stage of the bay, the first. Feature allows space to be saved and the second one, due to insulators directly bolted on the base frame helps to avoid additional post insulators. The insulating columns used for the STC can comply with either IEC and ANSI standard. Special heights and creepage distances are also available on request.

Type of Disconnecting Switch

115 kV Disconnecting Switch without Earthing Switch Type: STC 123-2000 CD101
115 kV Disconnecting switch without Earthing switch, have bus transfer switching device Type: STC 123-2000 CD101
115 kV Disconnecting Switch with Earthing Switch Type: STC-E 123-2000 CD201
115 kV Disconnecting switch with Earthing switch, mounted on take-off structure Type: STC-E 123-2000 CD201
115 kV Earthing Switch Type: ES 123-40 CM102

COELME
COSTRUZIONI ELETTROMECCANICHE - SPA



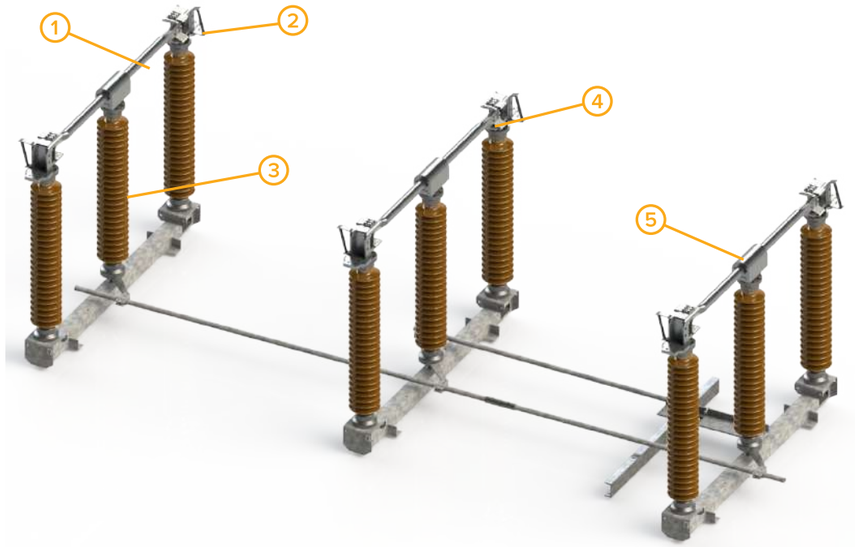


Dimension (Millimeter)

A	1,780
B	1,220
C	1,435
D	1,300
E	200
F	1,500
G	1,466
H	1,500

Operating Principle

The base frame supports two insulators and a rotating insulating rod (drive insulator), which supports and operates the arm. From the open position, the arm (1) rotates to enter the fixed contacts (2) at the ends of the disconnector. As the blade comes in touch the fixed contacts, the insulating rod (3) keep on turning, inducing a rotation of the arm (4) around its longitudinal axis, by the mean of the central gearbox (5). In the final closed position the blade is locked in the contact, preventing any accidental opening.



Note : Manufacturing under the brand
COELME
COSTRUZIONI ELETTROMECCANICHE - SPA Italy

Technical data

Description	STC
System voltage (kV)	115
Rated voltage, Ur (kV)	123
Rated power frequency withstand voltage	
- Between live parts and ground, Ud(kV)	230
- Between contact in open position, Ud(kV)	265
Rated lightning impulse withstand voltage	
- Between live parts and ground, Up (kV)	550
- Between contact in open position, Up (kV)	630
Rated normal current, Ir (A)	2,000
Rated short-time withstand current, Ik (kA)	40
Rated peak withstand current, Ip (kA)	100
Standard	IEC62271-102 / IEC60694

PRECISE

SURGE ARRESTERS

LOW VOLTAGE SURGE ARRESTER

General Description

Precise has also been continually developing LV-MV Surge Arresters of Polymer types since the early 1990's. The production line consists of four MV Arrester series and two LV Arrester series under PRECISE brand. There are LAZ-Pxx, PAZ-Pxx-1, SAZxx and PAZ-Pxx-3 For MV Arresters and LAS-002, LOZA for LV Arresters.

PRECISE Surge Arresters act as body-guards to protect their subjects against the disturbances due to over voltage. For the fact that most of electrical equipment, such as transformers, motors, switchgears, generators, etc. will need the protection from Surge Arresters.

Low Voltage Surge Arrester MOV Gapless Surge Arrester type LAS-002, LOZA

LAS-002

LOZA

Technical data

Description	LAS-002	LOZA
Rated voltage (Ur) (Vrms)	480	480
Maximum continuous operating voltage (Uc) (Vrms)	480	480
Rated frequency (Hz)	50	50
Housing material of arrester	ABS	Silicone rubber
Nominal discharge current (In), 8/20 us wave shape (kApeak)	5	5
Maximum discharge current (Imax), 8/20 us wave shape (kApeak)	10	10
Test classification	Class II	Class II
Measured limiting voltage (kVpeak)	2	2
Short current withstand capability test (Ip) (kArms)	10	10
Dielectric withstand test, 1 min (kVrms)	3.3	3.3
Weight (approx.) (kg.)	0.25	0.25
Standard	IEC61643-1	IEC61643-1

MEDIUM VOLTAGE SURGE ARRESTER

Medium Voltage Surge Arrester MOV Gapless and Silicone Housed Surge Arrester for Distribution System

Installation in Distribution

Installation at Transformer

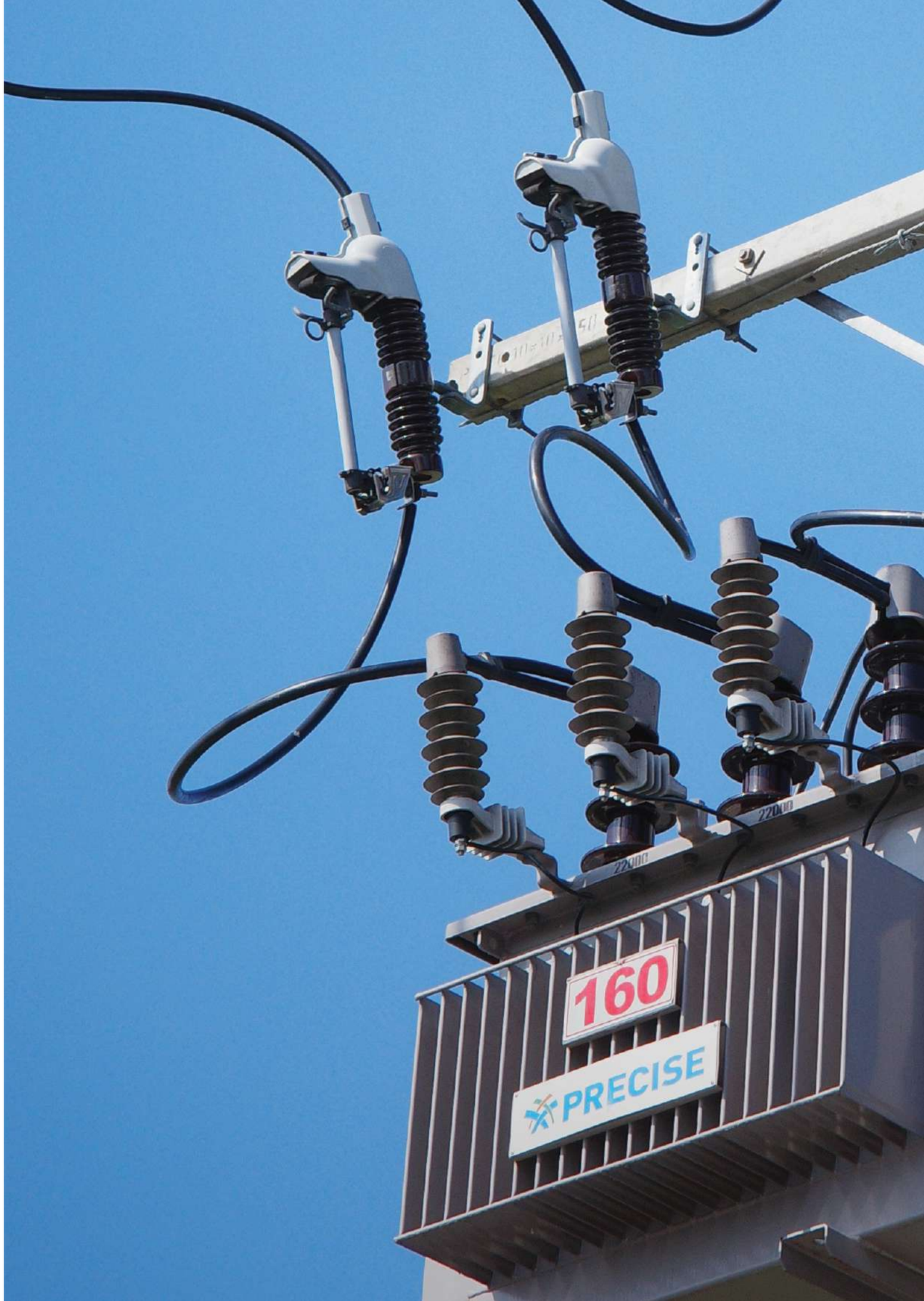
Technical data

Description	LAZ-P	PAZ-P-1	SA2XX
Rated voltage (Ur) (kVrms)	3 - 36		
Maximum continuous operating voltage Ucor MCOV (kVrms)	0.81 Ur		
Rated frequency (Hz)	48 -62		
Housing material of arrester	Silicone rubber		
Nominal discharge current (kApeak)	5	10	
Line discharge class	Distribution	1	2
Pollution level of creepage distance (Standard IEC60815-3)	III or IV		
Short Circuit current (kArms)	16	20	
Standard	IEC60099-4		

Medium Voltage Surge Arrester MOV Gapless and Silicone Housed Surge Arrester for Substation

Technical data

Description	PAZ-P-3
Rated voltage (Ur) (kVrms)	3 - 36
Maximum continuous operating voltage Uc or MCOV (kVrms)	0.85 Ur
Rated frequency (Hz)	48 -62
Housing material of arrester	Silicone rubber
Nominal discharge current (kApeak)	10
Line discharge class	3
Pollution level of creepage distance (Standard IEC60815-3)	III or IV
Short Circuit current (kArms)	20
Standard	IEC60099-4



HIGH VOLTAGE DISTRIBUTION FUSE CUTOUTS PORCELAIN TYPE

High Voltage Distribution Fuse Cutouts Porcelain Type

Features

Fuses are considered another essential piece of equipment in electrical systems to help prevent damage to electrical cables and other equipment in distribution systems such as transformers, capacitors and other equipment installed in systems due to overload or short-circuiting. A variety of high and low voltage types are available for selection, depending on the right choice for the type of work done.

