Larson Electronics LLC
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Phone: 800.369.6671

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MT-SSVT-R7-1P-GEXD-167KVA-SLZ-AE-A6-AM-CZ-Z-M3

167 KVA Station Service Voltage Transformer, 345000Y/200000 Grounded Wye Primary, 120/240V Secondary, Oil-filled, Copper, 8100 ft

Product ID: 311524



Image: MT-SSVT-R7-1P-GEXD-167KVA-SLZ-AE-A6-AM-CZ-Z-M3

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-SSVT-R7-1P-GEXD-167KVA-SLZ-AE-A6-AM-CZ-Z-M3 Station Service Voltage Transformer

Transformer Type: Station Service Voltage Transformer, Conventional Type
Transformer Configuration: Liquid Filled
Transformer Polarity Type: Subtractive
Phase: Single Phase
Capacity: 167 KVA
Primary Voltage: 345 KV
Primary Phasor: Grounded Wye
Maximum System Voltage: 362 KV
Primary Lightning Impulse Voltage (BIL): 1700 KV
Primary Switching Impulse Voltage (BSL) : 1175 KV
Partial Discharge Level: 300 KV
Secondary Voltage: 120/240V (L-N-L)
Secondary Voltage Class: 1.2 kV Class
Secondary Phasor: Dual Winding Single Phase
Secondary BIL: 30 KV
Frequency: 60 Hz
Temperature Rise: 55°C
Insulation Rating: Class E Insulation - 120°C, 248°F
Power Frequency Withstand Voltage (Dry, 1 Min.): 680 KV
Power Frequency Withstand Voltage (Wet, 10 Sec.): 680 KV
Cooling Class: ONAN; Self-Cooled
Tap Changer: 5-position Tap Changer
Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps
Tap %: 2.5%

Ratings

Meets/Exceeds DOE 2016 Efficiency Ratings
Complies with ANSI / IEEE #C57.12.00 and C57.12.01
Complies with ANSI / IEEE #C57.12.20
Complies with ANSI / IEEE #C57.12.28
Complies with ANSI / IEEE #C57.12.31
Complies with ANSI / IEEE C57.12.70
Complies with ANSI / IEEE C57.12.80, C57.19.01, C57.13.3
Complies with ASTM D3487
Complies with IEEE693
Windspeed Withstand rating - 125 mph

Tap Changer Switch Location: High Voltage (HV) Front Compartment
Impedance: 1.2-6.0% Typical
Primary Connection Type: Live Bushing Lug
Primary Termination: Porcelain High Voltage Bushing, NEMA 4-Hole Pad, ANSI #70 Gray
Primary Connection Qty: (1)
Primary Neutral Connection: Included, 5 KV Class, 30 KV BIL
Primary Surge Arresters : Included, MCOV 115%
Secondary Connection Type: Live Bushing Lug
Secondary Connections: Live Bushing Lugs equipped with (4) 2 inches conduit knockouts, bottom only.
Secondary Connection Qty: (3)
Secondary Neutral Connection: Secondary X2 Neutral Grounded to Tank via 1/2"-13 UNC Tapped Hole, 7/16" Deep Bung & Copper Ground Strap
Terminals: Tin Plated Primary and Secondary - Accepts Copper or Aluminum Connections
Grounding Provisions: (1) Lug w/ Grounding Strap, Tank Grounding Lug
Transformer Protection: N/A
Load Break Switch: N/A
Minimum Creepage Distance (8,000 ft altitude): TBD
Minimum Strike Distance (8,000 ft altitude): TBD
Efficiency Standard(s): Meets DOE 2016 Standards, Meets ANSI/IEEE Standards
K-Factor Rating (Harmonic Mitigation): K-1 (Standard)
Pulse Drive Rating: N/A
Insulation Fluid: Mineral Oil Type II, Non-PCB
Temperature Indicator: N/A
Pressure/Vacuum Indicator: N/A
Pressure Relief Device: Included, Automatic Action
Fault Indicator: N/A
Fill Valve: 1/2" NPT Port w/ Removable Bolt
Drain Valve: 1/2" NPT Port w/ Removable Bolt
Winding Material: Copper
Ambient Temperature Rating: -50°C to 40°C
Sound Level: 51 dBA
Elevation Level: 8100 ft Above Sea Level
Seismic: High Seismic Withstand Rating (Complies to IEEE 693)
Min. Basic Wind Speed: 90 mph
Importance Factor: 1.15
Core Material: Grain Oriented Steel
Tank Material: Coated Steel
Housing Material: Coated Steel w/ Corrosion Resistant Cover Band, Removable Top Cover
Hardware Material: Stainless Steel Hardware
Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating
Finish Color: Light Grey (ANSI #70)
Mounting: Base Mount
Lifting Lugs: Included
Dimensions*: 58.19"-W x 52.6"-D x 156.38"-H (1478mm x 1336mm x 3972mm)
Oil Weight*: 650 kg (1433 lbs)
Total Weight (Liquid Filled)*: 3150 kg (6945 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
Intl: 1-903-270-1187
Fax: 1-903-765-7664
E-mail: sales@larsonelectronics.com

