

# 三相箱式变压器

## Three Phase Pad Mounted Transformer

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### 终端型箱式变压器

Liquid-Filled Radial Feed Pad Mounted Transformer



### 介绍 General >>

终端型箱式变压器是一种油浸式三相商业箱式配电变压器，专门设计用于服务于购物中心，学校，机构和工厂等地下配电负载。它适用于带或不带丝锥的终端型应用。该变压器使用铝或铜绕组，并经过优化以最大程度地提高效率 and 占地面积。具有电压高，中性点无漂移，损耗小，体积小，成本效益，安全环保，外形美观等优点。我司终端型箱式变压器是根据行业标准（包括适用的CSA，ANSI C.57，DOE和IEEE）进行设计和测试的。

Liquid-Filled Radial Feed Pad Mounted Transformer is an oil-filled, three-phase, commercial pad mounted distribution transformer specifically designed for servicing such underground distribution loads as shopping centers, schools, institutions and industrial plants. It is available in both live front and dead front construction, for radial feed applications, with or without taps. The transformer uses aluminum or copper winding and is optimized to maximize efficiency and footprint. It has many advantages: such as high voltage, no drifting of neutral point, low loss, small volume, cost-effective, safety and environment protection, attractive appearance and etc. Our Liquid-Filled Radial Feed Pad Mounted Transformer is designed and tested in accordance with industry standards including CSA, ANSI C.57, DOE, and IEEE as applicable.

## 标准功能 Standard Features



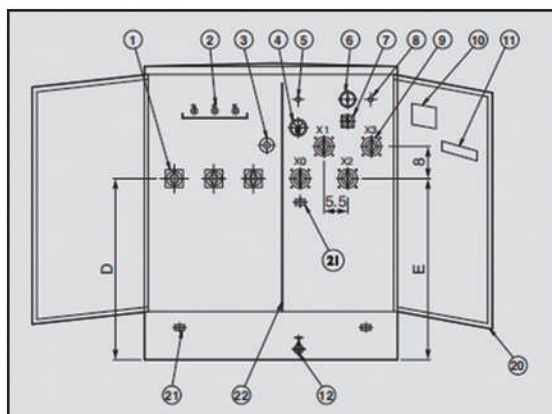
- 低碳钢，可选不锈钢罐
  - 三点门锁门，确保安全
  - 可移动门槛，易于安装
  - 不锈钢橱柜铰链和安装螺栓
  - 带有可移动门槛的固定式柜子，其深度如下：
    - / 19英寸深，适用于300kVA至750 kVA
    - / 22英寸深，适用于1000kVA至1500kVA
    - / 24英寸深，适用于2000 kVA至3750kVA
    - / 30英寸深，适用于7500kVA至5000 Kva
  - 对于带电的正面结构，外部钳位高压瓷带有单个吊环螺栓的夹式连接器的套管（适用于#6 AWG实心至250 MCM绞合导体）。
  - 对于无前端结构，可使用外部夹紧的高压套管孔来卸荷或不卸荷插件。
  - 带120° 固定杆的HV和LV隔室门为铰链式和提升式
  - 钢制HV / LV车厢隔板
  - 用LV上的一个五角螺栓进行挂锁  
车厢门和HV上的两个五角螺栓  
车厢门-含三点门锁机构
  - 高压连接：
    - / 带电的外部前部包覆和可拆卸的高压套管  
带吊环螺栓，夹式连接器
  - 低压连接：
    - / 外部夹紧的聚合物和瓷低压衬套，带有  
4-12孔铲
  - 500 kVA及以下的排油塞
  - 1英寸排水阀，带采样器，适用于750kVA及以上
  - 加油塞
  - 五脚铁芯/线圈组件。
  - 可移动的LV中性接地带；按要求
  - 符合ANSI要求的铭牌
  - 自动式溢流阀
  - 吊耳（4）
- Mild steel, optional stainless steel tank
  - Three-point latching door for security
  - Removable sill for easy installation
  - Stainless steel cabinet hinges and mounting studs
  - Bolted-on cabinet with removable sill having the following depths :
    - / 19" deep for 300kVA through 750 kVA
    - / 22" deep for 1000kVA through 1500kVA
    - / 24" deep for 2000 kVA through 3750kVA
    - / 30" deep for 5000 Kva through 7500kVA
  - For live front construction, externally clamped high voltage porcelain bushings with a single eyebolt, clamp-type connector (accommodates #6 AWG solid to 250 MCM stranded conductors).
  - For dead front construction, externally clamped high voltage bushing wells for loadbreak or non-loadbreak inserts.  
HV and LV compartment doors-hinged and lift-off type with
  - 120° holding bars  
Steel HV/LV compartment barrier
  - Padlocking facility with one penta-head bolt on the LV  
compartment door and two penta-head bolts on the HV  
compartment door-including 3 point latching mechanism
  - HV connection:
    - / Live front-external clamped and removable HV bushings  
with eyebolt, clamp type connector
  - LV connection:
    - / Externally clamped polymer & porcelain LV bushing with  
4-12 Hole spades
  - Oil drain plug for 500 kVA and below
  - 1" drain valve with sampler for 750 kVA and above
  - Oil fill plug
  - Five-legged core/coil assembly.
  - Removable LV neutral ground strap; as required
  - Nameplate per ANSI requirement
  - Self-actuating pressure relief valve
  - Lifting lugs (4)