Fuses cutout are quality products from Precise. They are high voltage fuses designed and manufactured to meet international IEEE C37.42 standards, Provincial Electricity Authority standards and Metropolitan Electricity Authority standards. Fuse cutouts are installed in high voltage electricity distribution systems with maximum voltage at 38 kV.

Catalog no. 2710832

Catalog no. 2711232

Catalog no. 2711232PG

Catalog no. 3810865N

Technical data

kV			Ampere, RMS		Min. creepage	Type	Catalog number
Nom.	Max	BIL	Cont.	Interrupting	distance (mm)		
25	27	125	100	8,000	320	PGP	2710832
25	27	125	100	12,000	400	PGP1	2711232
25	27	125	100	12,000	400	PGP1	2711232PG
33	38	150	100	8,000	650	PGC1	3810865N

HIGH VOLTAGE DISTRIBUTION FUSE CUTOUT POLYMERIC TYPE

27kV 100A 12kA asym. Type FCP27

Features

- Maximum voltage design 27kV
- Rated continuous current 100A
- Drop-out open fuse cutout design
- Non-expendable cap
- Single-vent expulsion fuse holder
- Cutout body constructed from single-core, bird-proof polymer
- Designed for off-load operation, featuring a hook for on-load switching via a portable loadbreak tool (Loadbuster)
- Provides overcurrent and fault protection for distribution lines and equipment, including distribution transformers, current transformers, and capacitor banks

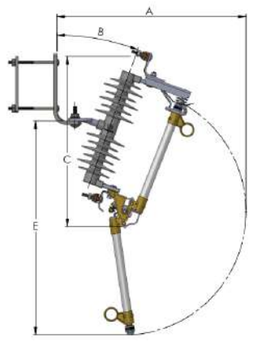
Dimension

A	B	C	D	E
576	201	295	350	637

All dimensions are in millimeters

Performance characteristics

Applied standard	IEE C37.42
Catalog number	2711254
Nominal system voltage kV-rms	22
Maximum voltage design kV-rms	27
Dry withstand voltage kV-rms	42
Wet withstand voltage kV-rms	36
BIL 1.2x50us kV-peak	125
Continuous current A-rms	100
Interrupting current asymmetrical / symmetrical A-rms	12000/8000
Frequency Hz	50
Ambient air temperature	Up to 40 °C
Altitude	Up to 1000 m.
Vertical insulator angle from center line of cutout body	15-20 degree
Approximate weight with NEMA bracket kg.	7
Fuse holder expulsion	Yes
Non-Expendable cap	Yes



Note : The manufacturer reserves the right to change technical data or design without prior notice.

COMPOSITE INSULATOR SUPPORTER FOR DROP FUSE CUTOUT

Composite Insulator Supporter for Drop Fuse Cutout

Features

The composite insulator supporter is composed of the following primary components:

- Fiberglass Rod: Ensures exceptionally high tensile strength.
- Metal Fittings: Crimped directly onto the fiberglass core for a highly secure attachment.
- Silicone Rubber Housing: Provides excellent dielectric performance and outstanding hydrophobic properties.

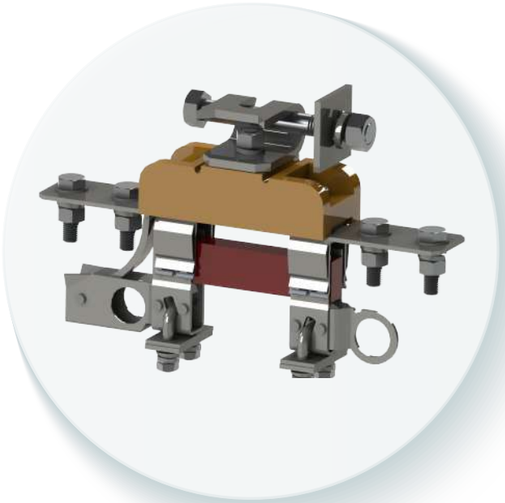
General Overview

Composite insulator supporters for drop-out fuse cutouts are design-tested and type-tested in strict compliance with the IEC 61952-2002 standard. They also undergo rigorous testing for resistance to chemical attacks as per IEC TR 62039. These composite insulator supporters feature the following characteristics:

The composite insulator supporter is utilized to increase the clearance distance between the drop-out fuse cutout and the crossarm. This added distance effectively prevents flashovers and animal-induced faults. It is highly suitable for heavily polluted environments, such as industrial zones, coastal regions, and areas with high contamination levels. For optimal protection, this composite insulator supporter should be used in conjunction with an animal barrier.

Characteristics	
Power frequency test (wet&dry), minimum	30 kVr.m.s.
Lightning impulse withstand voltage test, Positive and negative, minimum	95 kVpeak
Specified cantilever load, minimum	9 kN
Weight (Include on mental parts and bracket), Maximum	8 kg.

LOW TENSION FUSE SWITCHES



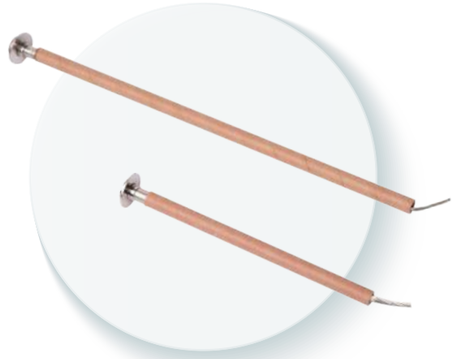
Features

Precise's low tension fuse switches have been designed and manufactured to meet IEC60947-3 standards and Provincial Electricity Authority standards. They are perfect for the low voltage installation and use of electrical transformers. They are used in combination with low tension fuse links or bolt and blade type HRC with currents not exceeding 400 amps.

Technical data

Volt (V)	Ampere (A)	IC (kA)	BIL (kV)	Catalog number
500	400	80	12	OFS-4A5

HIGH VOLTAGE DISTRIBUTION FUSE LINKS



Features

Fuse links are quality products from Precise. They are high voltage fuses designed and manufactured to meet IEEE C37.42 international standards, Provincial Electricity Authority standards and Metropolitan Electricity Authority standards. Fuse links are installed in high voltage electricity distribution systems with maximum voltage at 38 kV. They help prevent damage to electrical cables and other equipment in distribution systems such as transformers, capacitors and other equipment installed in systems.

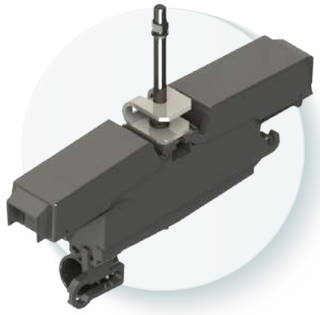
Styles

Style	Overall length (mm)	Speed	Rating ampere	Rating kV
Universal removable button fuse-link	665	K	1A through 100A	27
	765		1A through 100A	38 637

Technical data

27 kV		38 kV	
Ampere	Catalog number	Ampere	Catalog number
1	K00127	1	K00138
2	K00227	2	K00238
3	K00327	3	K00338
6	K00627	6	K00638
8	K00827	8	K00838
10	K01027	10	K01038
12	K01227	12	K01238
15	K01527	15	K01538
20	K02027	20	K02038
25	K02527	25	K02538
30	K03027	30	K03038
40	K04027	40	K04038
50	K05027	50	K05038
65	K06527	65	K06538
80	K08027	80	K08038
100	K10027	100	K10038

Low-voltage Fuse-Switch Disconnector (FSD) (Model : EOFS4A5)



Introduction

The FSD is a single-pole, single-throw (SPST) switch designed for installation in a horizontal underhung position. It features a modular design where individual components—such as the upper housing, lower housing, and terminal covers—can be removed separately. Furthermore, each pole of the FSD can be independently installed on or detached from the "L" mounting bracket, ensuring ease of maintenance.

Advantages

- Durable Housing: The FSD housing is constructed from fiber-reinforced polyamide plastic, providing excellent electrical insulation, weather resistance, and flame retardancy.
- Enhanced Safety: There are absolutely no electrically conductive parts on the outer surface of the housing.
- Optimal Performance: The conductor terminals and fuse contacts are precisely designed and proportioned to continuously carry their rated current without exceeding the maximum allowable temperature rise specified in relevant standards.

