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MT-PML-R7-3P-DMA-225KVA-GE-LT-DF-A6-BB-CZ-2B4-M1

225 kVA Pad Mount Transformer - 34500V Delta Primary - 480GrdY/277 Grounded Wye Secondary - Oil Cooled, ANSI Gray

Product ID: 306527



Image: MT-PML-R7-3P-DMA-225KVA-GE-LT-DF-A6-BB-CZ-2B4-M1

Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.

MT-PML-R7-3P-DMA-225KVA-GE-LT-DF-A6-BB-CZ-2B4-M1 Pad Mount Transformer	Ratings
Transformer Type: Pad Mounted, Compartmental-Type	Meets/Exceeds DOE 2016 Efficiency Ratings
Transformer Configuration: Liquid Filled Pad Mounted	Meets/Exceeds CSA Efficiency Ratings
Transformer Feed Type: Loop Feed	Complies with ANSI / IEEE C57.12.00
Operation: Step-Down Operation (Not Approved for Step-Up)	Complies with ANSI / IEEE C57 12.28
Phase: Three Phase	Complies with ANSI / IEEE C57 12.29
Capacity: 225 KVA	Complies with ANSI / IEEE C57 12.34
Vector Group: DYN1	Complies with ANSI / IEEE C57 12.35
Primary Voltage: 34500V	Complies with ANSI / IEEE C57.12.70
Primary Voltage Switch: N/A	Complies with ANSI / IEEE C57.12.110
Primary Voltage Class: 35 kV Class	Complies with ANSI / IEEE C57.12.131
Primary Phasor: Delta	Complies with ANSI / IEEE C62.11
Primary BIL: 150 KV	Complies with ANSI / IEEE C62.22
Secondary Voltage: 480GrdY/277	Complies with ANSI / IEEE 386
Secondary Voltage Class: 1.2 kV Class	Complies with ANSI / IEEE C2
Secondary Phasor: Grounded Wye	Complies with ANSI / IEEE C37.47
Secondary BIL: 30 KV	Complies with ANSI Z535.4
Frequency: 60 Hz	Complies with ASTM D3487
Temperature Rise: 65°C	Complies with ASTM D6871
Insulation Rating: Class E Insulation - 120°C, 248°F	Complies with NEMA 260-1996
Cooling Class: KNAN; Self-Cooled	Complies with 10 CFR Part 431
Forced Air (Fans): None	Complies with CSA C2.1-06
Tap Changer: 5-position Tap Changer	Complies with CSA C50
Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps	Complies with CSA C88
Tap %: 2.5%	Complies with CSA C88.1
Tap Changer Switch Rating: 200-Amp, 35 kV	Complies with CSA C88-16

