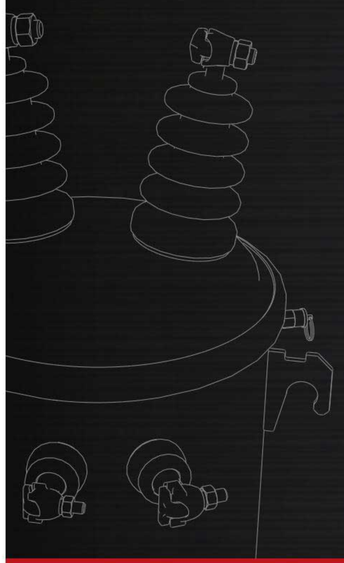
EVERPOWER
ELECTRIC INDUSTRIES

SINGLE PHASE DISTRIBUTION TRANSFORMERS



EVERPOWER ELECTRIC INDUSTRIES CO.,LTD.

No.5 Chaosheng Industrial Park, Nanhai,Foshan,
Guangdong,China
Tel: (86) 757-85122088 Fax: (86) 757-85122165
Email: sales@everpowerelectric.com
Website: www.EverpowerElectric.com

PHILIPPINE OFFICE

Silicon Electrical Supply, Inc.
1908 A. Francisco St., Sta. Ana Manila, Philippines 1009
Tel: +632-5213111 to 16 Website: www.siliconelectrical.com
Fax: +632-354 1959 Email: sales@siliconelectrical.com

EVERPOWER ELECTRIC INDUSTRIES CO.,LTD.

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Corporate profile

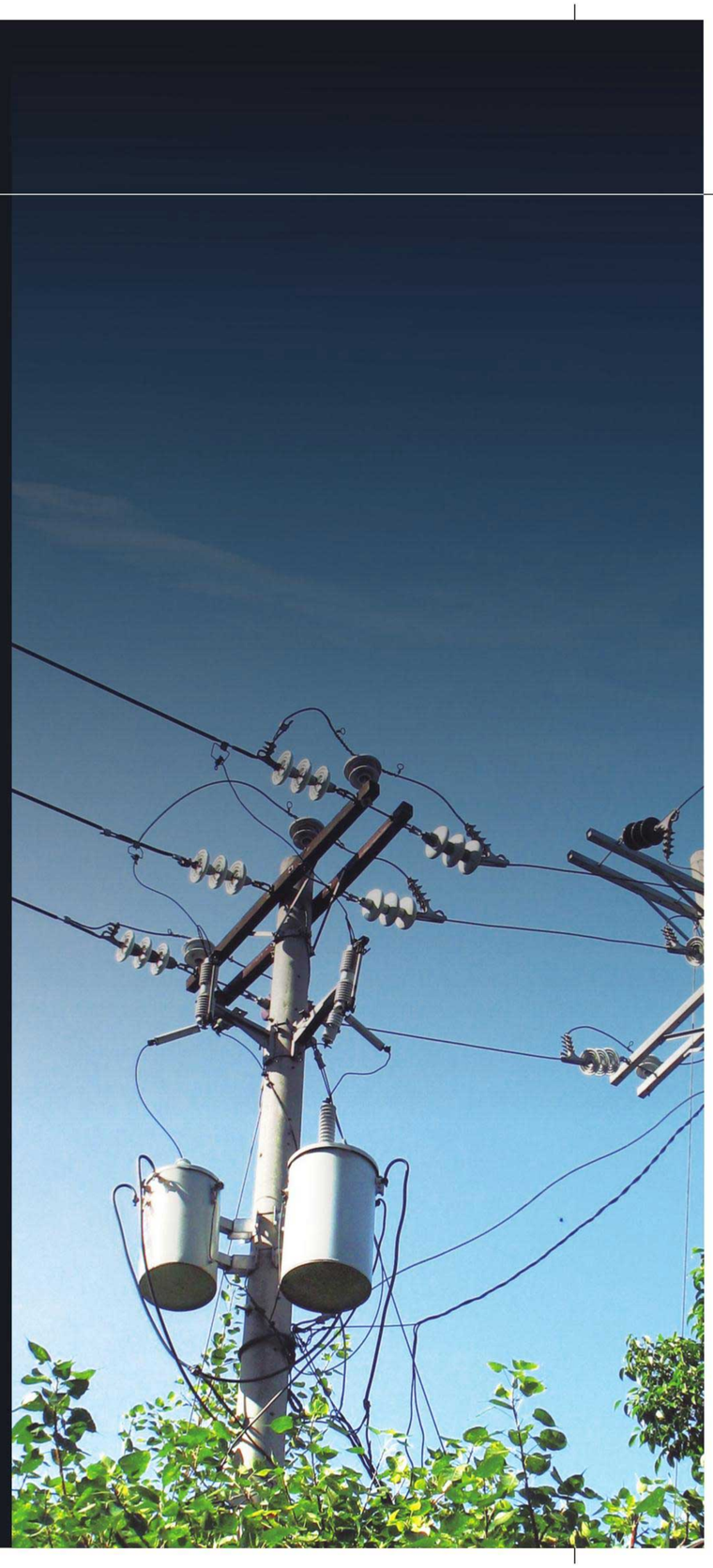
Everpower is specialized in manufacturing a wide range of medium and high voltage electrical equipment for electric utility and industrial markets.