Technical data

Description	Characteristics
Standard	IEC 60947-3:2020
Rated operational voltage (Ue)	500 V
Rated frequency	50 Hz
Rated operational current (Ie)	400 A
Rated conditional short-circuit current	80 kA r.m.s.
Rated impulse withstand voltage (Uimp)	12kV , peak
Rated making and breaking capacity	1,200 A
Rated insulation voltage (Ui)	1,000 V
Minimum creepage distances	Pollution degree 3
Degree of protection	IP 23
Utilization category	AC - 22B

LOW-VOLTAGE H.R.C.FUSES

Introduction

Low-voltage H.R.C. fuses effectively limit high prospective short-circuit currents to safe cut-off values. By leveraging the low operating energy and cut-off current characteristics detailed in this brochure, cables and equipment can be optimally sized without the need for over-dimensioning. For instance, under low short-circuit conditions, the low peak let-through energy protects overload relays from thermal damage. Furthermore, during a severe short circuit, the extremely fast-acting fuse link prevents contactor contacts from welding and minimizes electro-dynamic forces within the lines.

Advantages

- High-quality Construction: Premium build quality ensures reliable performance.
- Reduced Equipment Stress: Low let-through current significantly minimizes thermal and mechanical stress on downstream equipment during a short circuit.
- High Energy Efficiency: Low power loss results in optimal energy efficiency and minimal heat generation.
- Reliable Protection: Offers safe and reliable breaking capacity, ranging from minor overloads to maximum short-circuit currents.
- Optimal Sizing: Finely graded selectivity allows for the optimal use and sizing of cable cross-sections.
- High Durability: Features excellent resistance to aging.
- Temperature Stability: Maintains constant operational characteristics even under varying temperature conditions.
- Clear Identification: A color band on the right side of the fuse body clearly indicates the rated operational current.

Power dissipation loss

DIN Size	Max. power dissipation
0	16W
1	23W
2	34W

Items	Description
Standard	IEC60269-2,TIS2109
Dimensions	IEC60269-2
Type	Blade contacts
Utilization Category	gG
Rated voltage	AC 500V 50Hz
Rated current range	32 - 400A
Rated breaking capacity	AC 120kA
DIN size	0, 1 & 2

Breaking capacity

These fuses are distinguished by a high rated breaking capacity of at least 120 kA, which is achieved through:

- Advanced fuse element design and manufacturing processes
- Precise positioning of the fuse element within the fuse body
- High chemical purity, optimized grain size, and proper density of the quartz sand
- Exceptional resistance of the ceramic fuse body to pressure and temperature fluctuations

Current limitation

In addition to a reliable rated breaking capacity, the let-through current of fuse links significantly impacts the overall cost-effectiveness of an installation. During a short circuit, the fault current flows through upstream fuses until the circuit is safely interrupted. While this short-circuit current is naturally limited by the network impedance, the active current limitation provided by the fuse is crucial for protecting the system.

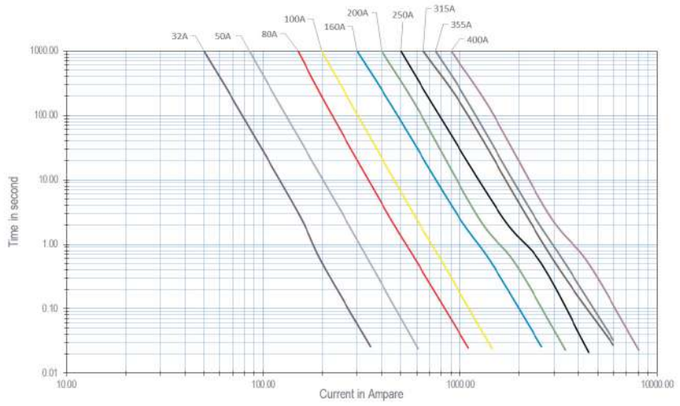
Selection & Ordering Data

Size	Rating (A)	Order No.	Color band	Weight per unit (kg)
0	32	BLG-0-032	Purple	0.22
	50	BLG-0-050	Grey	

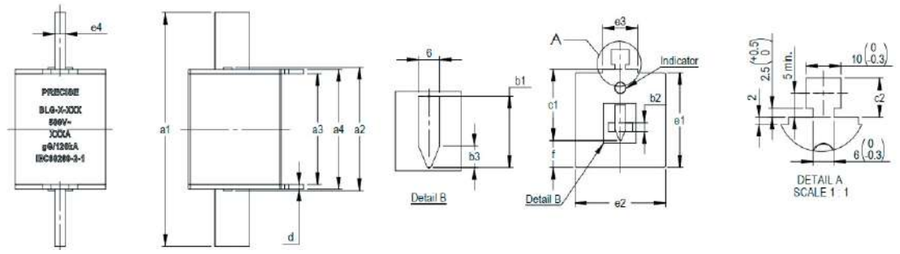
Size	Rating (A)	Order No.	Color band	Weight per unit (kg)
1	80	BLG-1-080	Red	0.38
	100	BLG-1-100	Yellow	
	160	BLG-1-160	Blue	
	200	BLG-1-200	Green	
	250	BLG-1-250	Black	

Size	Rating (A)	Order No.	Color band	Weight per unit (kg)
2	315	BLG-2-315	Brown	0.56
	355	BLG-2-355	N/A	
	400	BLG-2-400	Pink	

Time-current characteristics

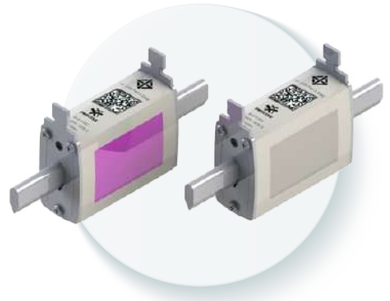


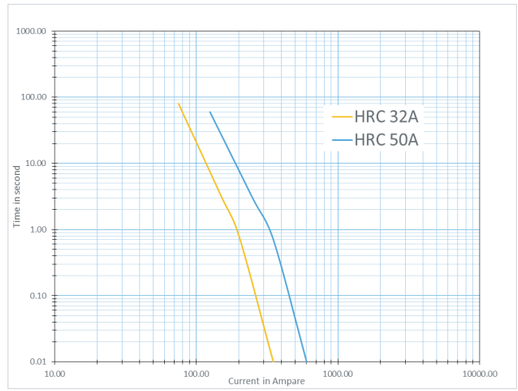
Dimensions



Model	a1	a2	a3	a4	b1	b2	b3	c1	c2	d	e1	e2	e3	e4	f
BLG-0-032	125 (±2.5)	68 (-8)	62 (+3/-1.5)	68 (+1.5/-3)	15 min	4.5 min	5 min	35 (±0.8)	11 (-2)	2 (+1.5/-0.5)	48 max	40 max	20 (±5)	6 (±0.2)	15 max
BLG-0-050	125 (±2.5)	68 (-8)	62 (+3/-1.5)	68 (+1.5/-3)	15 min	4.5 min	5 min	35 (±0.8)	11 (-2)	2 (+1.5/-0.5)	48 max	40 max	20 (±5)	6 (±0.2)	15 max
BLG-0-080	135 (±2.5)	75 (-10)	62 (±2.5)	68 (±2.5)	20 min	5 min	6 min	40 (±0.8)	11 (-2)	2 (+1.5/-0.5)	53 max	52 max	20 (+5/-2)	6 (±0.2)	15 max
BLG-0-100	135 (±2.5)	75 (-10)	62 (±2.5)	68 (±2.5)	20 min	5 min	6 min	40 (±0.8)	11 (-2)	2 (+1.5/-0.5)	53 max	52 max	20 (+5/-2)	6 (±0.2)	15 max
BLG-0-160	135 (±2.5)	75 (-10)	62 (±2.5)	68 (±2.5)	20 min	5 min	6 min	40 (±0.8)	11 (-2)	2 (+1.5/-0.5)	53 max	52 max	20 (+5/-2)	6 (±0.2)	15 max
BLG-0-200	135 (±2.5)	75 (-10)	62 (±2.5)	68 (±2.5)	20 min	5 min	6 min	40 (±0.8)	11 (-2)	2 (+1.5/-0.5)	53 max	52 max	20 (+5/-2)	6 (±0.2)	15 max
BLG-0-250	135 (±2.5)	75 (-10)	62 (±2.5)	68 (±2.5)	20 min	5 min	6 min	40 (±0.8)	11 (-2)	2 (+1.5/-0.5)	53 max	52 max	20 (+5/-2)	6 (±0.2)	15 max
BLG-0-315	150 (±2.5)	75 (-10)	62 (±2.5)	68 (±2.5)	25 min	8 min	6 min	48 (±0.8)	11 (-2)	2 (+1.5/-0.5)	61 max	60 max	20 (+5/-2)	6 (±0.2)	15 max
BLG-0-355	150 (±2.5)	75 (-10)	62 (±2.5)	68 (±2.5)	25 min	8 min	6 min	48 (±0.8)	11 (-2)	2 (+1.5/-0.5)	61 max	60 max	20 (+5/-2)	6 (±0.2)	15 max
BLG-0-400	150 (±2.5)	75 (-10)	62 (±2.5)	68 (±2.5)	25 min	8 min	6 min	48 (±0.8)	11 (-2)	2 (+1.5/-0.5)	61 max	60 max	20 (+5/-2)	6 (±0.2)	15 max

