Larson Electronics LLC
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Email: sales@LarsonElectronics.com
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MT-PMNT-R7-3P-GMF-1MVA-GMQ-RT-DD-A6-BB-CS-2B2-M2

1 MVA Pad Mount Network Transformer - 24940GrdY/14400 Grounded Wye Primary, 13200GrdY/7620 Grounded Wye Secondary - KNAN/Bell Green - 304 Stainless

Product ID: 297571



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-PMNT-R7-3P-GMF-1MVA-GMQ-RT-DD-A6-BB-CS-2B2-M2 Pad Mount Transformer
Transformer Type: Outdoor Pad Mounted, Compartmental-Type
Transformer Configuration: Liquid Filled Pad Mounted
Transformer Feed Type: Radial Feed
Operation: Step-Down Operation
Phase: Three Phase
Capacity: 1 MVA (1000 KVA)
Vector Group: YnYn
Continuous Voltage Range: 10%
Primary Voltage: 24940GrdY/14400
Primary Voltage Switch: N/A
Primary Voltage Class: 25 kV Class
Primary Phasor: Grounded Wye
Primary BIL: 125 KV
Secondary Voltage: 13200GrdY/7620
Secondary Voltage Class: 25 kV Class
Secondary Phasor: Grounded Wye
Secondary BIL: 150 kV
Frequency: 60 Hz
Temperature Rise: 65°C
Insulation Rating: Class A Insulation
Cooling Class: ONAN; Self-Cooled
Forced Air (Fans): None
Tap Changer: 5-position Tap Changer
Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps
Tap %: 2.5%
Tap Changer Switch Rating: 300-Amp, 35 kV
Tap Changer Switch Location: High Voltage (HV) Front Compartment

Ratings

Meets/Exceeds DOE 2016 Efficiency Ratings
Complies with ANSI / IEEE C57.12.00
Complies with ANSI / IEEE C57 12.28
Complies with ANSI / IEEE C57 12.29
Complies with ANSI / IEEE C57 12.34
Complies with ANSI / IEEE C57 12.35
Complies with ANSI / IEEE C57.12.70
Complies with ANSI / IEEE C62.11
Complies with ASTM D3487
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
100% Stainless Steel Construction, Corrosion Resistant

Efficiency %: 99.20%
Based on transformer operating at 50% of nameplate base kVA.

Load Losses Based on 85°C Reference Temp.
No Load Loss (in watts)): +/- 1350W +10% Tolerance
Full Load Loss (in watts) at 100%: +/- 12330W +10% Tolerance
Total Load Loss (in watts) at 100%: +/- 13680W +10% Tolerance

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

Impedance (Typical): 5.5% - 6.0%
Primary Connection Type: Dead Front, Side Mounted With Full Length ATC Bottom Entry
Primary Termination Arrangement: -
Primary Termination: -
Primary Connections: 25kV Class, 200A Bushing Well & Insert
Primary Connection Qty: (4), Staggered Terminal Arrangement
Primary Parking Stand Qty: -
Primary Bushing Rating: 30% Phase Bushing Rated For Positive Sequence Applications; 100% Phase Bushing Rated For Phase Independent Applications
Primary Neutral Connection: -
Primary Surge Arrestors: -
Primary Surge Arrestor Voltage Rating: -
Primary Surge Arrestor MCOV Rating: -
Primary Over Current Protection (OCP): -
Primary Over Current Protection Method: -
Primary Over Current Protection Holder: -
Primary Grounding Provisions: (1) Grounding Lug
Secondary Connection Type: Dead Front, Side Mounted With Full Length ATC Bottom Entry
Secondary Termination: Standoff Well Bushings w/ Removable Studs, 200A Load Break Elbows w/ Inserts
Secondary Connections: 200A Load Break Well Bushings w/ Inserts
Secondary Connection Qty: (4) Primary Connections w/ (4) Standoff Brackets for Parked Elbows
Secondary Connection Supports: N/A
Secondary Surge Arrestors: High Voltage Elbow Surge Arrestors, Included
Secondary Surge Arrestor Voltage Rating: 26 kV Class
Secondary Surge Arrestor MCOV Rating: 15 kVrms
Secondary Over Current Protection (OCP): Bayonet Fuses, Partial-Range Current-Limiting Fuses
Secondary Over Current Protection Method: Fused w/ Isolation Link
Secondary Over Current Protection Holder: Bayonet Fuse Holder w/ Drip Shield
Secondary Neutral Connection: 30% Phase Bushing Rated For Positive Sequence Applications; 100% Phase Bushing Rated For Phase Independent Applications
Secondary Grounding Provisions: (1) Grounding Lug
Metering Current Transformer (CT): N/A
Metering Panel: N/A
Auxiliary Control Panel : N/A
Load Break Switch: N/A
Load Break Switch Qty: N/A
Load Break Switch Rating: N/A
Load Break Switch Location: N/A
Efficiency Standard(s): Meets DOE 2016 Standards, Meets ANSI/IEEE Standards
K-Factor Rating (Harmonic Mitigation): K-0 (Standard)
Pulse Drive Rating: N/A
Insulation Fluid: Mineral Oil Insulating Fluid - Non PCB Fluid
Fluid (Oil) Capacity*: 270 Gallons
Fluid (Oil) Weight*: -
Radiators: Removable With Isolation Valves - Galvanized, Stainless Steel, Powder Enamel Coated
Liquid Level Indicator: Analog Dial Gauge w/ Alarm and Trip Contacts
Temperature Indicator: Analog Dial Gauge w/ Alarm and Trip Contacts
Pressure/Vacuum Indicator: Analog Dial Gauge w/ Contacts and Bleeder Valve
Pressure Relief Device: Included, Automatic Action - Cover Mounted with Contacts and Shroud
Sudden Pressure Relay: With Seal In Contacts
Fill Valve: Removable Bolt 1"
Fill Valve Location: Front Compartment
Drain Valve: Included, Drain Valve w/ Sampler
Drain Valve Location: Front Compartment
Control Box: NEMA 4 (IP54) Stainless Steel, NEMA 4X (IP54) Auxiliary Wiring Cabinet w/ Strip Heater, Breaker, Thermostat, GFI Outlet, and Door Switch Operated Light
Winding Material: Copper
Ambient Temperature Rating: 40°C