Everpower holds experienced and qualified technical team, we have been manufacturing transformers for over ten years。This experience, combined with intensive research and development, ensures that our transformers offer the highest standards of quality, reliability and durability, backed by world-class service and support.

EVERPOWER Oil Immersed Type Distribution Transformers

(C.R.G.O Silicon Steel /Amorphous Metal)

- Single phase Conventional Transformer
- Single phase Completely Self-protected Transformer (CSP)
- Single phase Pad Mounted Transformer
- Three phase oil immersed
- Three Phase Hermetically Sealed
- Three Phase Pad-mounted Transformer



Features:

- Easy, fast installation
- Attractive, modern appearance
- Superior insulation and sealing systems
- Higher system reliability
- Low operating costs

Advantages:

- Advanced Technology, Rich Experience
- Highest standards of quality, reliability and durability
- A wide range to suit every application
- Units can be customized to specific requirements

Applications:

- Urban and rural electrification
- Public Utilities
- Highly polluted and hazardous Conditions

www.everpowerelectric.com

EVERPOWER offers a wide range of electrical distribution equipment for substation, overhead, underground and in-plant electrical distribution transformer with many significant features and advantages.

Standard:
IEEE C 57.12.00
ANSI C 57.12.20
IEC 60076

Single Phase Pole-mounted Conventional

Three Phase Oil-immersed with conversator

Single Phase Pole-mounted
Completely Self-protected (CSP)

Three Phase Hermetically Sealed

Single Phase Pad- mounted

Three Phase Pad-mounted

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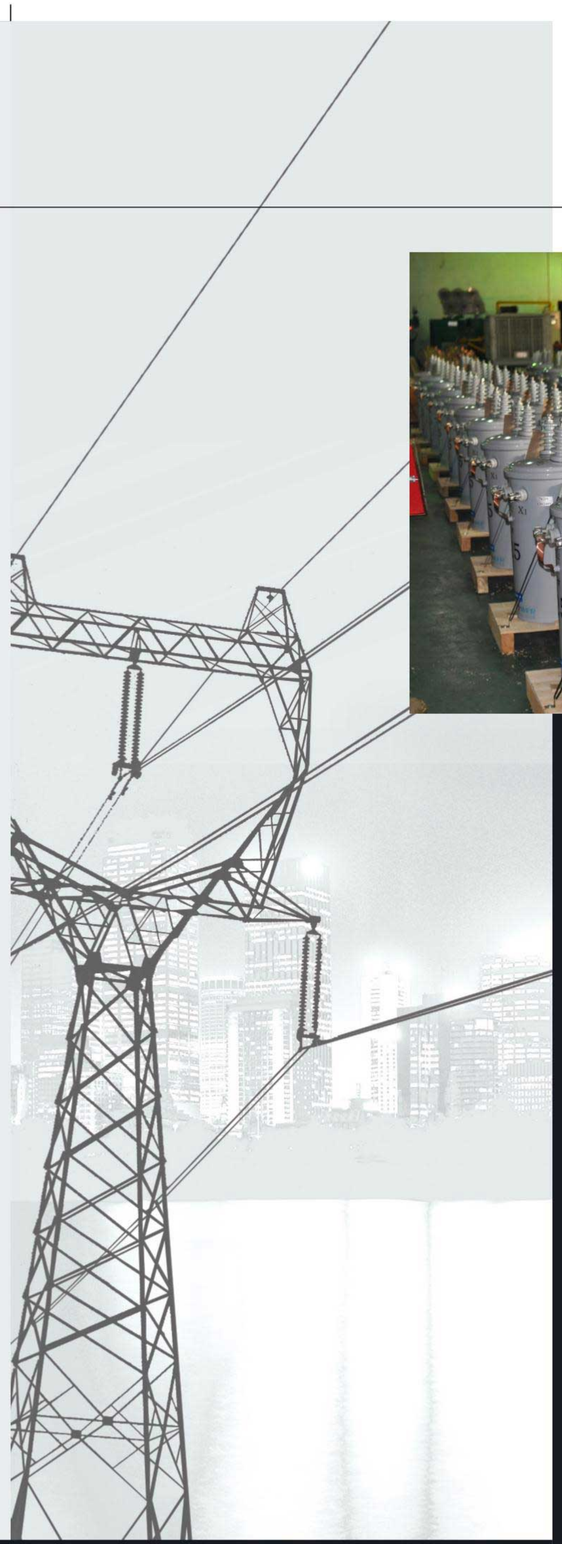
Single Phase Pole-mounted