H.R.C. FUSE 32 - 50A SIZE 0





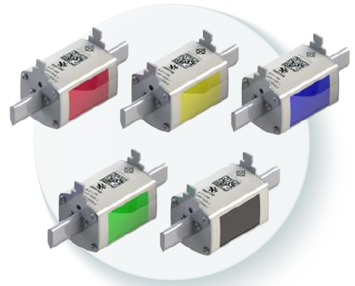
Items	Description
Standard	IEC60269-2,TIS2109
Dimensions	IEC60269-2
Type	Blade contacts
Utilization Category	gG
Rated voltage	AC 500V 50Hz
Rated current range	32 - 50A
Rated breaking capacity	AC 120kA
DIN size	0

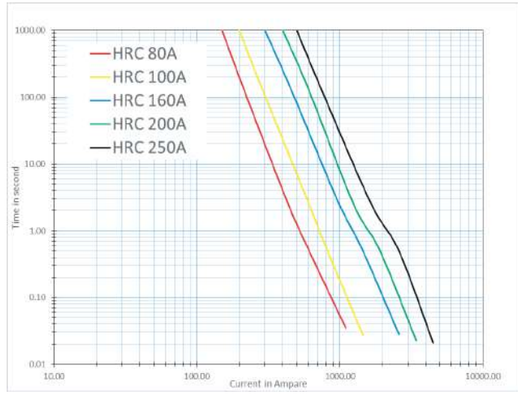
TIS. 2109 Part 2-2559

Made in Thailand

Rated current, In	Color
32 A	Purple
50 A	Grey

H.R.C. FUSE 80 - 250A SIZE 1





Items	Description
Standard	IEC60269-2,TIS2109
Dimensions	IEC60269-2
Type	Blade contacts
Utilization Category	gG
Rated voltage	AC 500V 50Hz
Rated current range	80 - 250A
Rated breaking capacity	AC 120kA
DIN size	1

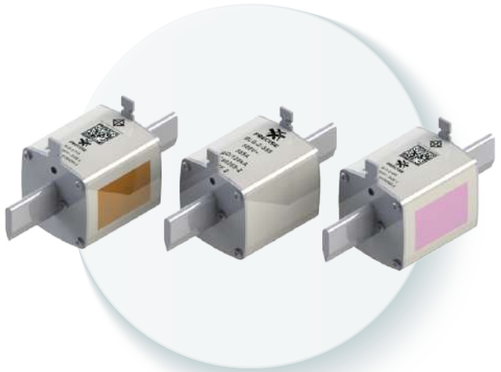
TIS. 2109 Part 2-2559

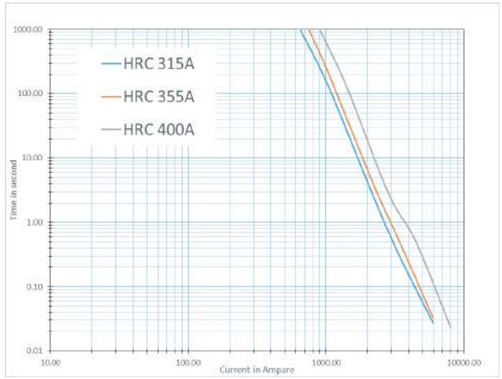
Made in Thailand

Rated current, In	Color
80 A	Red
100 A	Yellow
160 A	Blue
200 A	Green
250 A	Black

LOW-VOLTAGE H.R.C. FUSES

H.R.C. FUSE 315 - 400A SIZE 2



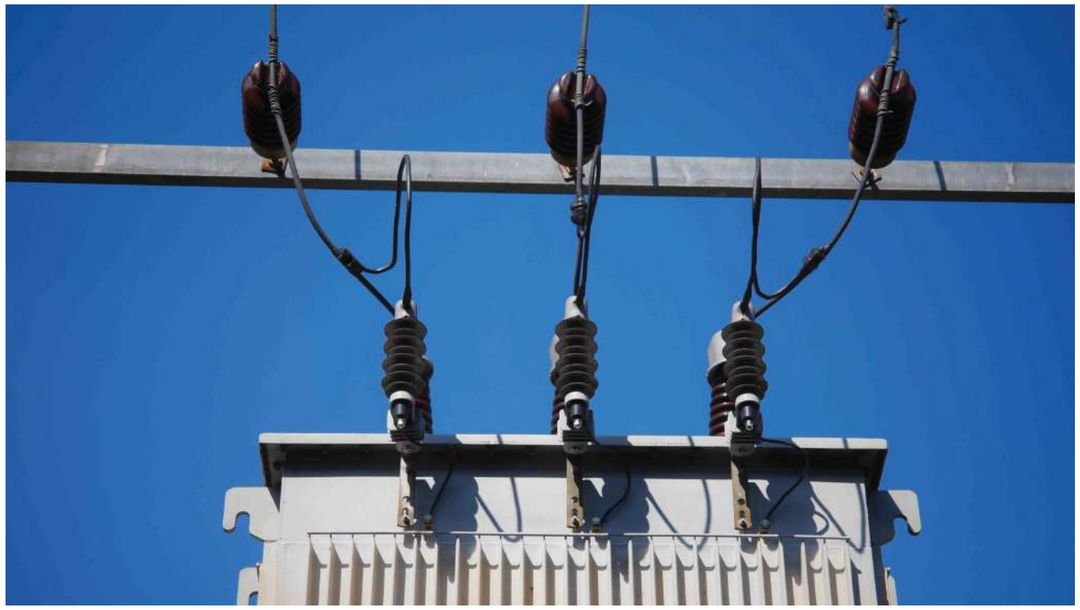


TIS. 2109 Part 2-2559

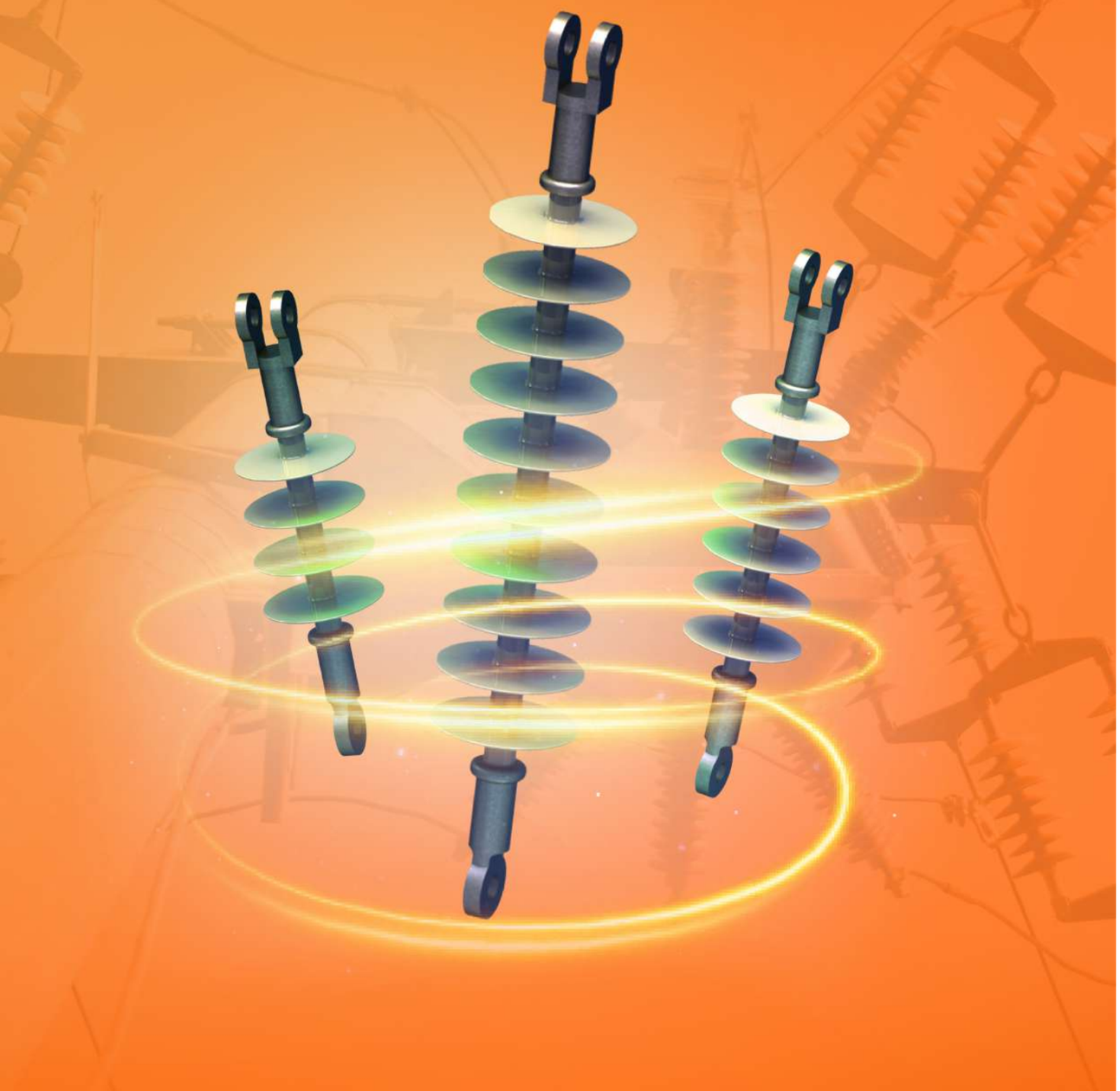
Made in Thailand

Items	Description
Standard	IEC60269-2,TIS2109
Dimensions	IEC60269-2
Type	Blade contacts
Utilization Category	gG
Rated voltage	AC 500V 50Hz
Rated current range	315 - 400A
Rated breaking capacity	AC 120kA
DIN size	2