Total Load Loss (in watts) at 50%: +/- 3762W +10% Tolerance

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
Zero sequence impedance
Factory dissolved gas analysis to be sent with FAT results

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

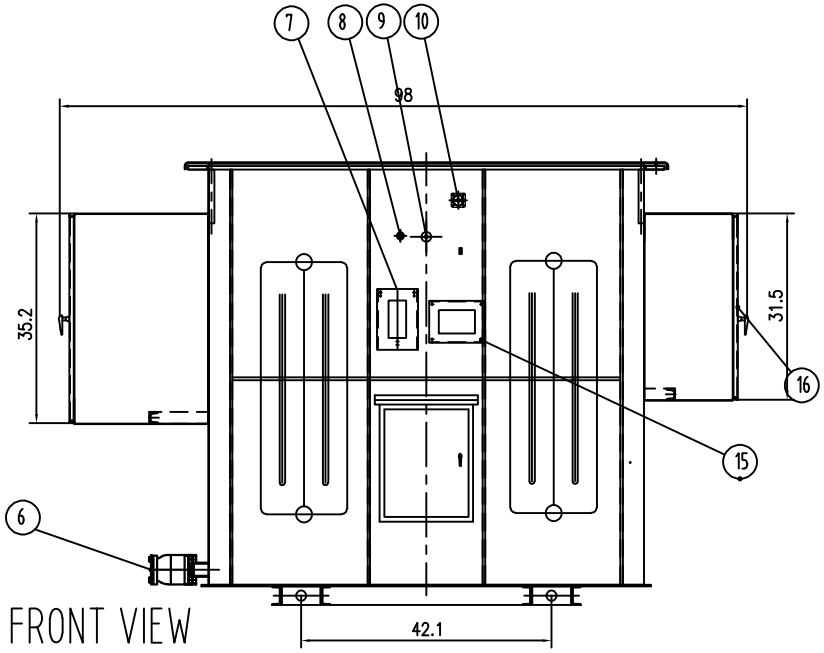
Sound Level: 62 dBA
Elevation (Altitude): 3300ft (1000 meters) Above Sea Level
Core Material: Grain Oriented Steel
Tank Material: 304 Stainless Steel
Cabinet Material: 304 Stainless Steel
Base Platform Material: 304 Stainless Steel
Portability: Lifting Lugs, Provisions for Jacking Under Base, w/ Base Construction Suitable for Using Rollers or Skidding
Housing Type: Compartmental Air-Filled Cabinet w/ Locking Doors, Steel Barrier Separation
Enclosure Rating: NEMA 4 (IP54)
Seismic Rating: Yes
Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating
Finish Color: -
Mounting: Pad Mounted
Conduit Opening: Bottom Feed Underground Entry/Exit
HV Compartment Base Wireway Dimensions*: -
LV Compartment Base Wireway Dimensions*: -
MV/LV Compartment Cabinet Depth*: -
Tank Cover Access Handhole: N/A
Dimensions*: 98"-W x 87"-D x 67"-H
Weight: 7,550 lb
*Please note that numbers are approximate and subject to change