EVERPOWER single-phase oil-filled pole-mounted distribution transformers are specifically designed for the decentralization distribution network of servicing residential overhead distribution loads of town and countryside. They are also suitable for light and diversified power applications. These transformers are designed for the application conditions normally encountered on electric utility power distribution systems.

High Performance Inside and Out side:

- Transformer are Class OA.Our transformer cores and coils are designed to provide the best field performance.
- Cores are made of C.R.G.O or Amorphous Metal.
- Coils are wound with the highest quality electrical grade epoxy coated, thermally upgrade rise paper. Flat wire and hot pressing provides excellent short circuit strength.
- The core and coil assembly is securely banded to the top and bottom frames to further assure mechanical intergrity.
- Complete Sealing construction, high overload capacity, high quality in power supply.



Available Sizes and Voltages

KVA	H.V. Ratings	BIL(kV)	L.V.Ratings
3	2400	60	120/240
5	4160	75	240/480
7.5	4800	75	277
10	7200	95	
15	7620	95	
25	7970	95	
37.5	11400	95 or 125	
50	12000	95 or 125	
75	13200	95 or 125	
100	13800	95 or 125	
167	14400	125	
250	19920	125 or 150	
333			
500			

Features of Conventional Single-phase Transformer:

- Lifting lugs.
- One or two cover-mounted high voltage porcelain bushing(s) with eyebolt terminal (10-100KVA) or spade terminal.
- Low voltage porcelain with eyebolt or spade terminals.
- Low voltage neutral grounding strap (furnished on 10-50KVA single HV bushing units).
- ANSI support lugs (hanger brackets).
- Pressure Relief Device.
- Tank ground pad.
- Stainless steel nameplate.
- Robust construction having excellent short circuit and thermal withstand capabilities.
- Proven technology, effectively improving the quality and reliability of the electrical distribution system.
- Computer Aided Design and Everpower's Design Software Systems.

The following additional features are all standard on self-protected type CSP units:

- High voltage surge arrester
- High voltage expulsion fuse
- Low Voltage Circuit breaker
- Secondary breaker operating handle with emergency overload reset and overload signal light.

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Single Phase Pole-mounted CSP Type

CSP is a protection system for distribution transformers. The CSP protection system protects the from lighting, secondary faults, severe overloads, and provides visual warning of the existence of uneconomical loading conditions.

The CSP design provides maximum protection against transformer failure and disruptive outages. It also protects you from the extra costs of more complicated installation, unnecessary equipment and power downtime.

Philosophy of CSP protection

- The distribution transformer should be protected from faults and overloads which would shorten it’ s life.
- The electrical distribution system should be protected from a transformer that has failed: so that the fault is isolated to the failed transformer and affects only the customers who are served by the failed transformer.
- It is not economical to operate a distribution transformer, on a regular basis, in an over-loaded condition.
- Lighting protection is maximized when the surge arrester is directly mounted to the transformer tank reducing to a minimum the.
- Impedance of the ground connection.