Rated current, In	Color
315 A	Brown
355 A	N/A
400 A	Pink

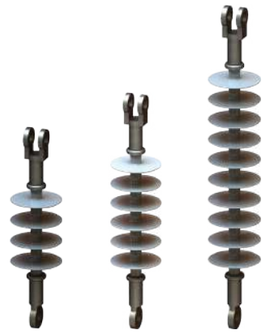


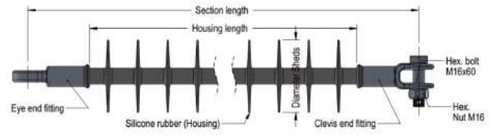
SUSPENSION INSULATOR



SILICONE HOUSING SUSPENSION INSULATORS

Silicone Housing Suspension Insulators
For 15 kV system up to 36 kV system





General Description

The PRECISE's Suspension Insulator type PS-Rxx1-CE with silicone housing has been designed by uniform shed type for heavily contamination areas and developed for medium voltage distribution system, between 15 kV system to 36 kV system. There are three types for PRECISE's Suspension insulator;

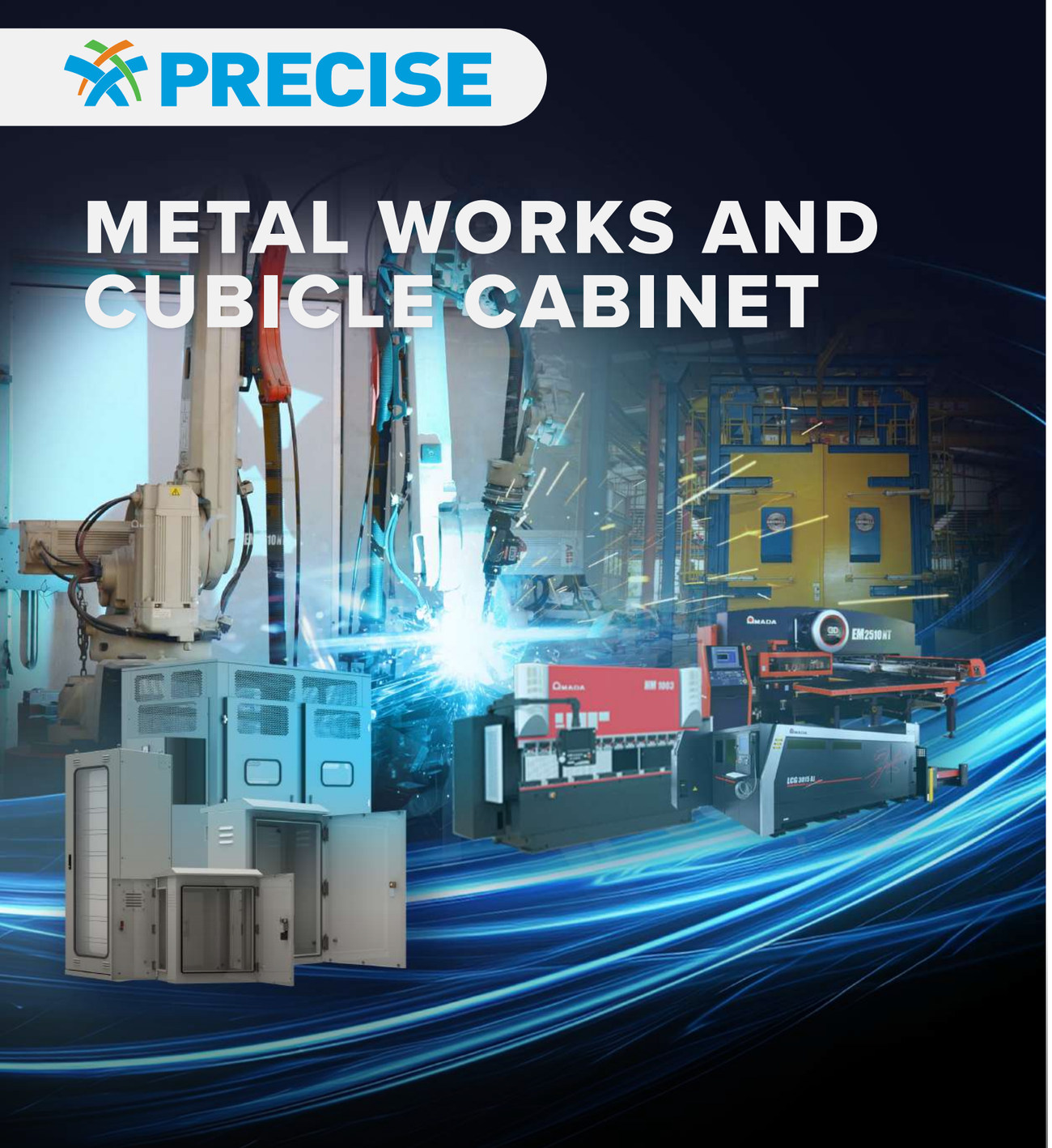
-Type PS-R041-CE for 15 kV system
-Type PS-P061-CE for 24 kV system
-Type PS-P101-CE for 36 kV system

Technical data

Description	PS-R041-CE	PS-R061-CE	PS-R101-CE
Nominal voltage (kVrms)	15	24	36
Rated frequency (Hz)		48 -62	
Section length (mm.)	345	428	600
Creepage distance housing (Lt) (mm.)	460	686	1,110
Arcing distance housing (St) (mm.)	217	299	464
Diameter of sheds (mm.)		100	
Number of sheds (sheds)	4	6	10
Housing length (mm.)	165	256	422
Low frequency withstand voltage			
- Wet condition within 1 minute (kVrms)	50.5	91.7	142
Critical impulse withstand voltage			
- Positive polarity (kVpeak)	106	211	327
- Negative polarity (kVpeak)	106	211	327
Power-frequency flashover voltage			
- Wet condition (kVrms)	69.5	104.7	162
50% Dry lightning impulse flashover voltage			
- Positive polarity (kVpeak)	158.2	219.7	340
- Negative polarity (kVpeak)	166.8	227.0	352
Specified mechanical load (SML) (kN)		70	
Routine test load (RTL) (kN)		35	
Weight (Approx.) (kg.)	1.17	1.43	1.66
Housing material		Silicone rubber	
Standard		IEC 61109	

Note : All dimensions of Clevis and Eye end fitting are designed as ANSI Class 52-4

METAL WORKS AND CUBICLE CABINET



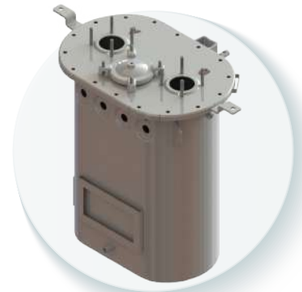
In addition to electrical equipment, PRECISE also manufactures and supplies metal components for communication enclosures, transformer enclosures, transformer tanks or others sheet-metal products based on customer requirements. At PRECISE, we use modern design and manufacturing technologies that comply with international standards to support the Smart Grid industry, including advance 3D CAD/CAM software, high precision laser cutting machine, automated bending station that seamlessly integrate bending robot with press brake bending machine. At our welding stations, we integrate handling robots with welding robots to ensure the highest quality and precision in every workpiece. Surface treatment and preparation are carried out through sandblasting, high-pressure spray washing, and zinc phosphate coating before applying powder coating with epoxy and polyurethane powder for better anti-corrosion performance.

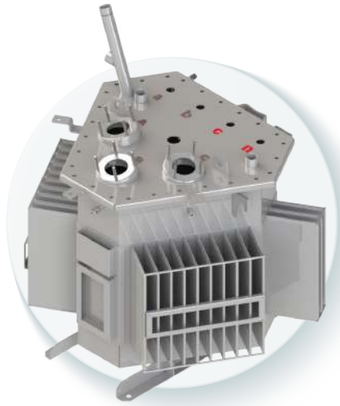
Transformer Tank

We specialize in the fabrication of tanks for Distribution Transformers, Current Transformers (CT), and Voltage Transformers (VT). Constructed from industrial-grade SS400 and SPCC steel, our tanks undergo precision welding to ensure a completely leak-proof structure. The surface is finished with a high-quality epoxy coating for superior adhesion and durability. Our products are designed to fully comply with MEA/PEA standards and are also available in custom-made specifications for both single-phase and three-phase systems.