## 可选配件 Optional Accessories >>

- 油位计
- 液体温度表
- 压力真空计
- 带手孔的焊接盖
- 带或不带采样器的排油阀
- 安装在油箱盖上的机械泄压装置
- 主终端：
  - 带负载断开插件的外部夹紧式套管孔
  - 整体式断负荷或无负荷套管
- 二级终端：
  - 带有NEMA 4孔，6孔，8孔，10孔或12孔铲的外部夹紧式衬套
  - 提供铲形支撑。它们提供8孔或更大的铲状端子-主交换：
  - LBOR油开关：一个用于终端型。
  - 外部无励磁分接开关
  - 外置双电压开关
  - 外接 $\Delta$ -Y开关
  - 2位负载断油开关
  - 4位T或V型刀片分段回路开关
- 过压保护：
  - 配电级，金属氧化物避雷器，3-36 kV。
  - 配电级，阀式避雷器，3-27 kV。
- 过电流保护：
  - 每个双敏熔丝上均装有塑料滴头杯
  - 弱链接盒保险丝
  - 双敏熔丝与内部部分范围限流熔断器串联
  - 二次下油断路器
- 其他构造选项：
  - 不锈钢水箱及柜体设计
  - 部分不锈钢设计（柜门槛和罐底）
  - 30英寸或34英寸或40英寸深的机柜
  - CT或PT，包括安装支持
  - LV外部安装的塑壳断路器
  - 外置电度表
  - 轻巧的翻盖式机柜
  - 其他外部安装的铭牌
  - 根据要求不同的油漆颜色
- 防风罩：
  - 变压器在机柜上可能具有可选的防风罩，该防风罩通过铰链连接，可以留出空间以更换双敏熔丝。
  - 可以方便地将防风罩提升到位并用单个支撑臂固定。
  - 防风罩不需要其他压紧硬件。