Components of the CSP Protection System

- High voltage surge arrester
  For surge protection, the surge arrester is mounted directly to the transformer tank.
- High Voltage Expulsion Fuse
  For Line “ Lock-out” Protection, the expulsion fuse is mounted inside of the transformer and it is connected between the incoming high voltage lead from the bushing and the high voltage line lead from the transformer primary winding.
- Low Voltage Circuit Breaker
  For Secondary fault and overload protection, the circuit breaker is mounted inside of the transformer and connected between secondary winding and the secondary bushing
- Overload Indicator
  For visual indication of uneconomical conditions, the signal light is electrically connected to the signal light sensing circuit within the transformer.

Available Sizes and Voltages

KVA	H.V. Ratings	BIL(kV)	L.V.Ratings
5	2400	60	120/240
7.5	4160	75	240/480
10	4800	75	277
15	7200	95	
25	7620	95	
37.5	7970	95	
50	11400	95 or 125	
75	12000	95 or 125	
100	13200	95 or 125	
167	13800	95 or 125	

Why choose EVERPOWER completely self-protected (CSP) transformer

CSP is cheaper:

Conventional transformers with external cutout fuse and lightning arresters might first appear to be a less expensive, but when you add up the substantial extra costs of cutout fuses, longer installation time, increased outage down time, and time lost repairing and replacing damaged equipment, and so on, conventional transformers just can not compete with CSP!

CSP is safer:

Completely self-protected transformers are safer by design, Along with internal installation that offers superior protection against animal intrusion, CSP offer these solutions to common problems.

Benefits of Everpower CSP:

- High-quality components
- Breaker on Breaker design is simple and fast to install
- Rigid Steel mounting bracket with operating handle and linkage
- Oil immersion provides superior insulation, temperature tolerance.
- Signal light makes it easy spot overloads/high oil termperatures.
- Emergency overload feature allows temporary above-peak operation.
- The distribution transformer should be protected from faults and overloads which would shorten it’ s life.
- Customized to specific requirements.

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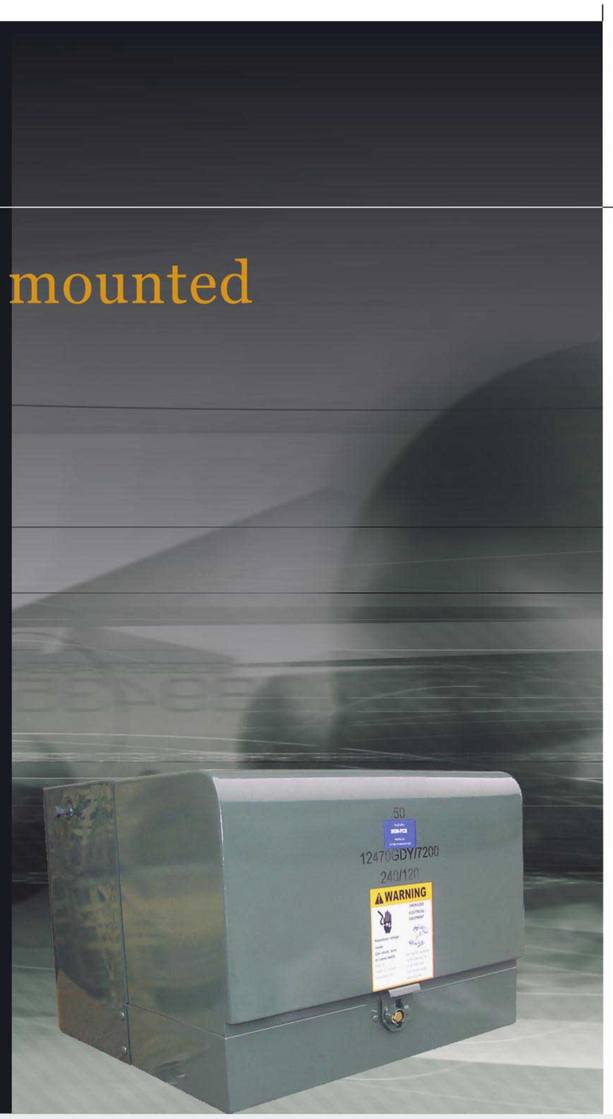
Single Phase Pad-mounted

Everpower manufacturers a complete line of single-phase pad-mounted distribution transformers. They are available in standard ratings and configurations or can be customized to meet specific needs.

The Pad-mounted Single Phase transformer is designed for cross feed (Type 2) loop feed or radial feed on a grounded wye.