Single-Phase Distribution Transformer Tank

- Material: Hot-Rolled Steel (SS400), Thickness 2.0 mm.
- Surface Finishing: Phosphatizing followed by Epoxy Primer and two coats of Polyurethane topcoat (RAL 7036 Gray).
- Coating Thickness: > 240 microns



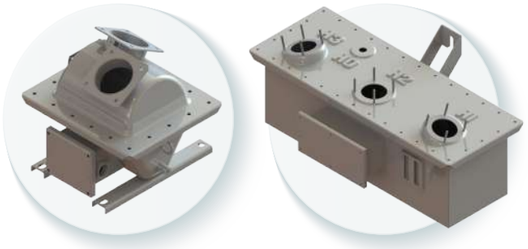


Three-Phase Distribution Transformer Tank

- Material: Cold-Rolled Steel (SPCC), Thickness 3.0 mm.
- Surface Finishing: Phosphatizing followed by Epoxy Primer and two coats of Polyurethane topcoat (RAL 7036 Gray, RAL 6035 Green).
- Coating Thickness: > 180 microns

Voltage Transformer Tank and Current Transformer Tank

- Material: Cold-Rolled Steel (SPCC), Thickness 3.0 mm.
- Surface Finishing: Phosphatizing and Powder Coated.
- Coating Thickness: 60–120 microns
- Colors: RAL 7032, RAL 7036



19” Rack |
Enclosure Solution

Standard 19” swing-rack enclosure cabinet is manufacturing from cold rolled carbon steel sheet (SPCC) which is available in both 2.5 and 3.0 mm. (panel thickness) variant, or as requested. It also has a degree of protection according to IEC 529 standard, and can prevent rust, animals and foreign objects from entering and causing damage to internal equipment. The enclosure is designed to open for service front, back, left and right side with up to 150 degrees (to the front) open-able rack

Material

- Steel Cold Rolled SPCC Thickness 2.5 MM. Or,
- Steel Cold Rolled SPCC Thickness 3.0 MM. Or,
- as requested

Surface Finishing

- Phosphatizing and powder coated
- Powder Coating Thickness 60 – 120 micrometer
- Powder Coat RAL7032, RAL7036 or RAL9002

IP Protection Rating

- IP51 Protection (IEC 60529)
- IEC60297-3-110 / IEC60297-3-110

19" Rack Enclosure Advantages

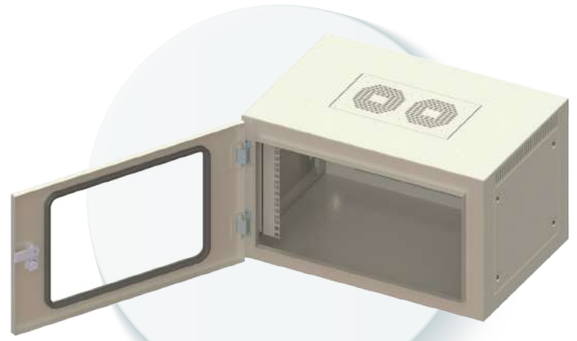
- For full or partial installation with 482.6 mm (19") components
- Allows depth-offset installation anywhere in the 25 mm pitch pattern; hinged on the left or right
- Two swing frames may also be fitted together in 800 mm wide enclosures

19” Rack | Swing Rack Enclosure Standard Size

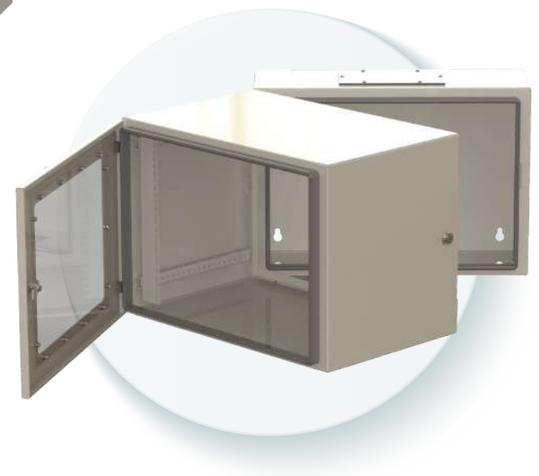
Width	Depth	Height	Unit(U)	Material	Color	Texture
800	610	2300	45	SPCC 2.5 / SPCC 3.0	RAL 7032, 7036, 9002	Semi-Gross
800	610	2340	47	SPCC 2.5 / SPCC 3.0	RAL 7032, 7036, 9002	Semi-Gross
800	800	2300	45	SPCC 2.5 / SPCC 3.0	RAL 7032, 7036, 9002	Semi-Gross
800	800	2340	47	SPCC 2.5 / SPCC 3.0	RAL 7032, 7036, 9002	Semi-Gross

Note: Made to Order

19” Rack | Wall–Mount Enclosure
Wall-Mount



Wall-Mount
Rack Enclosure



Wall-Mount
Rack Enclosure
(2 Sections)

Material

- Steel Cold Rolled SPCC or Electro-Galvanized Steel Sheet

IP Protection Rating

- IP4X Protection (IEC 60529)
- IEC60297-3-110 / IEC60297-3-110

19” Rack | Wall-Mount Enclosure Standard Size

Wall-Mount Enclosure	Width	Depth	Height	Unit(U)	Steel Sheet Thickness
Wall-Mount Rack Enclosure	600	400	245	4	1.2 mm.
	600	400	330	6	1.2 mm.
	600	400	465	9	1.2 mm.
	600	400	600	12	1.5 mm.
Wall-Mount Rack Enclosure (2 Sections)	600	600	245	4	1.2 mm.
	600	600	330	6	1.2 mm.
	600	600	465	9	1.2 mm.
	600	600	600	12	1.5 mm.

Note: Made to Order

OUTDOOR ENCLOSURE

OUTDOOR ENCLOSURE for Communication and CCTV

Outdoor enclosure adopts IP54 protection grade is suitable for use with electrical cabinet, motor control cabinet, communication system cabinet and CCTV cabinet, for example. Enclosure door can open up to 120 degrees for convenience and ease of installation and wiring of electrical component with sun protection to help reducing temperature inside the enclosure

OUTDOOR ENCLOSURE for Electrical & Communication (3 Doors)

Outdoor enclosure adopts IP54 protection grade to ensure the safety of internal items, available in standard sizes including 6U, 9U and 12U, are designed for use with electrical cabinet, motor control cabinet, communication system cabinet of various types. The enclosure door can be opened on 3 sides, and can open up to 120 degrees for more convenience and ease of installation and wiring of electrical equipment. The inside ceiling of its top roof is designed to allow the installation of ventilation fan. The rackcolumn can be adjusted in and out in 8 levels according to the depth of the enclosure. The floor plate is designed to allow the opening of 300x100 mm window or wire connection from outside into the enclosure.

METAL ENCLOSURE FOR RING MAIN UNIT (RMU)

METAL ENCLOSURE FOR RING MAIN UNIT (RMU)

RMU enclosure made of stainless material with thickness of 2.5 mm can prevent rust and has a degree of protection according to IEC 529 standard. It can also prevent animals and foreign objects from entering and causing damage to the equipment. The enclosure is designed to open for service both at the front and back

METAL ENCLOSURE for Dry Type Transformer

Metal enclosure for dry type transformer is a knock-down enclosure suitable for use in confined spaces or places where lifting equipment cannot access. It is also available with temperature control cabinet for turning transformer ventilation fan on and off, or with Roof Fan Exhaust to increase the efficiency of ventilation in confined spaces.

PRECISE

PROFESSIONAL ENERGY MANAGEMENT SYSTEM (PEMS)

PROFESSIONAL ENERGYMANAGEMENT SYSTEM (PEMS)

The Professional Energy Management System (PEMS) is an intelligent solution designed for the automated management of energy demand within an organization. The system monitors energy usage in real-time via wireless connectivity (Wi-Fi, 3G/4G). It is engineered for easy installation, significantly reducing the complexity of hardwired cable connections. All data is securely stored on a Cloud Server compliant with international security standards.

Controlled Buildings & Factories Are required to efficiently manage and systematically conserve energy in compliance with the "Energy Conservation Promotion Act B.E. 2535 (1992) and its Amendments." Key obligations include appointing a Person Responsible for Energy (PRE) and submitting annual energy management reports.
General Business Operators This solution is also ideal for general enterprises interested in implementing energy management systems to optimize efficiency and effectively reduce energy costs.

The Professional Energy Management System (PEMS) is engineered to empower business operators with precise, real-time energy insights—accessible anywhere, anytime. This user-friendly and cost-effective solution not only monitors usage but also automatically generates energy management reports fully compliant with the Department of Alternative Energy Development and Efficiency (DEDE) standards.

PROFESSIONAL ENERGYMANAGEMENT SYSTEM (PEMS)

System Function

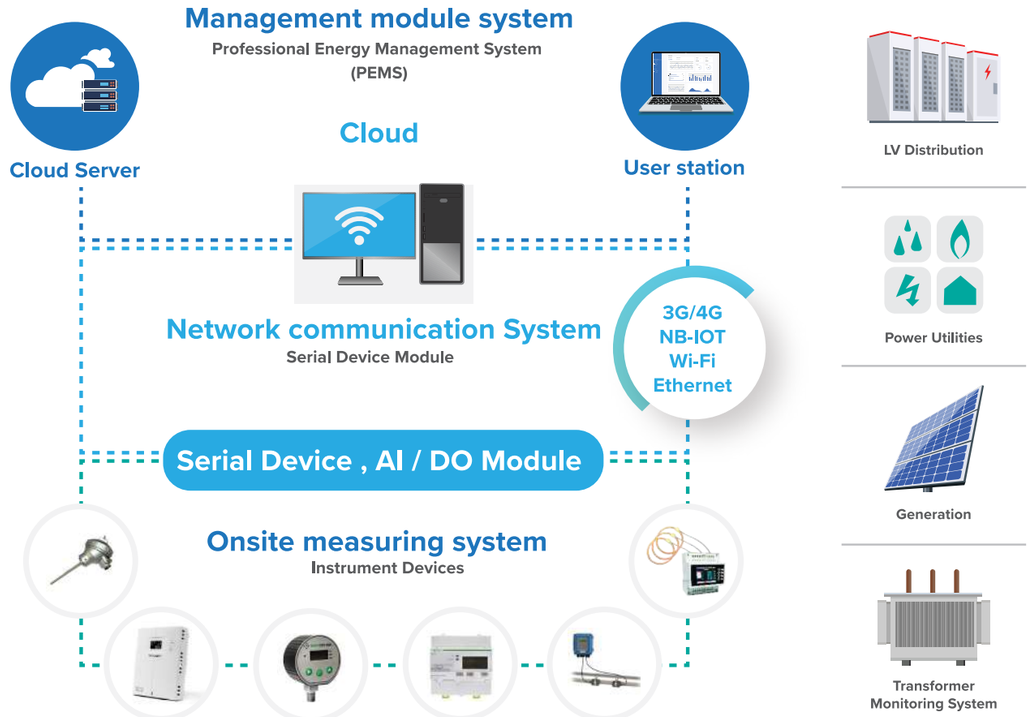
Professional Energy Management System (PEMS)