- Oil level gauge.
- Liquid temperature gauge.
- Pressure vacuum gauge.
- Welded cover with handhole.
- Oil drain valve with or without sampler.
- Mechanical pressure relief device mounted on tank cover.
- Primary termination:
  - Externally clamped bushing wells with loadbreak inserts
  - Integral loadbreak or non-loadbreak bushings
- Secondary termination:
  - Externally clamped bushings with NEMA 4-hole, 6-hole, 8-hole, 10-hole or 12-hole spades
  - Spade supports are available. They are provided for 8-hole spades and larger
- Primary Switching:
  - LBOR oil switch: one for radial feed.
  - Externally operated de-energized tap changer
  - Externally operated dual voltage switch
  - Externally operated  $\Delta$ -Y switch
  - 2-position loadbreak oil switches
  - 4-position T or V blade sectionalizing loop switches
- Overvoltage Protection:
  - Distribution class, metal oxide arresters, 3-36 kV.
  - Distribution class, valve-type lightning arresters, 3-27 kV.
- Over-current protection:
  - Bayonet-type expulsion fuses with plastic drip cup mounted on each bayonet fuse
  - Weak link cartridge fuses
  - Bayonet type in series with internal partial-range current limiting fuses
  - Secondary under oil circuit breaker
- Additional construction options:
  - Stainless steel tank and cabinet design
  - Partial stainless steel design (cabinet sill and tank bottom)
  - 30" or 34" or 40" deep cabinet
  - CT's or PT's, including mounting support
  - LV externally mounted molded case breaker
  - Externally mounted kWh meter
  - Flip-top cabinet for low profile design
  - Additional externally mounted nameplate
  - Different paint color per requirement
- Weathercover:
  - Transformers may feature an optional weathercover over the cabinet which is hinged to allow clearance for replacement of the bayonet-type fuses.
  - The weathercover can be lifted easily into place and secured with a single supporting arm.
  - The weathercover requires no additional holddown hardware.

# 标准设计 Standard Design



NO.	NAME	NO.	NAME
1	HV BUSHING	12	DRAIN VALVE WITH SAMPLER
2	BAY-O-NET FUSE	13	PAD LOCKABLE DOOR HANDLE
3	TAP CHANGER	14	LIFTING LUGS
4	DIAL TYPE THERMOMETER	15	HAND HOLE & SECURITY COVER
5	1 IN FILL PIUG	16	TANK
6	PRESSURE VACUUM GAUGE	17	COOLING RADIATORS
7	LIQUID LEVEL GAUGE	18	JACKING PAD
8	PRESSURE RELIEF VALVE	19	JACKING PROVISIONS
9	LV BUSHING	20	DOOR
10	NAME PLATE	21	2 HOLE HORIZ NEME GRD PAD
11	SERIAL NO	22	METAL LV-HV BARRIER

## 三相终端型箱式变压器技术参数

Technical Data for Liquid-Filled Radial Feed Pad Mounted Transformer

额定容量 (KVA) Rated Power	高压 (V) High Voltage	低压 (V) Low Voltage	损耗(W) Loss		尺寸(mm) Dimension			重量(KG) Weight	
			空载损耗(W) No-load Loss	有载损耗(W) On-load Loss	宽 W	深 D	高 H	油重 Oil Weight	总重 Total Weight
75	34500/ 19920 13800/ 7957 13200/ 7620 12470/ 7200 or others	240 480 480Y/ 277 600Y/ 347	180	1250	1390	910	1430	120	645
112.5			200	1500	1420	920	1430	138	729
150			280	2200	1510	980	1530	201	989
225			400	3050	1600	1000	1660	230	1195
300			480	3650	1660	1080	1680	260	1415
500			680	5100	1810	1160	1790	325	1905
750			980	7500	2030	1300	2030	535	2755
1000			1150	10300	1651	1549	1854	650	3235
1500			1640	14500	2210	1470	2150	748	5835
2000			2160	20645	2380	1600	2220	950	6430
2500			2680	27786	2480	1650	2330	1020	8865