Tap Changer Switch Location: High Voltage (HV) [Left Side] Front Compartment
Impedance: 1.2-6.0% Typical, Target 3.10-5.75%
Primary Connection Type: Dead Front
Primary Termination Arrangement: V Terminal Arrangement
Primary Termination: Externally Clamped Integral Bushings w/ Removable Studs, 200A Load Break Elbows
Primary Connection Qty: (6) Primary Connections for use w/ Elbow Connectors
Primary Parking Stand Qty: (6) Welded Brackets for Installing Accessory Parking Stand Bushings
Primary Bushing Rating: 35 kV Class, 150 kV BIL, 200A, Load Break, IEEE 386 Color Off-White
Primary Neutral Connection: N/A
Primary Surge Arrestors: (3) High Voltage Elbow Surge Arrestors, Included
Primary Surge Arrestor Voltage Rating: 36 kV Class Elbow Arrestor
Primary Surge Arrestor MCOV Rating: 21 kVrms
Primary Over Current Protection (OCP): Bayonet Expulsion Fuse in series w/ Partial-Range Current-Limiting Fuse
Primary Over Current Protection Method: Fused, Oil-Immersed
Primary Over Current Protection Holder: Bayonet Fuse Holder w/ Flapper Valve and External Drip Shield
Primary Grounding Provisions: (1) NEMA Ground Bar attached to tank via (2) Welded Ground Bungs in HV Cabinet
Secondary Connection Type: Live Front
Secondary Termination Arrangement: Staggered Terminal Arrangement
Secondary Connections: NEMA Spade Terminals, 4-Hole Spade, Externally Clamped, Accepts up to (4) Double Lug connections with (2) cables per side of Spade connector
Secondary Connection Qty: (4) Externally Clamped One-Piece Epoxy Bushings Copper Threaded Studs
Secondary Connection Supports: N/A
Secondary Over Current Protection (OCP): N/A
Secondary Neutral Connection: Secondary X2 Neutral Grounded to Tank via 1/2”-13 UNC Tapped Hole, 7/16” Deep Bung & Copper Ground Strap
Secondary Grounding Provisions: (1) NEMA Ground Bar attached to tank via (2) Welded Ground Bungs in LV Cabinet
Metering Current Transformer (CT): N/A
Metering Panel: N/A
Auxiliary Control Panel : N/A
Load Break Switch: 4-Position Load Break Switch
Load Break Switch Qty: (1)
Load Break Switch Rating: 200-Amp, 35 kV
Load Break Switch Location: High Voltage (HV) Front Compartment
Efficiency Standard(s): Meets DOE 2016 Standards, Meets CSA Standards Meets ANSI/IEEE Standards
K-Factor Rating (Harmonic Mitigation): K-1 (Standard)
Pulse Drive Rating: N/A
Insulation Fluid: Biodegradable Natural Vegetable Oil Ester Insulating Fluid - Non-PCB Fluid
Fluid (Oil) Capacity*: 126 Gallons
Fluid (Oil) Weight*: 970 lb
Liquid Level Indicator: Analog Dial Gauge
Temperature Indicator: Analog Dial Gauge
Pressure/Vacuum Indicator: Analog Dial Gauge
Pressure Relief Device: Included, Automatic Action
Fault Indicator: N/A
Gas Sampler Valve: Included, Schrader Valve
Fill Valve: 1" NPT Port w/ Removable Bolt Plug
Fill Valve Location: Front Compartment
Drain Valve: 1" NPT Port w/ 5/8" NPT Sampler Valve
Drain Valve Location: Front Compartment
Winding Material: Copper
Ambient Temperature Rating: 40°C
Ambient Operating Temperature Range: -40°C to +40°C (-50°F to +104°F)
Sound Level: 55 dBA

Complies with CSA C227.4
Complies with CSA C227.5
Complies with CSA C802-3
Complies with CSA C802.1

Features

Pentahead Bolt Entry Assembly

High-Fire Point Insulating Fluid

Non-PCB Insulating Fluid
Tamper Proof Housing
Hinged Front Compartment Doors, Pad Lockable
NEMA 3R Wiring Compartment

Hot Stick Included, HV Door Mount

Efficiency %: 99.00%

Based on transformer operating at 50% of nameplate base kVA.

Load Losses Based on 85°C Reference Temp.

No Load Loss (in watts): +/- 400W

Full Load Loss (in watts) at 100%: +/- 2,300W

Total Load Loss (in watts) at 100%: +/- 2,700W

Total Losses at 55°C LL Temp.& 20°C NL Temp.

Total Load Loss (in watts) at 50%: +/- 942W

Note: *Losses offered are typical only, not guaranteed*

Labeling:
Externally Stencilled (Painted) KVA Rating
Externally Stencilled (Painted) Voltage Rating
External Non-PCB Label
External Warning & Danger Label

External Barcode Label

Internal Busing & Accessory Labeling
Stainless Steel Riveted Nameplate

Factory Tests:
Winding Resistance Test
Insulation Resistance Test
Voltage Ratio Error Test
Short-circuit Impedance Test
No-load Loss (Wattage) Test
Load Loss (Wattage) Test
Induced Voltage Withstand Test
Separate Source Voltage Withstand Test
Pressure Integrity Test Test

