

NGR-AC-34.5KV-936A-AN-CU-M1

936 A 1-PH Air Core Neutral Grounding Reactor, 34500V, AN Class, 60 Hz, Copper, Light Grey
Product ID: 342268



Image: NGR-AC-34.5KV-936A-AN-CU-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.

NGR-AC-34.5KV-936A-AN-CU-M1 Air Core Neutral Grounding Reactor

Type: Air Core, Dry Type
Circuit Voltage of System: 34.5 kV
Support Insulators, BIL, Min Creepage Distance: Porcelain Gray, 200 kV, 27.441 inches
Insulation Rating, Line End: 25 kV
Insulation Rating, Ground End: 1.2 kV
Voltage BIL (Coil): 200 kV
Voltage BIL (Base Insulator): 200 kV
Power Frequency Withstand: 70 kV
Continuous Neutral Current Rating: 936 A
Frequency: 60 Hz
System Positive Sequence Impedance (w/o NGR): $0.0601+0.68133i$
System Zero Sequence Impedance (w/o NGR): $0.05009+0.32965i$
Reactance of NGR: 0.2Ω
Rated Fault Current (Thermal Rating): 31.2 kA
Rated Fault Duration: 10 sec.
Continuous Thermal Rating: 3% of the thermal current rating
Asymmetrical Fault Current: 80.0451 kA
Installation: Outdoor
Winding Material: Copper
Terminal: NEMA 4-hole stainless steel pad
Knockouts: N/A
Cooling Class: AN (Air-Natural)
Mounting: Free-Air on Owner Furnished Pedestal
Lifting Lugs: Included
Insulation: 220°C

Approvals/Ratings

NRTL listed for United States
NRTL listed for Canada
NEMA 3R Outdoor Steel Enclosure
Meets or Exceeds NEMA ST-20 Standards
Meets or Exceeds ANSI TR-2055 Station Post Insulators
Meets C57.12, 32 IEEE Standards
Seismic Qualified for Earthquake Loads
RoHS
CE Certified
UL Listed

Temperature Rise: 155°C
Elevation (Altitude): 100 ft
Temperature Range: 0°C to +45°C
Wind Load: <100 mph
Ice/Snow Load: 20 psf
Sound Level: Meets NEMA ST-20 Standards
Seismic Zone: High Seismic (CBC 2025 / IEEE 693-2018)
Importance Factor: 1.0
Environmental Contamination Level: Medium
Nameplate Material: Laser Engraved Lettering on SS
Hardware Material: SAE Stainless Steel Bolts & Washers, SAE Silicone Bronze Nuts
Enclosure Construction: Epoxy Impregnated, Fiberglass Encapsulated Construction
Finish: ANSI 70 Light Grey
Enclosure Dimensions: 55.12"-L × 47.24"-W × 86.6"-H
Weight: 2,094 lbs
Shipping Method: -
Shipping Weight: -
Shipping Dimensions: -
Warranty: 2 Years

Special Orders - Special Requirements

Contact us for special requirements

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The NGR-AC-34.5KV-936A-AN-CU-M1 is a single phase reactor generally connected between ground and neutral of transformers or generators in order to control single line-to-ground faults at a desired level. They achieve this by resisting current flow through inductive elements. This unit is used in order to limit line-to-ground fault current to a value which will not damage the equipment in the power system, yet allow sufficient flow of fault current to operate protective relays to clear the fault. If the circuit is balanced, current flow through the reactor will be zero, thus, there will be no losses.

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

Unit Features: The NGR-AC-34.5KV-936A-AN-CU-M1 is a single phase reactor with a 200 A capacity rating. This reactor is configured with a rated voltage of 34.5 kV AC. Featuring robust construction, this unit's cores are manufactured with non-aging, cold-rolled silicon steel laminations using state of the art technology.