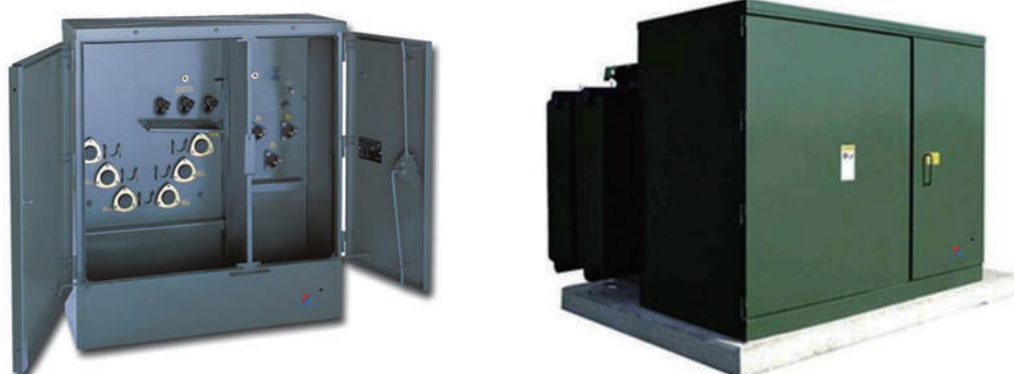
注：以上数据仅以我司标准设计为准，特殊要求可定制。

Note: The above data is only subject to our standard design, special requirement can be customized.

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## 三相环网型箱式变压器

Liquid-Filled Loop Feed Pad Mounted Transformer



### 介绍 General >>

环网型箱式变压器是一种油浸式三相商业箱式配电变压器，专门设计用于服务于购物中心，学校，机构和工厂等地下配电负载。它适用于带或不带丝锥的终端型应用。该变压器使用铝或铜绕组，并经过优化以最大程度地提高效率和占地面积。具有电压高，中性点无漂移，损耗小，体积小，成本效益，安全环保，外形美观等优点。我司环网型箱式变压器是根据行业标准（包括适用的CSA，ANSI C.57，DOE和IEEE）进行设计和测试的。

The Liquid-Filled Loop Feed Pad Mounted Transformer is an oil-filled, three-phase, commercial pad mounted distribution transformer specifically designed for servicing such underground distribution loads as shopping centers, schools, institutions and industrial plants. It is available in both live front and dead front construction, for loop feed applications, with or without taps. The transformer uses aluminum or copper winding and is optimized to maximize efficiency and footprint. It has many advantages: such as high voltage, no drifting of neutral point, low loss, small volume, cost-effective, safety and environment protection, attractive appearance and etc.

Our Liquid-Filled Loop Feed Pad Mounted Transformer is designed and tested in accordance with industry standards including CSA, ANSI C.57, DOE, and IEEE as applicable.

## 标准功能 Standard Features



- 低碳钢，可选不锈钢罐
  - 三点闭锁门，确保安全
  - 可移动门槛，易于安装
  - 不锈钢橱柜铰链和安装螺柱
  - 带有可移动门槛的固定式柜子，其深度如下：
    - / 19英寸深，适用于300kVA至750 kVA
    - / 22英寸深，适用于1000kVA至1500kVA
    - / 24英寸深，适用于2000 kVA至3750kVA
    - / 30英寸深，适用于7500kVA至5000 Kva
  - 对于带电的正面结构，外部钳位高压瓷带有单个吊环螺栓的夹式连接器的套管（适用于#6 AWG实心至250 MCM绞合导体）
  - 对于无前端结构，可使用外部夹紧的高压套管孔来卸荷或不卸荷插件
  - 带120° 固定杆的HV和LV隔室门为铰链式和提升式
  - 钢制HV / LV车厢隔板
  - 用LV上的一个五角螺栓进行挂锁
  - 车厢门和HV上的两个五角螺栓
  - 车厢门-含三点闭锁机构
  - 高压连接：
    - 带电的外部前部包覆和可拆卸的高压套管
    - 带吊环螺栓，夹式连接器
  - 低压连接：
    - 外部夹紧的聚合物和瓷低压衬套，带有4-12孔铲
  - 500 kVA及以下的排油塞
  - 1英寸排水阀，带采样器，适用于750 kVA及以上
  - 加油塞
  - 五脚铁芯/线圈组件
  - 可移动的LV中性接地带；按要求
  - 符合ANSI要求的铭牌
  - 自动式溢流阀
  - 吊耳（4）
- Mild steel, optional stainless steel tank
  - Three-point latching door for security
  - Removable sill for easy installation
  - Stainless steel cabinet hinges and mounting studs
  - Bolted-on cabinet with removable sill having the following depths :
    - / 19" deep for 300kVA through 750 kVA
    - / 22" deep for 1000kVA through 1500kVA
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  - For live front construction, externally clamped high voltage porcelain bushings with a single eyebolt, clamp-type connector (accommodates #6 AWG solid to 250 MCM stranded conductors).
  - For dead front construction, externally clamped high voltage bushing wells for loadbreak or non-loadbreak inserts.
  - HV and LV compartment doors-hinged and lift-off type with 120° holding bars
  - Steel HV/LV compartment barrier
  - Padlocking facility with one penta-head bolt on the LV compartment door and two penta-head bolts on the HV compartment door-including 3 point latching mechanism
  - HV connection:
    - Live front-external clamped and removable HV bushings with eyebolt, clamp type connector
  - LV connection:
    - Externally clamped polymer & porcelain LV bushing with 4-12 Hole spades
  - Oil drain plug for 500 kVA and below
  - 1" drain valve with sampler for 750 kVA and above
  - Oil fill plug
  - Five-legged core/coil assembly.
  - Removable LV neutral ground strap; as required
  - Nameplate per ANSI requirement
  - Self-actuating pressure relief valve
  - Lifting lugs (4)