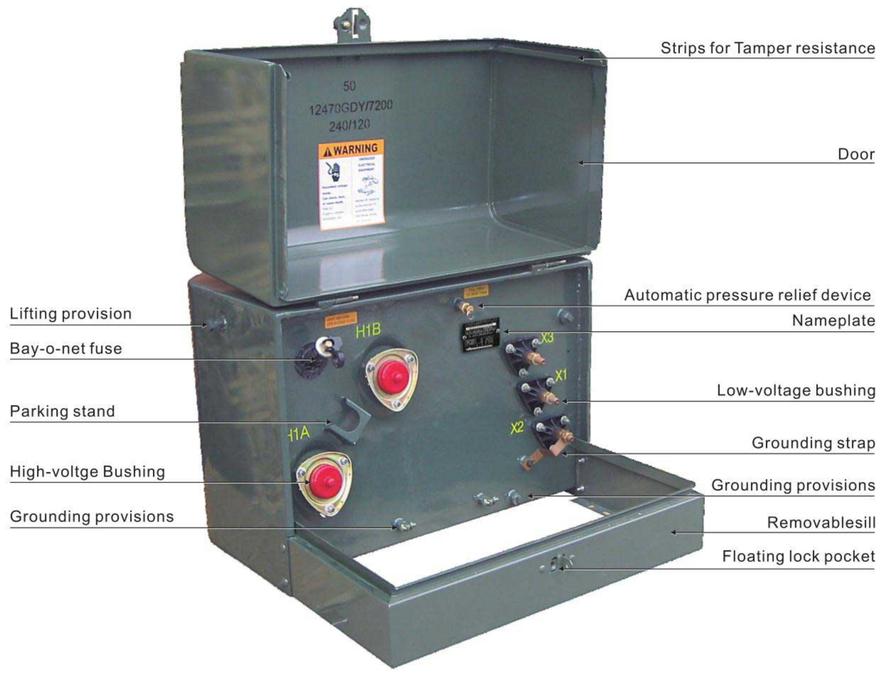


Standard:

IEEEI C57.12.00, ANSI C57.12.25
IEC 60076

Product Scope:

Ratings @ 65℃ Rise
KVA: 10,15,25,37.5, 50, 75, 100, 167, 250, 333
Primary Voltage: 2400-46,000V
Secondary Voltage: 120-600V
BIL: 60,75,95,125,150KV
50Hz or 60Hz



Available Size and Voltages

KVA	H.V. Ratings	BIL(kV)	L.V.Ratings
10 15 25 37.5 50 75 100 167	2160GrdY/2400 to 34500GrdY/19920 or 2400 to 19920 Dual voltages available	60kV to 150kV	120/240 240/480 277

Standard Features:

- Equipped with two universal high voltage bushing wells for loop feed.(Only one bushing well is provided for radial feed.)
- A recessed locking assembly with padlock provisions and a penta-head locking bolt is standard for tamper resistant operation。
- The front sill latches with the flip—top hood，is attached on the side of the tank and is remov-able.
- The high voltage universal bushing wells are externally clamped and removable. A parking stand between the bushing wells is provided for attachment of bushing accessories.
- Externally clamped low voltage bushings with contact nuts.
- N EMA safety labels.

Optional Features:

- Various multiple voltages or taps
- Externally-operate multiple voltage or tap changer switches for safe operation.
- Stainless steel tank, tank bottom, and/or hardware
- Various other designations available, e.g.,KVA, voltages

Three Phase Overhead

EVERPOWER Three-Phase Transformers are in accordance with IEC 60076 Standard, or National Standard GB1094" Power Transformer" . Special care is taken in the choice of high quality material, manufacturing technology and construction, so that the performance characteristics can match with those of the highest standard of the international market. Low loss and high efficiency means substantial saving in energy and low operating cost.Therefore they are widely used in places where requirement on voltage quality is emphasized, such as institutes, buildings, hotels, hospital and factories.

Three-phase oil immersed with conversator
(C.R.G.O.Silicon Steel Core)

Three phase hermetically sealed type transformers

Compared with normal oil immersed transformer, this type hermetically sealed transformer has no oil conservator, and adopts the corrugation on the oil tank as its heat radiation parts. The corrugations can expand or contract according to the change of volume. Thus the inner space of transformer can be isolated from the air, which can reduce the aging speed of oil and prevent the installation material from damping. Hermetically sealed type possesses a reliable operation, and its free from maintenance.