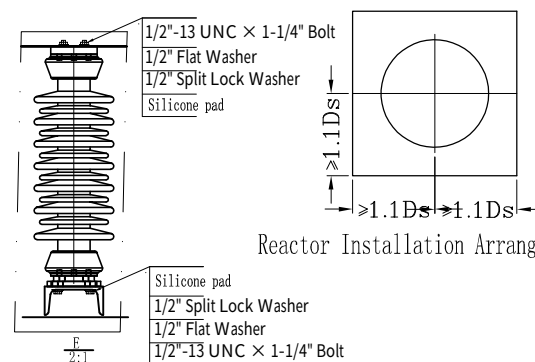
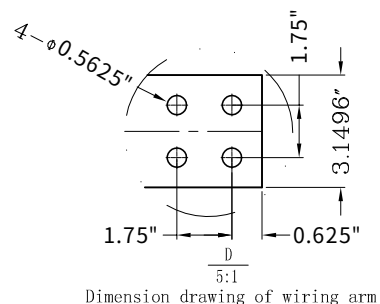
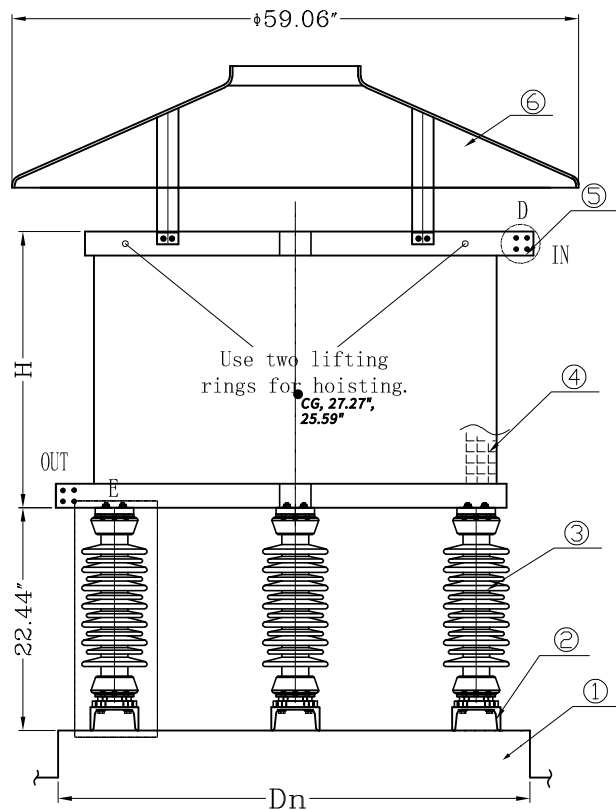
This unit boasts a low cost of ownership and is highly energy efficient. Lower heat emissions mean less cooling is needed as well. The standard NEMA Type 3R enclosure makes the unit suitable for both indoor and outdoor applications and is designed to be floor mounted. Wall mount brackets or additional mounting accessories can be purchased separately. This reactor features 220°C insulation with a 155°C temperature rise.

Benefits: The NGR-AC-34.5KV-936A-AN-CU-M1 has a perfect mechanical strength to withstand high short-circuit forces, limited temperature rise enables longer lifetime, special surface protection against UV and pollution Class IV areas, maintenance-free design, low noise levels.

Applications: Reducing single phase to earth fault currents which occur in electrical networks to prevent damages on transformers and generators, reducing temporary overvoltages formed by braking instantaneous fault currents, providing long-life for switchgears, and reducing step voltages to a harmless level for personnel.

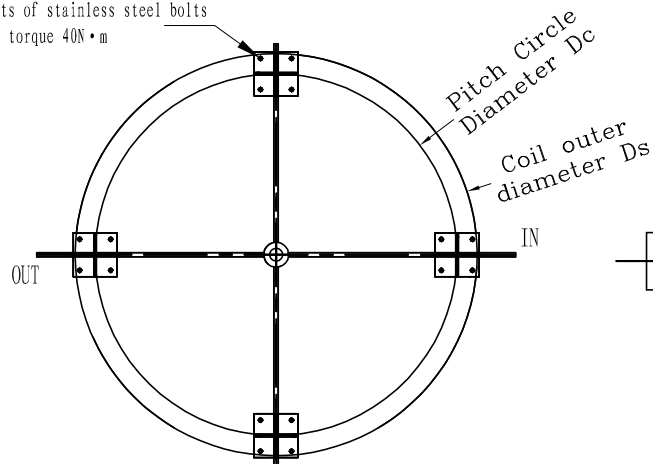
Larson Electronics is a manufacturer and as such can build stationary and portable transformer systems to your specifications. Although we carry several models of power distribution transformer systems, we can deliver custom ordered units almost as quickly as our prebuilt units. If this model does not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