The MT-SSVT-R7-1P-GEXD-167KVA-SLZ-AE-A6-AM-CZ-Z-M3 Station Service Voltage Transformer from Larson Electronics offers powerful, reliable and efficient power distribution in outdoor and public locations. The low operating costs, low heat emissions and low cost of ownership makes this transformer ideal for a wide range of applications and businesses. This power distribution system is designed for base mount on pad or pole installations and use.

Transformer Features: With a transformer rating of 167 kVA, the industrial transformer features a primary voltage of 345000Y/200000 Grounded Wye and a secondary voltage of single-phase 120/240V (L-N-L). This transformer connects to a three phase electrical grid system to provide single phase low voltage power for indoor distribution. This voltage transformer features porcelain high-voltage, single bushings on the primary side and three bushings on the secondary side. Equipped with Copper windings and a grain oriented steel core, this voltage transformer consists of one coil and two core loops

The MT-SSVT-R7-1P-GEXD-167KVA-SLZ-AE-A6-AM-CZ-Z-M3 is air cooled and does not have fans or mounting provision for fans. This unit features a 55°C temperature rise for reduced heat waste, increased reliability and longer life. The combination of low temperature rise and high efficiency makes this unit suitable for use in electrical rooms, air conditioned spaces in buildings, underground vaults and similar locations, in addition to outdoor areas.

Insulation Fluid: The MT-SSVT-R7-1P-GEXD-167KVA-SLZ-AE-A6-AM-CZ-Z-M3 features mineral oil (Type II) non-PCB insulation fluid. Internal marking is available for proper oil level monitoring. We offer transformers with FR-3 oil fluid, if needed.

Gauges: There is an oil level gauge in this transformer. We can add temperature and pressure/vacuum gauges at an additional cost. Standard liquid level, temperature and pressure/vacuum gauges are analog, manual reading types.

Valves: The MT-SSVT-R7-1P-GEXD-167KVA-SLZ-AE-A6-AM-CZ-Z-M3 is equipped with a pressure relief valve, fill valve, and drain valve with sampler port.

Pressure Relief Device: An automatic pressure relief device is included with this transformer.

Rapid Rise Relay: There are no rapid rise relays on the unit. This safety component is designed for protection when a rapid increase in tank pressure occurs. The relay is suitable for detecting sudden pressure fluctuations above predetermined safe limits.

Surge arresters: This system is equipped with one lightning arrester mounted on H1 primary terminal.

Protection Fuses: This transformer does not contain fuses or circuit breakers. For units without protection fuses, up stream protection is provided. We recommend provisions for protection fuses when possible, as blown fuses may require more frequent oil changes.

Mount: The heavy-duty enclosure makes the unit suitable for and outdoor applications