Shipping:
Shipped on pallet on open flatbed
Palletized on Wooden Pallet w/ Skid Pockets
Pallet Skid Facing Outward Sides of Truck
Note: *Crated shipping in lieu of palletizing can be done*

upon request for an additional fee

Elevation (Altitude): 3300ft (1000 meters) Above Sea Level
Core Material: Grain Oriented Steel
Tank Material: Coated Steel
Cabinet Material: Coated Steel
Base Platform Material: Coated Steel
Portability: Lifting lugs, provisions for jacking under base, w/ base construction suitable for using rollers or skidding
Housing Type: Compartmental Air-Filled Cabinet w/ Locking Doors, HV Compartment Left, LV Compartment Right, Steel Barrier Separation, HV Door Spring-Loaded Release Pin in LV Compartment
Enclosure Rating: NEMA 3R Weatherproof Wiring Cabinet, Sealed Tank
Seismic Rating: Yes
Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating
Finish Color: ANSI #70 Gray
Mounting: Pad Mounted
Conduit Opening: Bottom Feed Underground Entry/Exit
HV Compartment Base Wireway Dimensions*: 20"-W x 8"-D
LV Compartment Base Wireway Dimensions*: 16"-W x 8"-D
MV/LV Compartment Cabinet Depth*: 20"-D
Tank Cover Access Handhole: N/A
Dimensions*: 61"-W x 60"-D x 67"-H
Dry Weight (w/o Oil)*: - lb
Total Weight (Liquid Filled)*: 5,295 Lbs
*Please note that numbers are approximate and subject to change

Special Orders - Special Requirements
Contact us for special requirements
Toll Free: 1-800-369-6671
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The MT-PML-R7-3P-DMA-225KVA-GE-LT-DF-A6-BB-CZ-2B4-M1 34500V 3 Phase Energy Efficient Pad Mount Transformer from Larson Electronics is powerful, reliable and designed with the environment in mind. Suitable for both indoor and outdoor applications, the MT-PML-R7-3P-DMA-225KVA-GE-LT-DF-A6-BB-CZ-2B4-M1 provides increased reliablity and protection against critical equipment failures. The lower operating costs, lower heat emissions and lower cost of ownership make this transformer ideal for a wide range of applications and businesses.

PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO POWER DISTRIBUTION PANELS, TRANSFORMERS, OR SUBSTATIONS*

Transformer Features: With a transformer rating of 225kVA, the MT-PML-R7-3P-DMA-225KVA-GE-LT-DF-A6-BB-CZ-2B4-M1 transformer is a three phase unit with a primary voltage of 34500V Delta. It also provides a secondary voltage of 480GrdY/277V Grounded Wye. Featuring robust construction, this unit`s cores are manufactured with non-aging, cold-rolled silicon steel laminations using state of the art technology.

This unit boasts a low cost of ownership and is highly energy efficient. Lower heat emissions mean less cooling is needed as well. The Standard NEMA Type 3R enclosure makes the unit suitable for both indoor and outdoor applications and it can be pad mounted. The unit also features mineral oil cooling, class A insulation, a 55°C temperature rise and is rated IP24. The MT-PML-R7-3P-DMA-225KVA-GE-LT-DF-A6-BB-CZ-2B4-M1 is designed so that no excess oil heating occurs from unbalanced loads or phase loss on the primary side.

Enclosure Design: This pad mounted transformer is a compartmental design. The tank and housing are fabricated from steel. The front electrical enclosure carries a NEMA 3R rating. The high voltage and low voltage compartments are located in front of the transformer tank, with the high voltage compartment on the left side and low voltage compartment on the right side.