Special Orders - Requirements
Contact us for special requirements

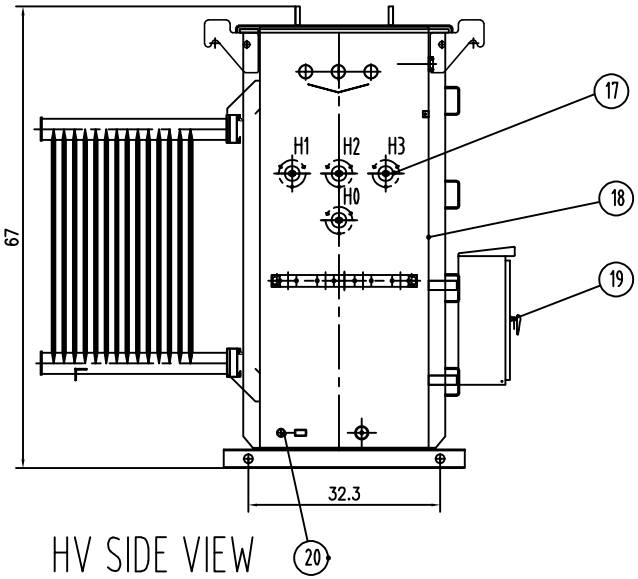
Toll Free: 1-800-369-6671
Intl: 1-214-616-6180
Fax: 1-903-498-3364
E-mail: sales@larsonelectronics.com

The MT-PMNT-R7-3P-GMF-1MVA-GMQ-RT-DD-A6-BB-CS-2B2-M2 from Larson Electronics is an Industrial Pad Mount Network Transformer that offers powerful, reliable, and efficient power distribution in indoor, outdoor, and public locations. The low operating costs, low heat emissions, and low cost of ownership makes this network 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 1000 KVA (1 MVA), the industrial transformer features a primary voltage of three-phase 24940GrdY/14400 Grounded Wye and a secondary voltage of three-phase 13200GrdY/7620 Grounded Wye. The unit has a primary radial feed for single installations and dead-front primary connections. This transformer features a 5-position tap changer with two, +/- 2.5% taps above and two, +/- 2.5% taps below to allow small changes for voltage. There are no load break switches or rapid rise relays present on the system.
Copper transformer winding material helps improve performance, reduce weight and lower cost. Compared to aluminum, copper windings have lower eddy losses due to higher resistivity. This transformer consists of rectangular coil and five-legged wound core design with three coils and four core loops (this is for three-phase transformers only; single-phase units have one coil and two core loops). The MT-PMNT-R7-3P-GMF-1MVA-GMQ-RT-DD-A6-BB-CS-2B2-M2 is air cooled and does not have fans or mounting provision for fans.
Enclosure Design: This pad mounted transformer does not have a full external enclosure. Instead, there are several control boxes and connection boxes constructed from 304 stainless steel. These boxes carry a NEMA 4 (IP54) rating and feature locking doors and steel barrier separation. The control box is equipped with a strip heater, breaker, thermostat, GFI outlet, and door switch operated light.
Temperature Rise: This unit features 65°C temperature rise for reduced heat waste, increased reliability and longer life. At 65°C temperature rise, the transformer offers 1000 KVA (1 MVA). The transformer meets standard efficiency requirements. 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.
Radiators: The MT-PMNT-R7-3P-GMF-1MVA-GMQ-RT-DD-A6-BB-CS-2B2-M2 is equipped with galvanized, stainless steel, powder enamel coated, removable

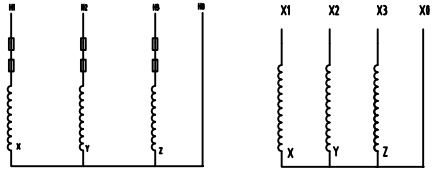
radiators with isolation valves.
Insulation Fluid: The MT-PMNT-R7-3P-GMF-1MVA-GMQ-RT-DD-A6-BB-CS-2B2-M2 features mineral oil insulating fluid (ONAN) with a capacity of 270 gallons.
Gauges: The following gauges are included with the system: liquid level, temperature, and pressure/vacuum gauges. Standard liquid level, temperature, and pressure/vacuum gauges are analog, manual reading types. These gauges have auxiliary contacts.
Fault Pressure Devices: This transformer features an automatic action fault pressure device. Fault pressure devices are used to detect high rates of pressure rise within the tank. The pressure relief device is equipped with contacts and shroud.
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 Arrestors: This system comes with high elbow surge arrestors on the secondary side. Designed for over-voltage and transient voltage protection, the components prevent damage caused by lightning, internal switching, or voltage surges. We can offer models without high elbow surge arrestors that have mounting provisions for customer-provided surge arrestors.
Valves: The MT-PMNT-R7-3P-GMF-1MVA-GMQ-RT-DD-A6-BB-CS-2B2-M2 is equipped with a pressure relief valve, fill valve, and drain valve with sampler port.
Protection Fuses: This transformer contains bayonet protection fuses on the secondary side. 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: This power distribution system can be pad mounted on concrete pads.
Benefits: The MT-PMNT-R7-3P-GMF-1MVA-GMQ-RT-DD-A6-BB-CS-2B2-M2 pad mount 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, underground vaults, 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.