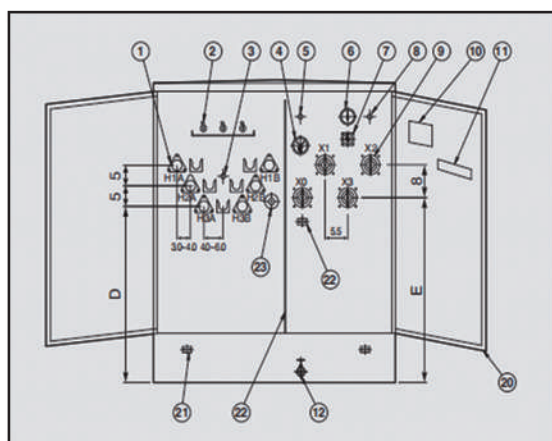
## 可选配件 Optional Accessories >>

- 油位计
- 液体温度表
- 压力真空计
- 带手孔的焊接盖
- 带或不带采样器的排油阀
- 安装在油箱盖上的机械泄压装置
- 主终端：
  - 带负载断开插件的外部夹紧式套管孔
  - 整体式断负荷或无负荷套管
- 二级终端：
  - 带有NEMA 4孔，6孔，8孔，10孔或12孔铲的外部夹紧式衬套
  - 提供铲形支撑。它们提供8孔或更大的铲状端子-主交换：
  - LBOR油开关：两个用于环网型
  - 外部无励磁分接开关
  - 外置双电压开关
  - 外接 $\Delta$ -Y开关
  - 2位负载断油开关
  - 4位T或V型刀片分段回路开关
- 过压保护：
  - 配电级，金属氧化物避雷器，3-36 kV
  - 配电级，阀式避雷器，3-27 kV
- 过电流保护：
  - 每个双敏熔丝上均装有塑料滴头杯
  - 弱链接盒保险丝
  - 双敏熔丝与内部部分范围限流熔断器串联
  - 二次下油断路器
- 其他构造选项：
  - 不锈钢水箱及柜体设计
  - 部分不锈钢设计（柜门槛和罐底）
  - 30英寸或34英寸或40英寸深的机柜
  - CT或PT，包括安装支持
  - LV外部安装的塑壳断路器
  - 外置电度表
  - 轻巧的翻盖式机柜
  - 其他外部安装的铭牌
  - 根据要求不同的油漆颜色
- 防风罩：
  - 变压器在机柜上可能具有可选的防风罩，该防风罩通过铰链连接，可以留出空间以更换双敏熔丝
  - 可以方便地将防风罩提升到位并用单个支撑臂固定
  - 防风罩不需要其他压紧硬件