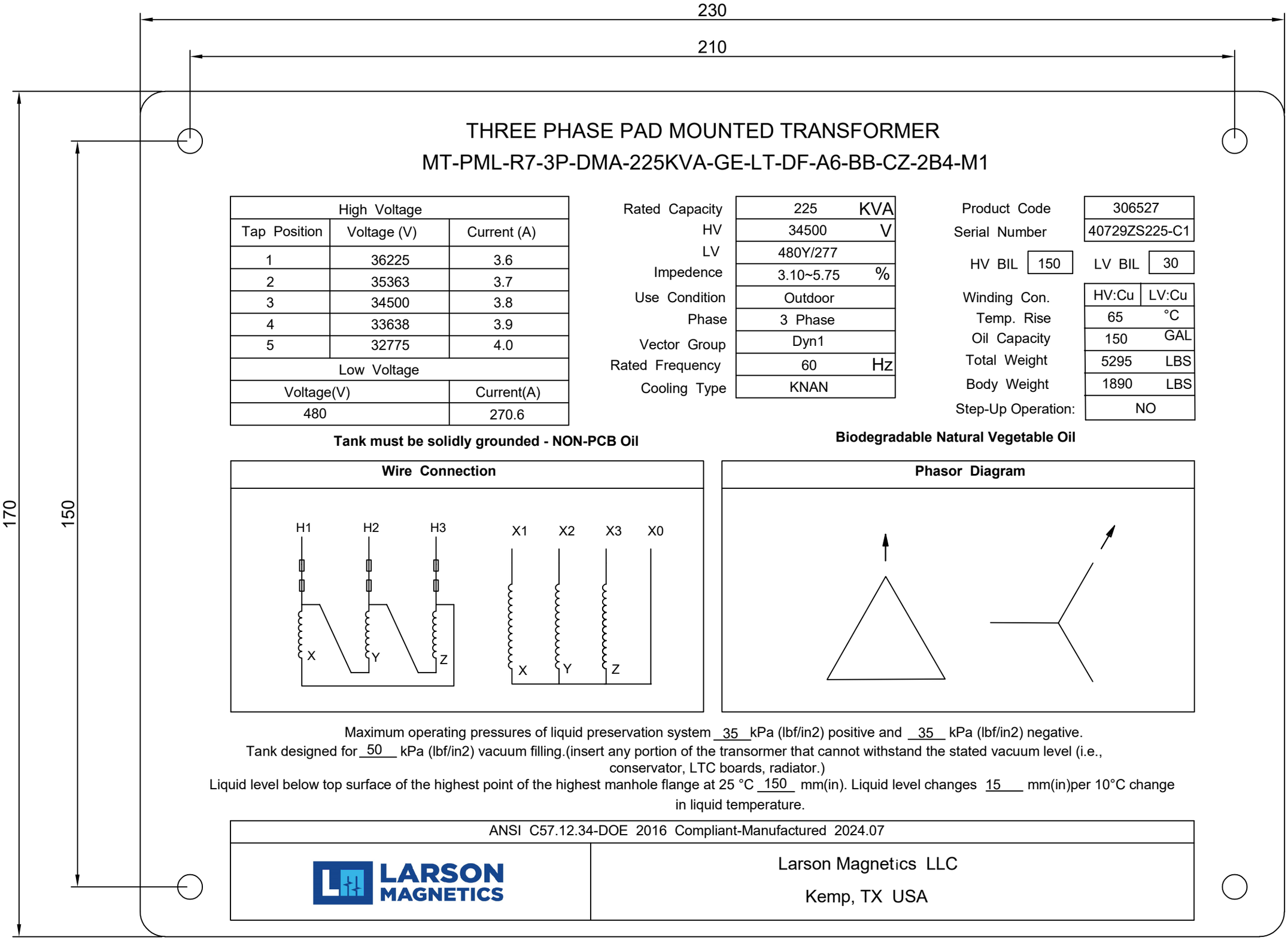
The HV and LV compartments are air filled and separated by a full length steel barrier between the compartments. A removable steel plate at the base of the HV and LV compartments prevents rodents and other intrusions from entering the enclosure once installed. This steel plate allows for underground conduit entry into the enclosure compartments. Two hinged exterior doors allows for access into the compartments. A single pad lockable handle on the low voltage compartment door allows for securing the transformer. A spring loaded pin within the low voltage compartment prevents the high voltage door from being opened without pulling the safety pin. A hot stick is included in the high voltage compartment, mounted to the HV door.

Benefits: The MT-PML-R7-3P-DMA-225KVA-GE-LT-DF-A6-BB-CZ-2B4-M1 pad mount transformer offers many benefits to the consumer. Precision cut aluminum transformer winding material help to improve performance. The close tolerances used during manufacturing also eliminates burrs which hinder performance. Each core is specially coated to prevent the ingress of moisture and are electrically balanced to minimize axial forces during short circuit situations.