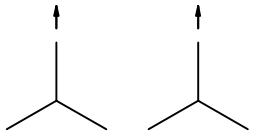
FRONT VIEW



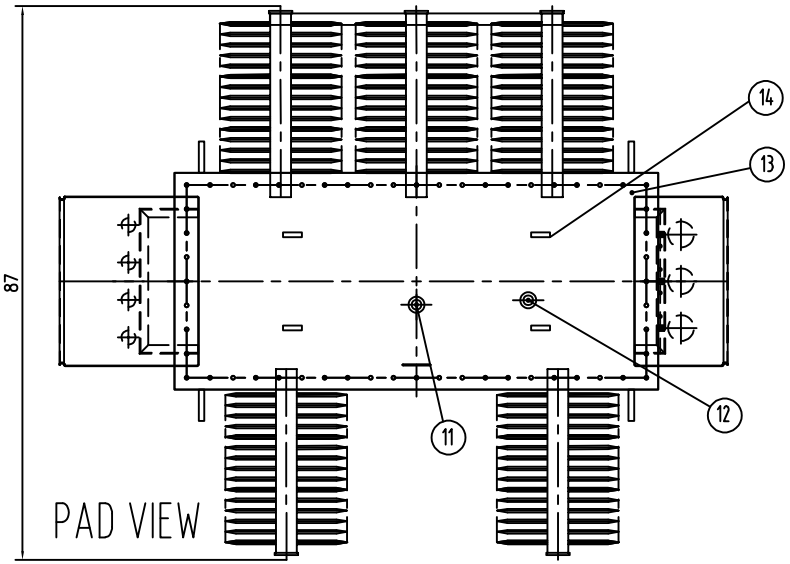
HV SIDE VIEW



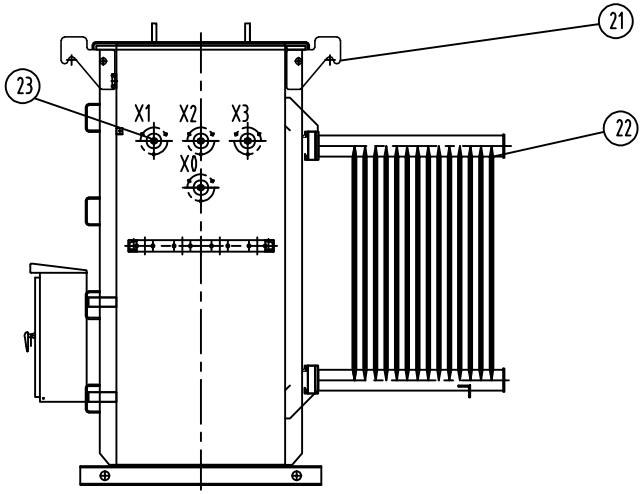
WIRING CONNECTION



PHASOR DIAGRAM



PAD VIEW



LV SIDE VIEW

Approx. Weight: 7550lbs.

NO.	Code	Name	QTY	Material	Unit Weight	Total Weight	Remark
23		LV bushing	4	200A well&inser			15kV
22		Radiator	5	304SS			removable
21		lifting lug	4	M16X35			
20		grounding bolt	2	M16X35			with washer
19		terminal box	1	304SS			IP54
18		tank	1	304SS			
17		HV bushing	4	200A well&insert			25kV Class
16	Hinge, door lock	door	1				
15		Nameplate	1				
14		lifting lug	4				for tank cover
13		tank cover	1	304SS			
12		Sudden Pressure Relay	1				
11		pressure relief valve	1				
10		oil level guage	1				
9		tap changer	1				
8		temperature senson	1				
7		temperature guage	1				
6		drain valve	1				w/sampler
5		LV coil	(1)	copper			
4		ative part insulation	(1)				
3		HV lead wire	(1)	copper			
2		core assembly	(1)				
1		HV coil	(1)	copper			