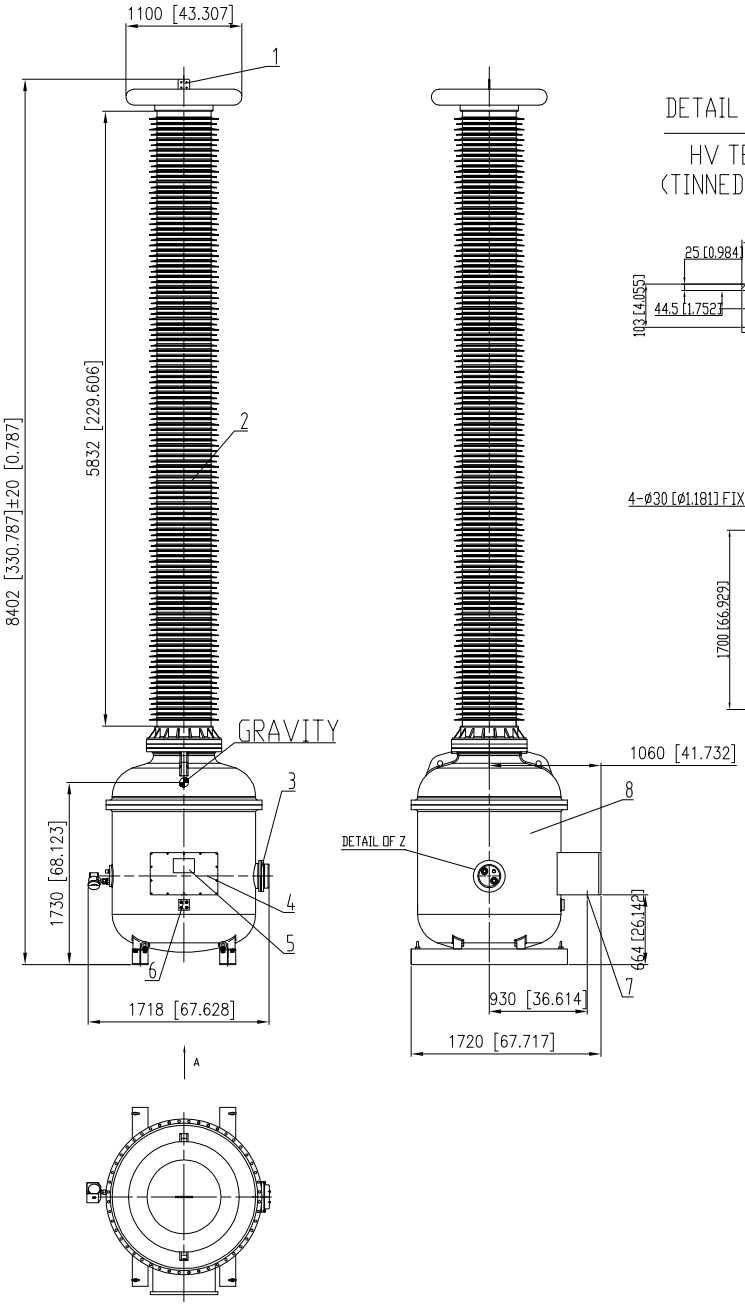
Benefits: The MT-SSVT-R7-1P-GEXD-167KVA-SLZ-AE-A6-AM-CZ-Z-M3 heavy-duty transformer offers many benefits to consumers. This transformer provides owners with significant energy savings, as well as offering environmental benefits. Higher efficiency not only extends the life of the transformer, but also turns into cost savings for owners in the form of lower energy bills and decreased cost of ownership.

Applications: General purposes, industrial sites, electrical rooms, public locations, manufacturing facilities, steel plants, offshore, commercial, military, processing plants, electric power distribution, utilities, public locations and more.

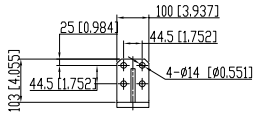
Larson Electronics is a manufacturer and as such can build stationary and portable transformer systems to your specifications. Although we carry several models of power distribution transformer systems, we can deliver custom ordered units almost as quickly as our prebuilt units. If this model does not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

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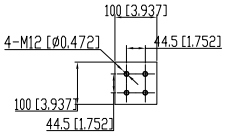
OUTLINE DRAWING OF 345KV POWER VOLTAGE TRANSFORMER, SF6 INSULATION
POWER BURDEN: 167kVA



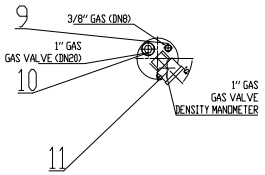
DETAIL OF ITEM #1
HV TERMINAL
(TINNED ALUMINUM)



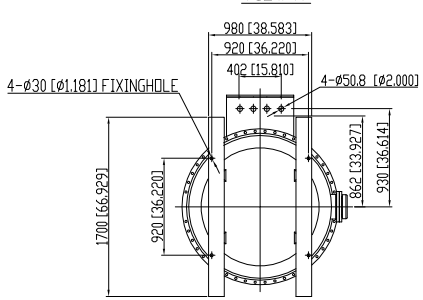
DETAIL OF ITEM #6
GROUNDING TERMINAL
(TINNED COPPER)