Three phase hermetically sealed
(C.R.G.O.Silicon Steel Core)

Application Standards:

GB1094, IEC76:Power Transformer
ANSI C57.12
or specific customer standards

Features:

1、Compliance to International Standards like ANSI, IEEE, etc.
2、Robust QUALITY POLICYs ensure implementation of the best design and manufacturing practices.
3、Flexibility in designing transformers to exacting customer requirements (Optimum cost).
4、Best insulation and sealing systems.
5、A wide range of features and accessories is available to satisfy almost any special requirement, including fuses, surge arresters, controls, pressure relief devices, and high voltage tap switches, and etc.

SH15 series Amorphous Metal

By using Amorphous Metal ,the core loss (No-load loss) of a transformer can be reduced by a whopping 75%, resulting in enormous energy savings. It especially applies to the users of low load rate, such as the rural area and the developing region.

SH15 series Amorphous Metal transformer

S11 series Three phase Oil-immersed Transformer (Typical Technical Data)

TYPE	RATED KVA	VOLTAGE COMBINATION			VECTOR GROUP	LOSS (KW)		FULL-LOAD LOSS	IMP. VOL%	DIMENSION (L×W×H)	WEIGHT(KG)	
		HV (KV)	TAPPING RANGE%	LV (KV)		NO-LOAD LOSS	FULL-LOAD LOSS				OIL WEIGHT	TOTAL WEIGHT
S11-50	50					0.130	0.87	1.9		790x720x1120	135	680
S11-100	100					0.200	1.50	1.5		1000x750x1120	150	770
S11-200	200					0.340	2.60	1.25		1030x770x1120	185	930
S11-250	250	6	+2X			0.392	3.05	1.15	4	1150x780x1180	200	1080
S11-315	315	6.3	2.5%			0.469	3.65	1.05		1320x820x1250	230	1280
S11-400	400	10	or	0.4	Y,yn0	0.560	4.30	0.95		1380x830x1390	285	1450
S11-500	500	10.5	+3X2.5%	0.415	D,yn11	0.670	5.15	0.95		1400x830x1390	320	1710
S11-630	630	11	or			0.840	6.20	0.85		1570x920x1350	370	2010
S11-800	800	13.2	+5%			0.938	7.50	0.75	4.5	1640x960x1440	430	2370
S11-1000	800					1.072	10.3	0.65		1800x1080x1670	540	2830
S11-1250	1250					1.260	12.0	0.6		1830x1080x1670	595	3520
S11-1600	1600					1.624	14.5	0.6		1980x1180x1760	720	4150

SH15 series Amorphous Metal (Typical Technical Data)

TYPE	RATED KVA	VOLTAGE COMBINATION			VECTOR GROUP	LOSS (KW)		FULL-LOAD LOSS	IMP. VOL%	DIMENSION (L×W×H)	WEIGHT(KG)	
		HV (KV)	TAPPING RANGE%	LV (KV)		NO-LOAD LOSS	FULL-LOAD LOSS				OIL WEIGHT	TOTAL WEIGHT
SH15-M-50	50					0.03	0.87	0.9		970x620x1040	160	710
SH15-M-100	100					0.06	1.50	0.7		1060x770x1070	180	870
SH15-M-200	200	6	+2X			0.10	2.60	0.5	4	1110x930x1170	230	1140
SH15-M-250	250	6.3	2.5%			0.12	3.05	0.5		1180x1010x1180	260	1290
SH15-M-315	315	10	or	0.4		0.14	3.65	0.4		1160x1050x1190	280	1500
SH15-M-400	400	10.5	+3X2.5%	0.415	D,yn11	0.17	4.30	0.4		1240x1090x1230	330	1710
SH15-M-500	500	11	or			0.20	5.15	0.3		1270x1160x1330	370	1960
SH15-M-630	630	13.2	+5%			0.24	6.20	0.3	4.5	1450x1240x1350	430	2250
SH15-M-800	800					0.30	7.50	0.3		1520x1380x1460	480	2730
SH15-M-1000	1000					0.34	10.3	0.3		1720x1460x1510	620	3300

Above data is for reference purpose only and is subject to change

A Wide Range of Protection Options

Everpower provides a complete line of transformer components and accessories

Meet or exceeds ANSI or International Standards

Porcelain Bushings
High-and Low- Voltage Bushings are externally clamped, gasket bushings with eyebolt-type terminals. Connectors are electrical brass tin-plated, to withstand corrosion and suitable for copper or aluminum conductors.