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

1000/24.94 drawing

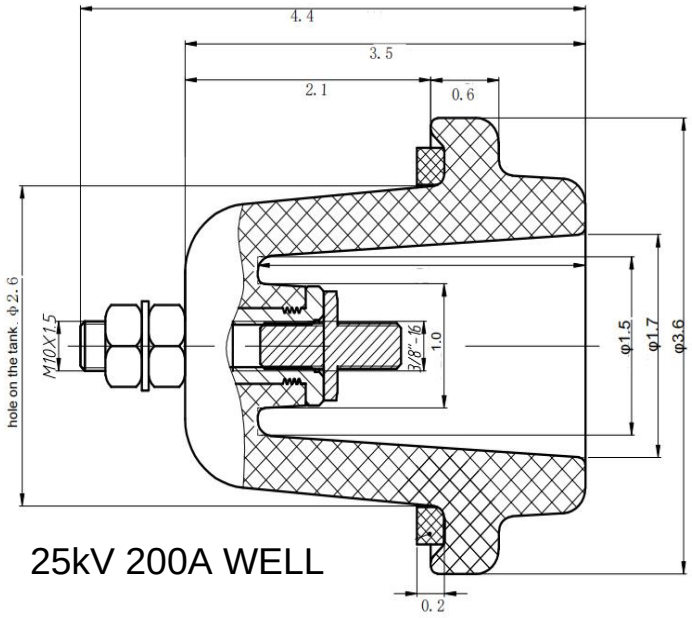
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pattern mark	mass	scale
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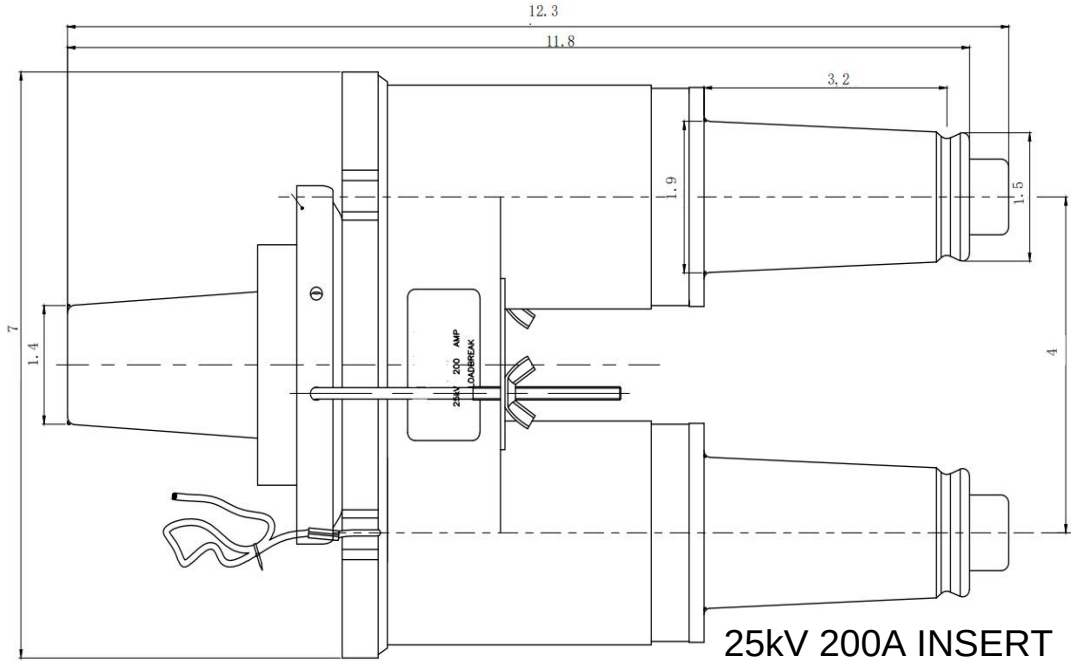
LARSON ELECTRONICS