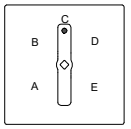
DETAIL OF Z



VIEW A

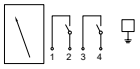


TAP CHANGER HANDLE



VOLTAGE (%)	SWITCH POSITION
105.0 %	A
102.5 %	B
100 %	C
97.5 %	D
95.0 %	E

RATED PRESSURE 0.50 MPa SF6
1-2 ALARM PRESSURE OPERATING PRESSURE 0.48 MPa SF6 (NO contact)
3-4 MINIMUM OPERATING PRESSURE 0.45 MPa SF6 (NO contact)



MAIN ELECTRICAL CHARACTERISTICS

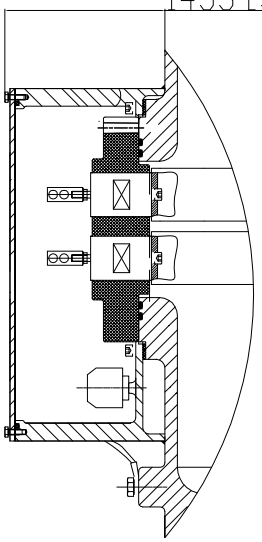
- STANDARDS: ANSI/ IEEE C57.13
- RATED VOLTAGE: 550 kV
- RATED FREQUENCY: 60 Hz
- POWER FREQUENCY TEST VOLTAGE: 680 kV 1min
- LIGHTNING IMPULSE TEST VOLTAGE: 1700 kV 1.2/50 μs
- SWITCHING IMPULSE WITHSTAND VOLTAGE: 1175kV
- VOLTAGE FACTOR: 1.2, cont. 1.5, 30s.
- PRIMARY OPERATING VOLTAGE: 345000/ √3 V
- NOMINAL SECONDARY VOLTAGE: 120-240 V
- POWER RATING: 167 kVA
- TEMPERATURE RISE: 55℃
- 5-POSITION TAP CHANGER
- TAP QTY: (2) FCAN ABOVE TAPS, (2) FCBN BELOW TAPS
- MINIMUM DEGREE OF PROTECTION: IP55
- ELEVATION LEVEL: 8100FT (2468.88 METERS) ABOVE SEA LEVEL
- TEMPERATURE RANGE: -50℃~+40℃
- COMPOSITE INSULATOR -GREY
- MIN. CREEPAGE DISTANCE : 17050 mm=671.26"
- MIN. ARCING DISTANCE: 5832 mm=229.61"
- SF6 WEIGHT: 180 kg=396.83 lbs
- TOTAL WEIGHT: 4100 kg=9038.95 lbs
- OPERATING PRESSURE SF6 0.50 MPA A 20℃ (REL.)
- ALARM PRESSURE SF6 0.48 MPA A 20℃ (REL.)
- MINIMUM OPERATING PRESSURE SF6 0.45 MPA A 20℃ (REL.)
- RUPTURE OF PRESSURE (20℃) 1.3 MPA 0+10%
- DESIGN PRESSURE 1.0MPA
- ENCLOSURE ACCORDING TO DM 1 12 1980

SR.NO.	DESCRIPTION
1	HV TERMINAL STUD
2	COMPOSITE INSULATOR -GREY
3	OVERPRESSURE RELIEF DEVICE
4	SECONDARY TERMINAL BOX
5	NAME PLATE
6	EARTH/GROUND TERMINAL
7	LV CABLE GRAND HOLE
8	ENCLOSURE
9	SF6 GAS FILLING VALVE-DN8
10	SF6 GAS FILLING VALVE-DN20
11	DENSITY MANOMETER
12	TAP CHANGER HANDLE