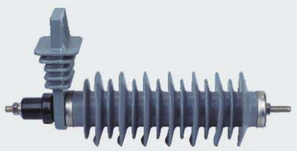
Tap Changer
A de-energized tap changer is used in oil filled distribution transformers and rated for 50 amp continuous duty with and 150 kV.

Pressure Relief Device
The standard Pressure Relief Device, located on the tank above the liquid level, relieves excessive internal tank pressure and reseals at a lower positive pressure.

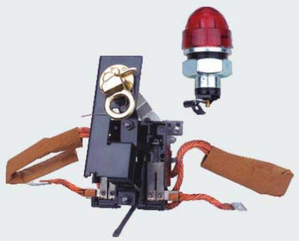
B ay-O-Net Fuse Assembly with fuse cartridge.
Bay-O-Net Fuse Assembly are used to protect transformer and distribution systems.

Backup Fuse
Backup Fuse is used in series with low current primary protection devices

Thermometer
It indicates the liquid temperature near the top of tank.



High Voltage Surge Arrester
For surge protection, it is mounted directly to the transformer tank



Low Voltage circuit breaker
A low voltage breaker senses the fault and trips, protecting the transformer
Overload Indicator
Signal light and emergency overload switch allows quick identification of problem and fast power restoration

Low Voltage Surge Arrester
Low Voltage Surge Arrester is designed to provide SURGE PROTECTION at secondary bushings, service entrance locations and any other electrical apparatus connected to a secondary voltage source.

Bushing well
It is designed for the termination of primary winding leads at the front plate of fluid-filled apparatus.

Secondary Bushing for
Pad mounted transformer

Sectionalizing loadbreak switch
It can be used on single-and three-phase grounded wye or delta systems.

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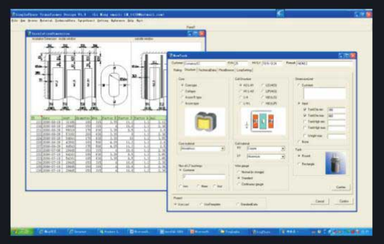
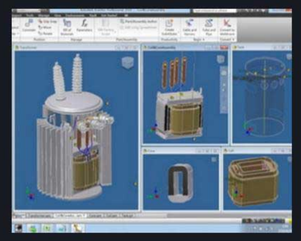
Reliability and Quality

Everpower's quality management system has earned ISO9001 certification, that links all aspects of the company's operations, including Marketing, Engineering, Managment Information System, Manufacturing, Shipping and Accounting to make sure that not only our products, but everything we do for our customer is of the highest quality.



The Optimization Design System ensure that each transformer design in optimized to satisfy the customer's needs at the lowest possible cost.



The Product Automated Design System(PADS) ensures that each customer's unique for requirements are satisfied.

Everpower perfect ERP system realized successfully the integrated management of the material flux, capital flux and information flux.

ISO9001 Certificated.

Excellent pursuit of quality

EVERPOWER has fully implemented ISO9001 quality authentication system, to provide the powerful guarantee for product quality. Quality begins and ends with each person at Everpower , we will continuously create the surmounting expectation quality and service" , wholeheartedly serves for customers, take the market as the instruction, keep product quality and service level with world synchronization.

The quality of products is assured right from design, material ordering to the final dispatch. We have all the required testing facilities to assure the reliability & quality of the materials used in the manufacturing transformers. Our transformers have been tested and approved by Independent testing lab.

Everpower transformers undergoes a detailed individual test and inspection, including all routine test according to National or International Standard prior to shipment.

These includes:

- Resistance measurement of windings
- Voltage Ratio and No load current test
- No load losses test Excitation Current at rated voltage
- Impedance voltage and load loss measurement
- Induced Over-voltage withstand test
- Tank Air pressure test
- Dielectric test of oil

The following type and special tests can be carried out upon request for the transformer of new design or customer:

- Temperature rise test
- Lighting Impulse Test
- Short Circuit Test
- Noise Level Test

Three phase 750KVA test from Independent Test Lab
(C.R.G.O. Silicon Steel Core)

Single phase 10KVA type test from Independent Test Lab
(Amorphous Metal Core)

Single phase 25KVA type test from Independent Test Lab
(Primary Voltage: 34.5/19.92kV)