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

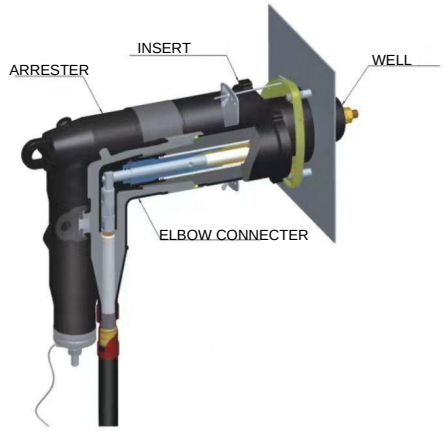
SECONADRY BUSHING DETAILS



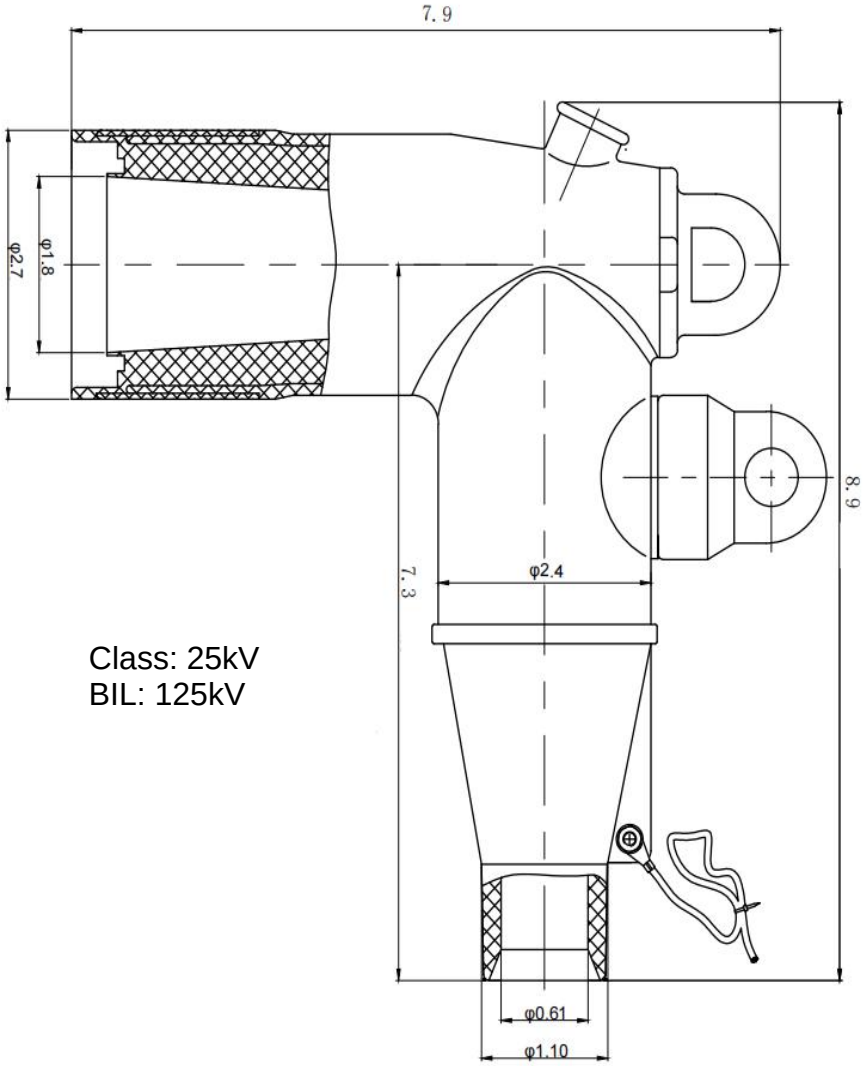
25kV 200A WELL



25kV 200A INSERT

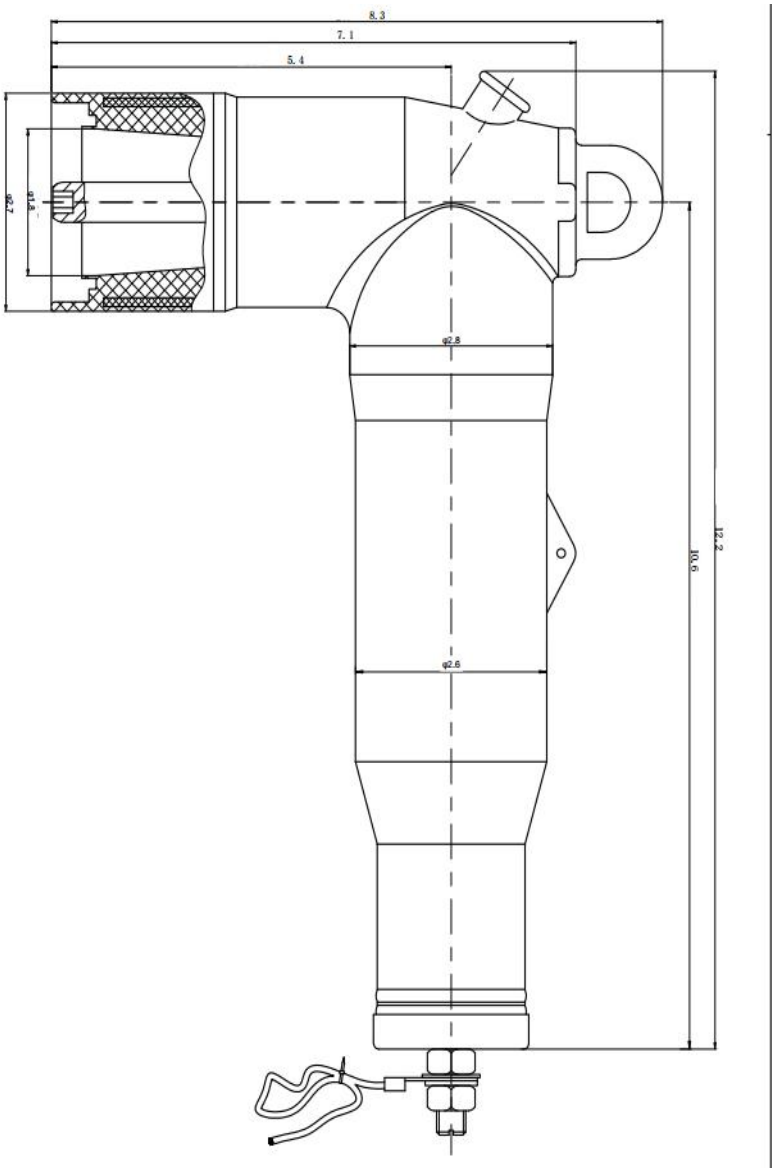


25kV 200A BUSHING INSTALLATION SKETCH