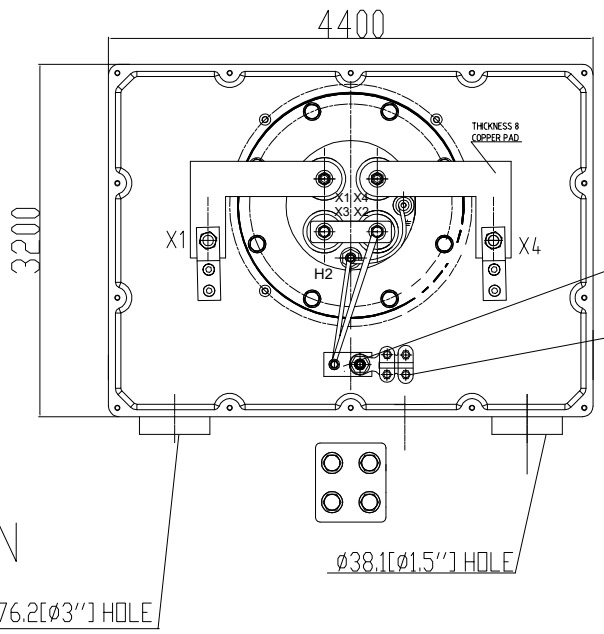
TITLE:	OUTLINE DRAWING	345KV POWER VOLTAGE TRANSFORMER			
PROJECT NO.:		TYPE			
CUSTOMER:		QUANTITY	1 NOS		
PO NO:		COMBINED		NAME	SIGN / DATE
ALL DIMENSIONS IN MM [INCHES]		SCALE: 1:1	DRN		
			CHD		
			APPD		
LARSON MAGNETICS LLC		DRG.NO:			

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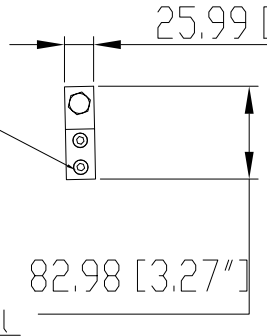
SECONDARY TERMINAL BOX DRAWING OF 345KV POWER VOLTAGE TRANSFORMER
SF6 INSULATION, POWER BURDEN: 167kVA



SERIES CONNECTION 240V



WIRE RANGE: 4/0AWG-290 kcmil

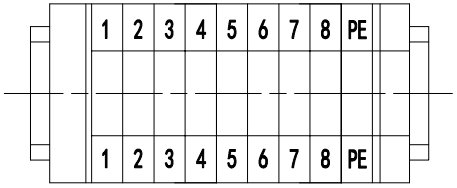


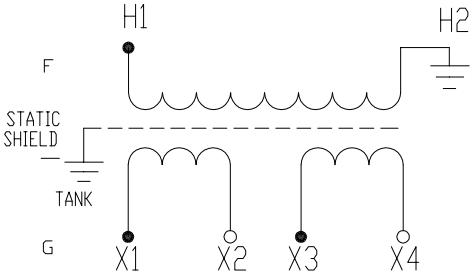
NEMA 2 HOLE EARTHING PAD

WCJB-6 TYPE
WIRE RANGE: 4/0 AWG-290 kcmil

HOLE PAD(COPPER)-ELECTRO TIN

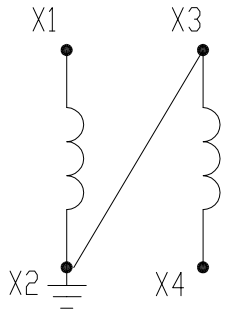
TERMINAL BLOCK



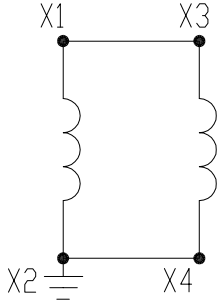


SUBTRACTIVE POLARITY

SERIES CONNECTION
240 V



PARALLEL CONNECTION
120 V



1-2, 3-4 ALARM (DENSITY MANOMETER)
5-6, 7-8 LOCK (DENSITY MANOMETER)

TITLE:	SEC. TERMINAL BOX DRAWING	345kV STATION SERVICE VOLTAGE TRANSFORMER				
PROJECT NO.:		TYPE				
CUSTOMER:		QUANTITY	1 NOS			
PO NO:		COMBINED		NAME	SIGN	DATE
ALL DIMENSIONS IN MM [INCHES]		SCALE: 1:1	DRN			
LARSON MAGNETICS			CHD			
			APPD			
LARSON MAGNETICS LLC		DRG.NO:				

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Frequently Asked Questions (FAQ)

There are no Faqs