This transformer provides owners with significant energy savings as well as offering environmental benefits. Higher efficiency not only extends the life of the transformer, but also turn into cost savings for owners in the form of lower energy bills and decreased cost of ownership.

Applications: General purposes.

Larson Electronics is a manufacturer and as such can build stationary and portable transformer systems to your specifications. Although we carry several models of power distribution transformer systems, we can deliver custom ordered units almost as quickly as our prebuilt units. If this model does not meet your needs, please contact us at 1-800-369-6671 or sales@larsonelectronics.com to discuss your specific requirements.



THREE PHASE PAD MOUNTED TRANSFORMER

MT-PML-R7-3P-DMA-225KVA-GE-LT-DF-A6-BB-CZ-2B4-M1

High Voltage		
Tap Position	Voltage (V)	Current (A)
1	36225	3.6
2	35363	3.7
3	34500	3.8
4	33638	3.9
5	32775	4.0
Low Voltage		
Voltage(V)		Current(A)
480		270.6

Rated Capacity	225	KVA
HV	34500	V
LV	480Y/277	
Impedence	3.10~5.75	%
Use Condition	Outdoor	
Phase	3 Phase	
Vector Group	Dyn1	
Rated Frequency	60	Hz
Cooling Type	KNAN	

Product Code	306527	
Serial Number	40729ZS225-C1	
HV BIL	150	LV BIL 30
Winding Con.	HV:Cu	LV:Cu
Temp. Rise	65	°C
Oil Capacity	150	GAL
Total Weight	5295	LBS
Body Weight	1890	LBS
Step-Up Operation:	NO	

Tank must be solidly grounded - NON-PCB Oil

Biodegradable Natural Vegetable Oil

Wire Connection

Phasor Diagram

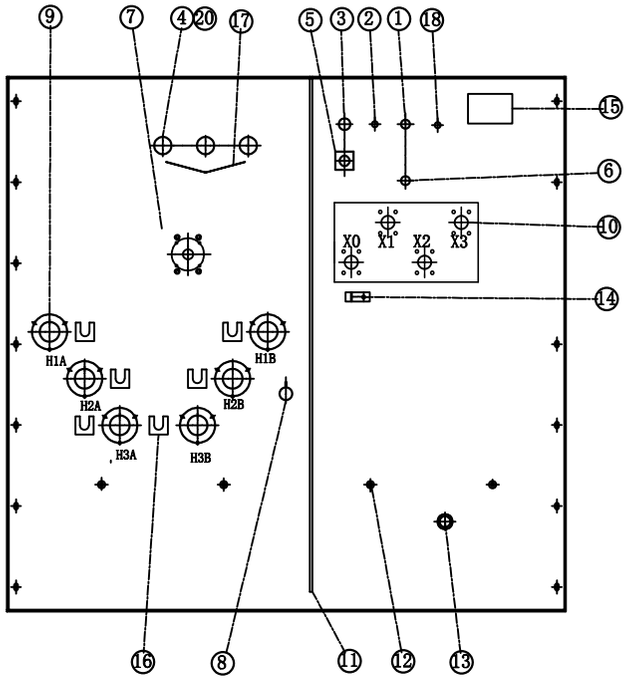
Maximum operating pressures of liquid preservation system 35 kPa (lbf/in2) positive and 35 kPa (lbf/in2) negative.
Tank designed for 50 kPa (lbf/in2) vacuum filling.(insert any portion of the transormer that cannot withstand the stated vacuum level (i.e., conservator, LTC boards, radiator.)
Liquid level below top surface of the highest point of the highest manhole flange at 25 °C 150 mm(in). Liquid level changes 15 mm(in)per 10°C change in liquid temperature.