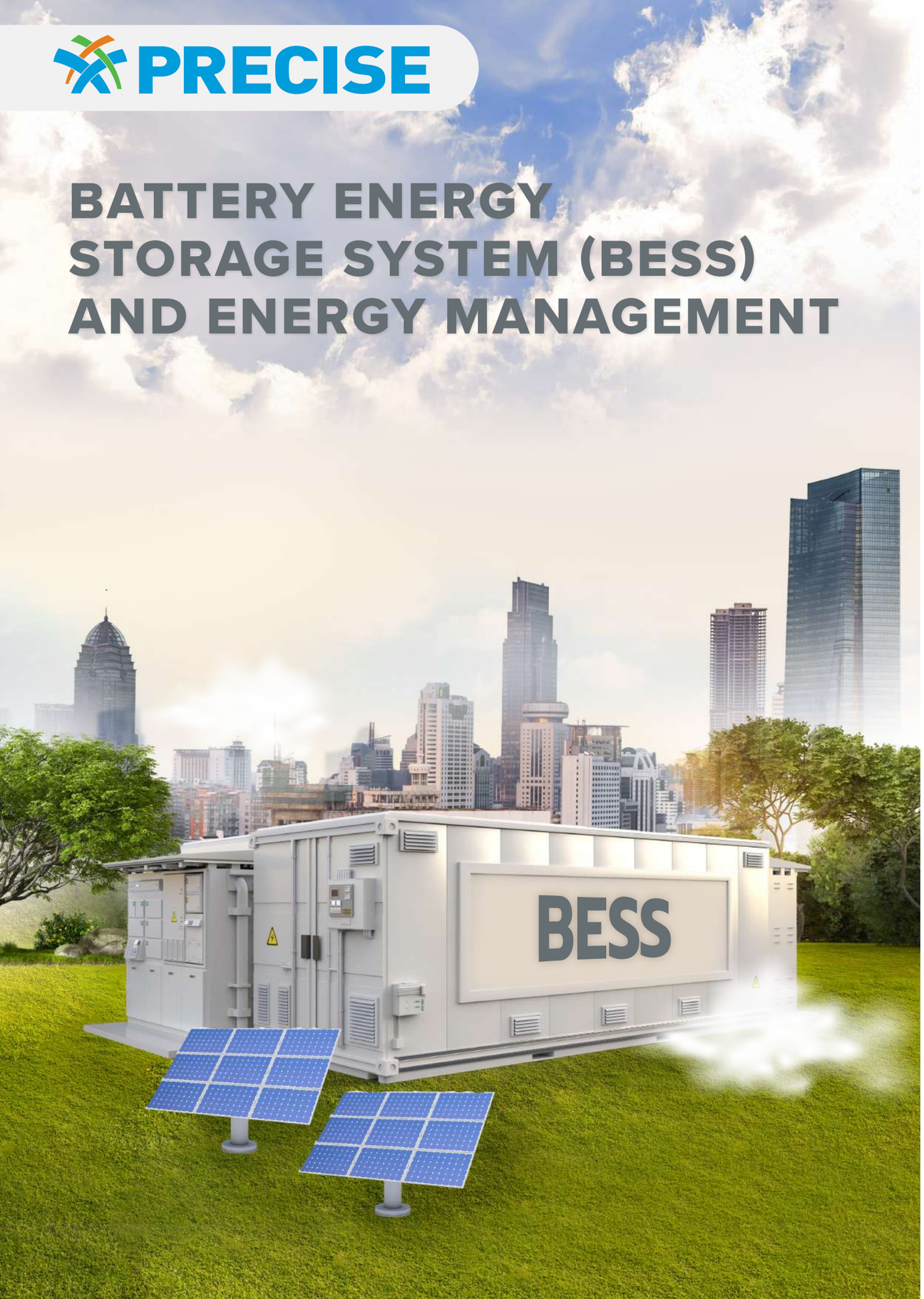
- Enhanced Precision & Scalability Delivers highly accurate monitoring of energy demand. The system offers scalability, allowing users to flexibly add or remove metering points to match facility requirements or ensure compliance with energy management reporting standards.
- Data is easily recorded in real time via wireless Wi-Fi, 3G/4G connections and stored in a cloud server for use or recall for viewing by using Web Application to immediately compare day/monthly/yearly energy use.
- Automatically generates energy management reports fully compliant with the Department of Alternative Energy Development and Efficiency (DEDE) formats. This solution is user-friendly, time-efficient, and cost-effective, while effectively supporting the implementation of corporate energy-saving measures.

PROFESSIONAL ENERGYMANAGEMENT SYSTEM (PEMS)

- Configurable alerts allows for immediate notification of abnormalities. This ensures efficient management of machinery and energy, minimizing potential damage, safety hazards, and unnecessary costs.
- Easy installation with no power interruption required. Business operations can continue seamlessly, ensuring low installation and maintenance costs.
- The system is designed to accommodate various energy .management reporting formats, including ESG, ISO 50001, and annual energy management reports.
- Energy monitoring areas can be designated and segmented by zones, such as by floor, department, or individual production station.
- Utilizes AI technology to forecast energy consumption trends, enabling precise planning and control of production costs and electricity usage.

Seamless & Non-Intrusive Installation The installation of DIN Rail Digital Power Meters utilizing Rogowski Coil technology is simple and efficient. The process with no power interruption required , allowing business facilities to maintain normal operations uninterrupted. This eliminates downtime and significantly reduces associated opportunity costs.





BATTERY ENERGY STORAGE SYSTEM (BESS) AND ENERGY MANAGEMENT

Smart Energy Solution: Solar + Liquid-Cooled BESS :

Enhance energy efficiency in factories and buildings with intelligent energy storage systems. With our full-service EPC solutions, you can be confident that your Solar + BESS projects will be installed with maximum efficiency, safety, and rapid return on investment. Empower your business to achieve Net Zero Emissions while gaining a sustainable competitive advantage.

Three Core Technologies for Complete Energy Management

1. **Solar Rooftop**
   Clean Energy from Solar Power
2. **Liquid-Cooled Lithium BESS:**
   Liquid-Cooled High-Performance Energy Storage System
3. **Smart EMS (Energy Management System):**
   Intelligent Software for Power Control and Real-Time Data Analytics

Why Choose Liquid-Cooled Lithium Batteries?

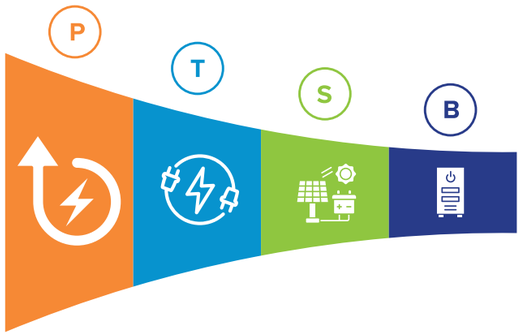
In the Commercial and Industrial (C&I) sector, stability and cost-effectiveness are of utmost importance. Liquid cooling systems offer significant advantages over conventional air cooling systems, as follows:

1. **Higher Efficiency**
   Precisely controls battery cell temperature with a minimal temperature difference (within 2–3°C), enabling optimal power utilization.
2. **Longer Lifespan**
   Extends battery lifespan by 15–20% (higher cycle life), reducing degradation caused by heat accumulation.
3. **Enhanced Safety**
   Reduces the risk of thermal runaway (battery fire) more effectively, with up to 30–40% improvement.
4. **Lower Self-consumption**
   Consumes less energy for temperature control compared to conventional air cooling systems.

BATTERY ENERGY STORAGE SYSTEM (BESS) AND ENERGY MANAGEMENT

Key Benefits for C&I

The EMS system reduces electricity costs through three key approaches.



Peak Shaving

Utilizes stored battery energy during peak demand periods to minimize demand charges.

TOU Arbitrage (Load Shifting)

Stores energy during off-peak periods and utilizes it during on-peak periods.

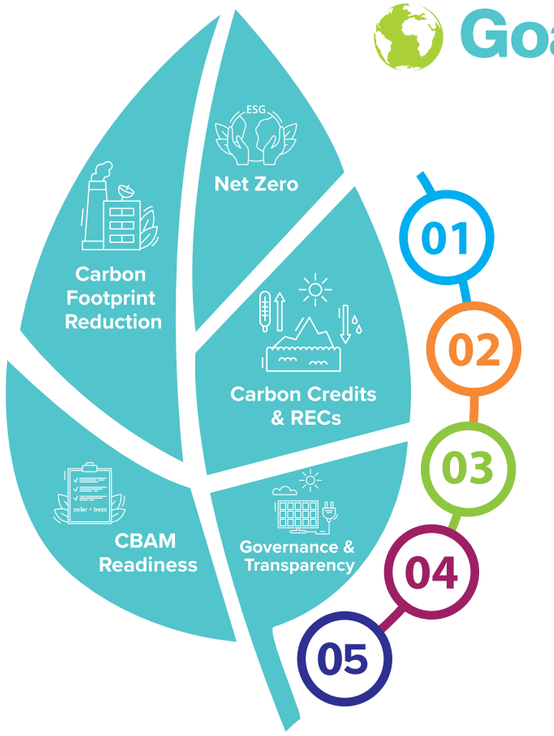
Solar Self-Consumption

Stores excess solar energy generated during the day for use in the evening or during cloudy periods, reducing reliance on grid electricity.