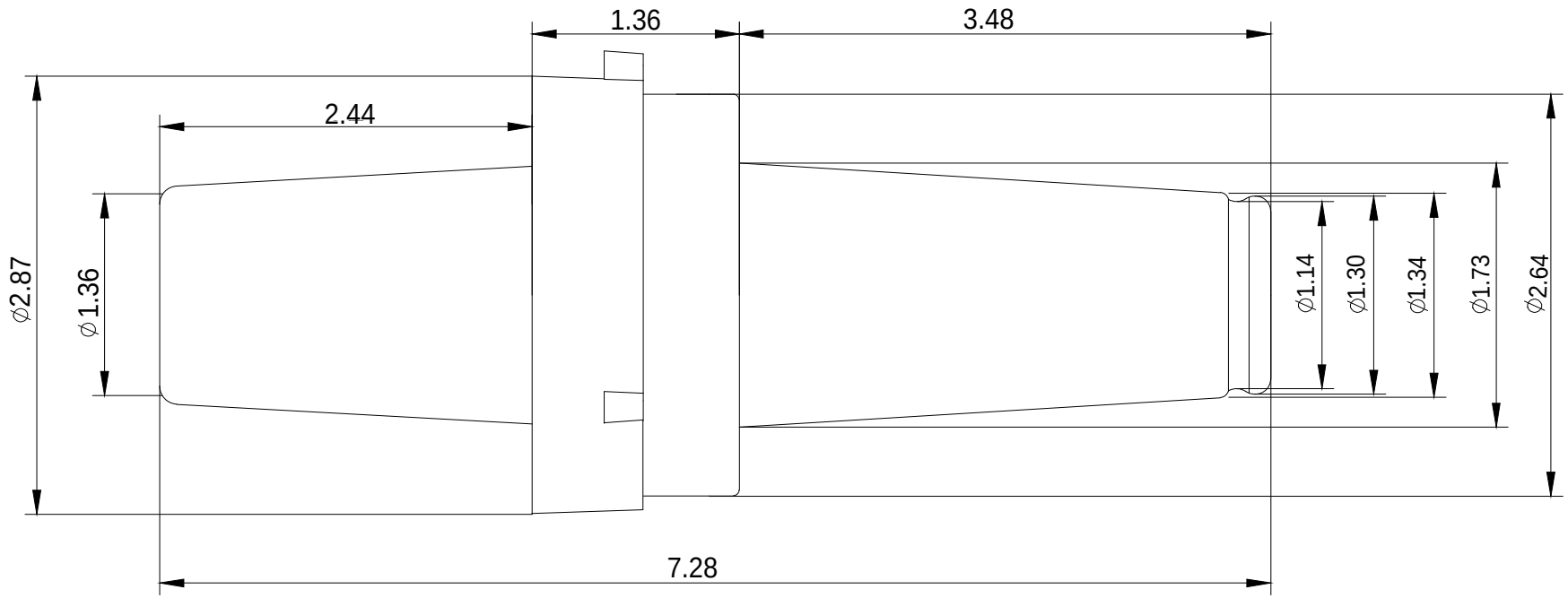
Class: 25kV
BIL: 125kV

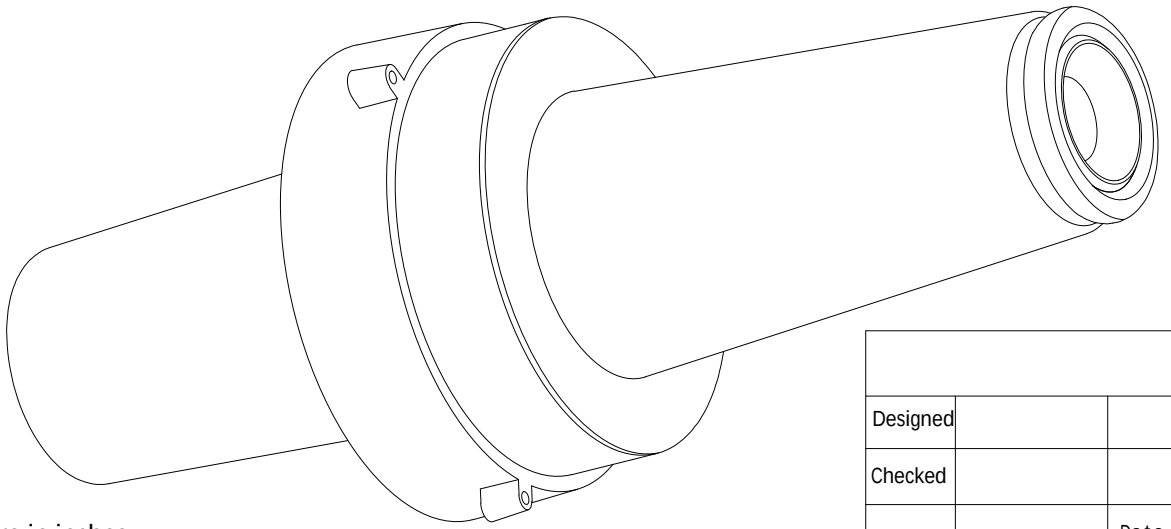
25kV 200A ELBOW CONNECTER



25kV 200A ARRESTER

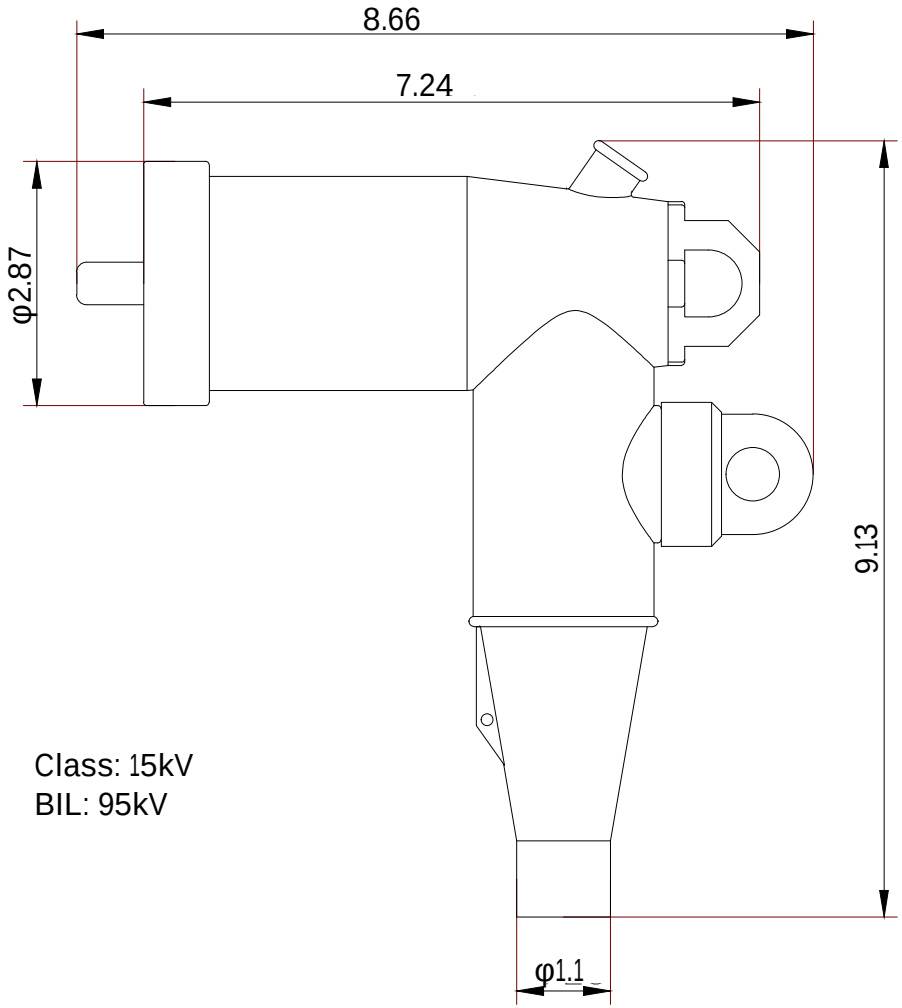
PRIMARY BUSHING DETAILS

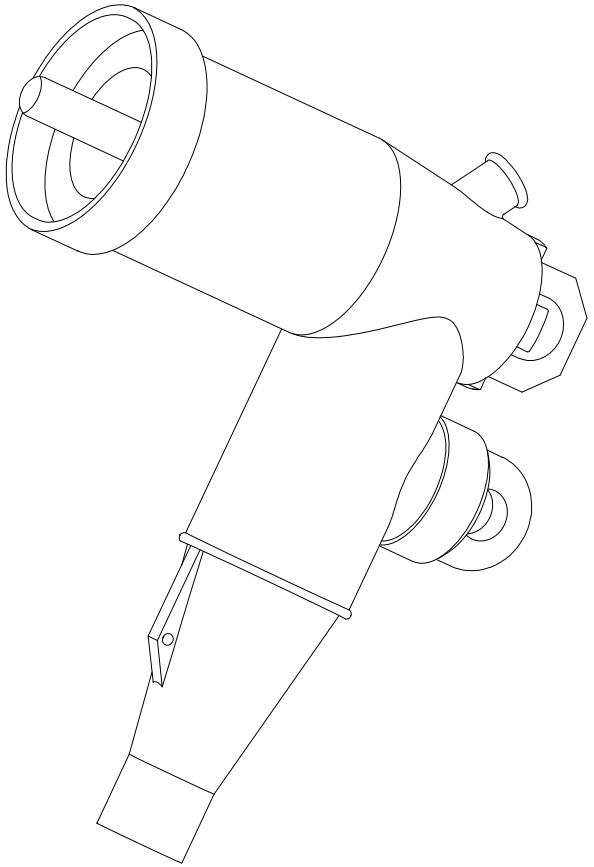




Remark: dimensions here are in inches.

Designed			G003	Product Name	15kV Class 200A Insert
Checked					
		Date	2023.6		





Class: 15kV
BIL: 95kV

Remark: dimensions here are in inches.

					15kV class 200A elbow connector

Frequently Asked Questions (FAQ)