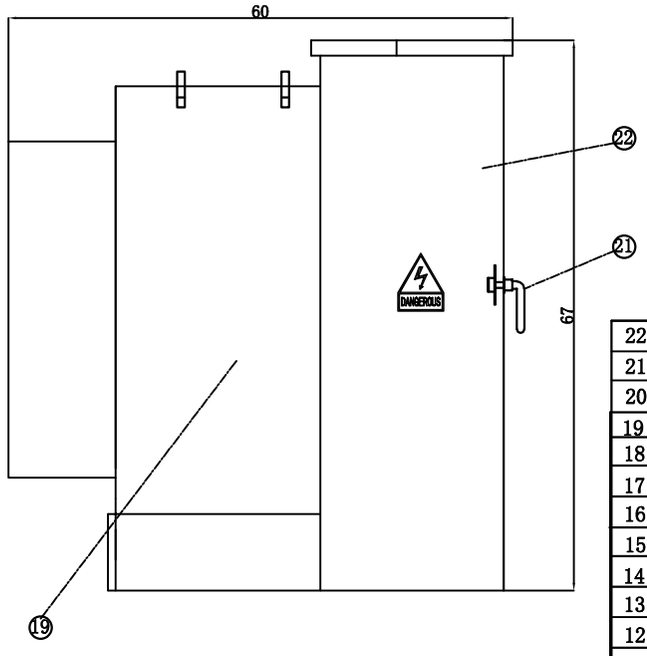
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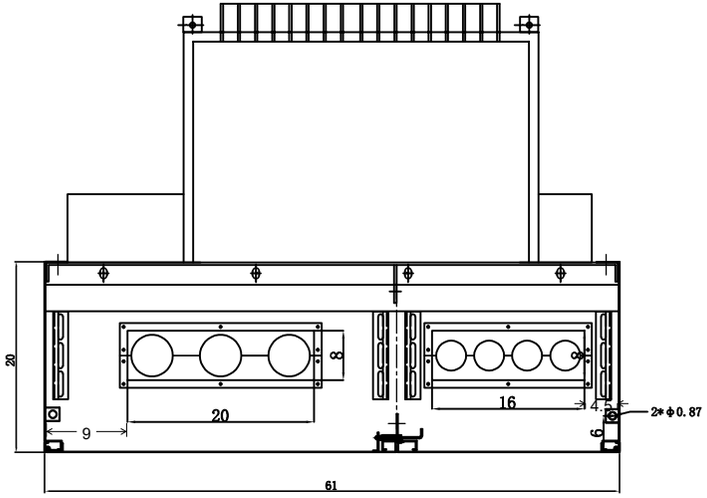
LARSON MAGNETICS

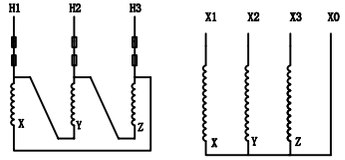
Larson Magnetics LLC

Kemp, TX USA

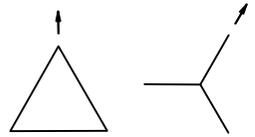








WIRING CONNECTION



PHASOR DIAGRAM

Approx. Weight: 5295LBS.

No.	Name	Model	QTY	Material	Remark
22	tank&housing	ANSI gray			
21	padlock	penta-head bolt	1		
20	current limting fuse		3		with Bayonet fuse
19	insulation oil	Biodegradable oil			
18	gas sampler valve		1		Schrade Valve
17	drip shield		1		
16	parking stand		6		
15	nameplate		1		
14	grounding strap		1		
13	drain valve w/sampler		1		
12	grouding lug	Ø25*20, M10	4		with copper bar
11	reinforcing rib	8mm steel	1		
10	LV bushing		4		4-hole spade
9	HV bushing	200A well&insert	6	load break	with (3) arrsters
8	off-circuit tap changer		1		
7	load breaker switch		1		4-position
6	temperature indicator		1		
5	oil indicator		1		
4	Bayonet fuse		3		w/flapper valve
3	oil fill valve		1		
2	pressure relief valve		1		automatic action
1	pressure indicator		1		

225kVA, 60Hz, KNAN,
34500V, Delta, Pri.,
480Y/277V, Wye-N

3P Pad Mounted Transformer

mark	revise	revision	signature	date
designed			standard	
checked			examined	
audited			approved	
crafted			date	

pattern mark				weight	scale

total page | page

LARSON ELECTRONICS®

Remark: dimensions here are in inches.Only for approval/preliminary design..

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Frequently Asked Questions (FAQ)

There are no Faqs