Backup Power

Ensures reliable backup power for critical loads, safeguarding operations against voltage drops and power interruptions.

Environmental Goals



Advancing toward Net Zero and RE100 Decarbonization

Decarbonization: Solar + BESS systems reduce reliance on fossil-fuel-based electricity, a primary source of greenhouse gas (GHG) emissions.

RE100 Support: Enables businesses to accelerate progress toward 100% renewable energy (RE100) targets with greater stability, by storing solar energy for use even when sunlight is unavailable.

Carbon Footprint Reduction

Measurable Impact: Enables clear calculation of annual carbon dioxide CO_2$ emission reductions through the EMS system.

Example: Installing a 1 MWp solar system can reduce CO_2 emissions by approximately 600–700 tons per year (equivalent to planting tens of thousands of trees).

Carbon Credits & RECs

T-VER / I-REC: Our system is designed to facilitate data collection for carbon credit certification (T-VER) and International Renewable Energy Certificates (I-REC).

CBAM Readiness

For factories exporting to Europe (EU) or the United States, implementing Solar + BESS systems helps reduce embedded emissions in products. This lowers exposure to cross-border carbon taxes and enhances competitiveness in the global market.

Governance & Transparency

Real-time ESG Reporting: Our EMS system can generate comprehensive reports on clean energy usage and carbon reduction, ready for inclusion in annual sustainability reports (SD Report / 56-1 One Report) for listed companies.

BATTERY ENERGY STORAGE SYSTEM (BESS) AND ENERGY MANAGEMENT

Scope of Services

We deliver end-to-end,
ONE-STOP SERVICE
ensuring seamless project execution from inception to completion.

FREE

Engineering	: Site survey, energy consumption analysis, and structural and electrical system design by licensed professional engineers (PE/SE).
Procurement	: Procurement of premium-grade equipment (Tier 1 solar panels and liquid-cooled BESS) at competitive prices.
Construction	: Specialized installation team adhering to the highest safety standards.
Permitting	: Comprehensive permitting services (grid interconnection with MEA/PEA, excavation/backfilling notifications, local authority approvals, and ERC compliance).
O&M & Monitoring	: Comprehensive after-sales support, including system inspection and 24/7 real-time performance monitoring via an advanced dashboard.

cost savings of 20% - 40%

(depending on system size and energy consumption behavior)

Payback Period

5 – 7 year

(Can be accelerated with BOI incentives)

System Lifespan

Solar panels: 25 years /
Battery: 10–15 years

IRR (Internal Rate of Return)

12% – 18%

BATTERY ENERGY STORAGE SYSTEM (BESS) AND ENERGY MANAGEMENT

Specification : Solar System + Battery Energy Storage

Installation Capacity (kWp)	Number of panels (approx.)	Inverter (String Inverter)	Liquid-Cooled BESS (Recommended capacity)	Installation area (approx. m^2)	Estimated CO_2 reduction (tons/year)
50	85-90	50 kW x 1 unit	100 - 150 kWh	350-450	35 tons
100	170-180	100 kW x 1unit	200 - 300 kWh	700-900	70 tons
500	850-900	100–125 kW x 4 unit	1,000 kWh (1 MWh)	3,500-4,500	350tons
1,000	1,700-1,800	100–125 kW x 8unit	2,000 kWh (2 MWh)	7,000-9,000	700tons
5,000	8,500-9,000	100–125 kW x 40unit	10,000 kWh (10 MWh)	35,000-45,000	3,500tons

Energy Management Software (SCADA : Solar + BESS)

Smart EMS & Cloud Monitoring: Advanced software for data analytics and intelligent battery dispatch control based on Time-of-Use (TOU) schedules. The dashboard provides real-time visualization of energy savings and system status.

At the core of maximizing the value of Solar + BESS systems is the Energy Management System (EMS), which acts as the “intelligent brain” of the project. As an EPC provider, we go beyond standard system installation by offering customized, tailor-made software solutions designed to address real on-site challenges.

1. Adaptive Control Logic: Each facility has unique energy usage patterns. Our EMS enables the development of tailored algorithms to precisely address site-specific requirements:

Problem: Certain machinery in the factory creates high surge power demand during specific periods, leading to increased demand charges.

Solution: Our system is customized to enable the battery to instantly discharge when peak demand is detected by sensors (ultra-fast response), providing precise control beyond the capabilities of typical off-the-shelf systems.

2. Seamless Integration: Rather than replacing your existing infrastructure, we intelligently integrate and enhance it for smarter, more efficient operation:

On-site Customization: Our engineering team can develop EMS solutions that integrate seamlessly with existing SCADA, PLC, or ERP systems, ensuring energy management operates in full alignment with production processes.
Multi-Brand Support : The system is designed for interoperability with equipment from multiple brands, maintaining vendor neutrality without being locked into any single provider.

BATTERY ENERGY STORAGE SYSTEM (BESS) AND ENERGY MANAGEMENT

3. Customized Dashboard & Reporting: A user-centric interface designed for real-world operations. Complex data is simplified into clear, actionable insights tailored to the needs of both executives and engineers.

Executive View: Focuses on key financial metrics such as cost savings (THB), return on investment (ROI), and greenhouse gas (CO_2) reduction for ESG reporting.

Operational View: Provides real-time insights into battery state of health (SOH), liquid cooling system temperature, and solar panel performance.

Auto-Reporting: Enables automated delivery of daily or monthly performance reports via Line or email.

Installation, Testing, Commissioning

“ PROFESSIONAL OF ELECTRICAL SYSTEM MAINTENANCE AND SERVICES ”

“ One Stop Service ” Precise — One partner, complete electrical solutions.

Leveraging our expertise as a direct manufacturer, PRECISE offers complete electrical solutions under our "One Stop Service" concept. We are dedicated to maximizing customer satisfaction through a full spectrum of services, ranging from system design and installation to professional maintenance. Our services cover all product types and voltage levels. We guarantee the availability of spare parts for emergency situations and offer Annual Maintenance Contracts (AMC). With PRECISE, you can be assured that your electrical infrastructure—the core driving force of your business—will operate with maximum stability and efficiency.

“Professional Team”

Our team consists of specialists who have undergone rigorous training from prestigious institutions, including The Engineering Institute of Thailand (EIT) under H.M. the King’s Patronage and the Center of Excellence in Electrical Power Technology at Chulalongkorn University. We provide a dedicated 24-hour Hotline On-Call Service to offer immediate support and consultation in case of emergencies, exclusively for customers with an Annual Maintenance Contract (AMC).

Maintenance Services

- Thermal Image Inspection by Infrared Camera
- MV Protection Equipment
- Oil Type & Dry Type Transformer
- Measurement Transformer
- 115/22 kV Substation
- Main Distribution Board (MDB) & LV Switch Board
- Grounding System Test & Improvement
- Medium Voltage Switchgear & Ring Main Unit
- Air Circuit Breaker & Test Trip Unit Protection
- Capacitor Bank & Power Factor Correction
- SF6 Gas Load Break Switch
- Molded Case Circuit Breaker
- Power Quality Analyzer

PRECISE

INSTALLATION AND RENOVATE HIGH VOLTAGE PROJECT

High Voltage Project

- 69-115/22 kV Substation EPC Project
- 69-115 kV Transmission Line Installation
- 69-115 kV Load Break Switch Installation
- 69-115 kV Air Break Switch Installation

Medium Voltage Project

- 22-33 kV Distribution Line Installation
- 22-33 kV Transformer and other Equipment Installation
- 22-33 kV SF6 Gas Load Break Switch Installation
- 22-33 kV Recloser Installation
- 22-33 kV Ring Main Unit Installation
- 22-33 kV Switch Gear Installation
- 22-33 kV Underground Cable System Project

Low Voltage Project

- Low Voltage Power Cable Installation
- Main Distribution Board Installation

PRECISE

Our Customer and Market

Quality Assurance

Precise is committed to an integrated management system fully certified under ISO 9001, ISO 14001, and ISO 45001 standards. We prioritize operational efficiency, quality, occupational health, safety, and environmental responsibility. We are dedicated to continuous improvement to ensure long-term sustainability and trust for all stakeholders. Furthermore, Precise has been certified with the Made in Thailand (MiT) mark, confirming that our products are manufactured locally in compliance with international standards and good governance. We are proud to support the Thai industry and build partner confidence for sustainable growth.

PRECISE Testing Service Center

As an independent testing laboratory accredited to ISO/IEC 17025, and leveraging our extensive experience in research and development, the PRECISE Testing Service Center offers comprehensive testing, calibration, and engineering services for electrical power equipment ranging from low to high voltage.Built on internationally recognized technical capabilities, we strictly adhere to global standards of impartiality and efficiency, effectively responding to the growing demands of both domestic and international markets.

Certificates & Type Test

Precise is proved by the certification of the Quality Management System according to the international standard of ISO 9001:2015. With our experience, we passed all product type tests and have been certified by both national and international laboratories such as CESI Italy, KEMA Netherlands, KERI Korea, EGAT (Electricity Generating Authority of Thailand), and etc.

Transformers Certificates

Distribulton Board Certificates

Instrument Transformers Certificates

Load Break Switch Certificates

Surge Arrester Certificates

LED Certificates

Power Capacitor Certificates

Disconnecting Switch Certificates

Drop-out Fuse Cutout Certificates

Electronic Meters Certificates

Cable Spacer Certificates, Suspension Insulator Certificates, Fuse Links Certificates

PRECISE

: preciseproducts : @preciseproducts : www.precise.co.th

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