- Oil level gauge
- Liquid temperature gauge
- Pressure vacuum gauge
- Welded cover with handhole
- Oil drain valve with or without sampler
- Mechanical pressure relief device mounted on tank cover
- Primary termination:
  - Externally clamped bushing wells with loadbreak inserts
  - Integral loadbreak or non-loadbreak bushings
- Secondary termination:
  - Externally clamped bushings with NEMA 4-hole, 6-hole, 8-hole, 10-hole or 12-hole spades
  - Spade supports are available. They are provided for 8-hole spades and larger
- Primary Switching:
  - LBOR oil switch: two for loop feed.
  - Externally operated de-energized tap changer
  - Externally operated dual voltage switch
  - Externally operated  $\Delta$ -Y switch
  - 2-position loadbreak oil switches
  - 4-position T or V blade sectionalizing loop switches
- Overvoltage Protection:
  - Distribution class, metal oxide arresters, 3-36 kV.
  - Distribution class, valve-type lightning arresters, 3-27 kV.
- Over-current protection:
  - Bayonet-type expulsion fuses with plastic drip cup mounted on each bayonet fuse
  - Weak link cartridge fuses
  - Bayonet type in series with internal partial-range current limiting fuses
  - Secondary under oil circuit breaker
- Additional construction options:
  - Stainless steel tank and cabinet design
  - Partial stainless steel design (cabinet sill and tank bottom)
  - 30" or 34" or 40" deep cabinet
  - CT's or PT's, including mounting support
  - LV externally mounted molded case breaker
  - Externally mounted kWh meter
  - Flip-top cabinet for low profile design
  - Additional externally mounted nameplate
  - Different paint color per requirement
- Weathercover:
  - Transformers may feature an optional weathercover over the cabinet which is hinged to allow clearance for replacement of the bayonet-type fuses.
  - The weathercover can be lifted easily into place and secured with a single supporting arm.
  - The weathercover requires no additional holddown hardware.

# 标准设计 Standard Design



NO.	NAME	NO.	NAME
1	HV BUSHING WEKKS ONLY	13	PAD LOCKABLE DOOR HANDLE
2	BAY-O-NET FUSE	14	LIFTING LUGS
3	4-POSITION T-BLADE S/W	15	HAND HOLE & SECURITY COVER
4	DIAL TYPE THERMOMETER	16	TANK
5	I IN FILL PIUG	17	COOLING RADIATORS
6	PRESSURE VACUUM GAUGE	18	JACKING PAD
7	LIQUID LEVEL GAUGE	19	JACKING PROVISIONS
8	PRESSURE RELIEF VALVE	20	DOOR
9	LV BUSHING	21	METAL LV-HV BARRIER
10	NAME PLATE	22	2 HOLE HORIZ NEME GRD PAD
11	SERIAL NO	23	TAP CHANGER
12	I IN DRAIN VALVE WITH SAMPLER		

## 三相环网型箱式变压器技术参数

Technical Data for Liquid-Filled Loop Feed Pad Mounted Transformer

额定容量 (KVA) Rated Power	高压 (V) High Voltage	低压 (V) Low Voltage	损耗(W) Loss		尺寸(mm) Dimension			重量(KG) Weight	
			空载损耗(W) No-load Loss	有载损耗(W) On-load Loss	宽 W	深 D	高 H	油重 Oil Weight	总重 Total Weight
75	34500/ 19920	240	180	1250	1390	910	1430	120	645
112.5			200	1500	1420	920	1430	138	729
150	13800/ 7957	480	280	2200	1510	980	1530	201	989
225			400	3050	1600	1000	1660	230	1195
300	13200/ 7620	480Y/ 277	480	3650	1660	1080	1680	260	1415
500			680	5100	1810	1160	1790	325	1905
750	12470/ 7200	600Y/ 347	980	7500	2030	1300	2030	535	2755
1000			1150	10300	1651	1549	1854	650	3235
1500	or others		1640	14500	2210	1470	2150	748	5835
2000			2160	20645	2380	1600	2220	950	6430
2500			2680	27786	2480	1650	2330	1020	8865

注：以上数据仅以我司标准设计为准，特殊要求可定制。

Note: The above data is only subject to our standard design, special requirement can be customized.