Model	System Voltage (kV)	Current (A)	Reactance (Ω)	H (in)	Dc (in)	Ds (in)	Dn (in)	Winding weight (pound)
NGR-AC-34.5KV-936A-AN-CU-M1	34.5	936	0.2	31.1	31.50	38.58	51.18	800

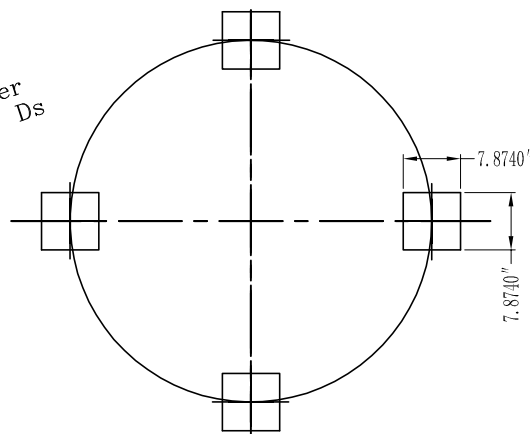


Reactor Installation Arrangement Sketch

Each support base requires
4 sets of stainless steel bolts
Safe torque 40N•m



Bolt Layout View



Foundation schematic diagram

Technical Requirements

- The angle between the incoming and outgoing lines of each reactor shall be as shown in the above-mentioned drawing.
- Installation location: Outdoor (NEMA 3R)
- Altitude: ≤ 1000 m (3280.84 ft)
- Item 1 supplied by user. Dimensions of the top surface of pre-embedded steel plate: 7.8740" $\times$ 7.8740" $\times$ 0.3937"
- Temperature Rise: 100°C Insulation Class: 155°C
- The center-to-center distance between two reactors shall be no less than 1.7 times the outer diameter of the reactor. The distance from the reactor center to the fence shall be no less than 1.1 times the outer diameter of the reactor. No closed metal loops are permitted within this range.
- The total height of the reactor shall have a tolerance of ± 3.9370 "; the outer diameter shall not exceed the specified value; Winding Weight ± 50 pounds
- Creepage distance of pillar insulators = 49.45"
- Remove the lifting eye upon completion of hoisting
- Wind load: Less than 100 mph
 - Ice & snow load: 20 psf
 - Seismic zone: High seismic zone, in accordance with CBC2025 / IEEE 693-2018
 - Reactor construction: Epoxy impregnated, fiberglass encapsulated
- Fasteners shall be SAE stainless-steel bolts and washers with SAE brass nuts.
- Weld Item 1 and Item 2 together.
- Each support base (between Item 2 and Item 3) requires 4 sets of stainless steel bolts with a safe torque of 40 N•m per set.
- Item 6 requires on-site installation by user. 200 kV BIL, 70 kV 1 min

6	Weather hood	$\phi 59.06$ "	Set	1	
5	Copper conductor arm	3.1496" $\times$ 0.3937"	pcs	8	Brass (#62)
4	Coil	Copper	Set	1	
3	Post insulator	H=19.6850"	pcs	4	
2	Shim plate		pcs	4	
1	Embedded steel plate		pcs	4	Supplied by user
Item	Name	Model NO.	Unit	Quantity	Remark

Air Core Neutral Grounding Reactor

Product ID	342268	Version number	V1.0
Order Number	309744		



Frequently Asked Questions (FAQ)

There are no Faqs