



User Guide for General Purpose Ventilated & Non-Ventilated Transformers

Product Safety

Safety Instructions*

- ⚠ **DANGER:** De-energize the transformer before performing any maintenance or service work.
- ⚠ **WARNING:** Installation and maintenance should be performed by qualified personnel only.
- ⚠ **WARNING:** To prevent shock, fire, and personal injury, follow all safety precautions on the unit and in this manual.

Certifications

- Ventilated Distribution Series 
- Non-Ventilated Automation Series 
- HS14FXCS-CE Series is CE certified to the LV directive as Class I, isolating, non-short-circuit proof, independent transformers and the EMC Directive.

Receiving & Handling

Inspection

- ⚠ **NOTICE:** If damage is found, immediately file a claim with the shipping company.
- Inspect for external damage from shipping.
- Remove covers/panels and inspect for damage to internal parts.

Handling

- ⚠ **CAUTION:** The transformer is heavy. Please take proper precautions when lifting or moving the unit. Never lift from or apply force to the coils, terminals, or terminal boards (on ventilated units).
- Lifting ears are provided on large non-ventilated units.
- Panels must be removed before fork or sling lifting ventilated units.
- Remove shipping bolts or braces (when applicable) from ventilated units. Failure to remove the shipping bolts may cause the unit to “hum” loudly from vibration. Failure to remove the shipping braces may cause a potential fire.

Installation

Location

- Select a location which complies with all local and national safety codes.
- Ensure that the location will not interfere with the normal movement of people, vehicles, equipment, and material.
- Units require a 6 inch minimum clearance on the top and sides.

Mounting

- Mount the unit on a wall (500 lb. maximum for ventilated units), floor (floor-mount designs only), or structure which has sufficient mechanical strength. Mount non-ventilated units on vertical surfaces only (exception: floor-mount designs).

Sound Levels

- To minimize sounds levels, use flexible conduit for wiring connections. Tighten all covers/panels to prevent vibrations.
- Avoid hallways and/or corners near the ceiling or floor.

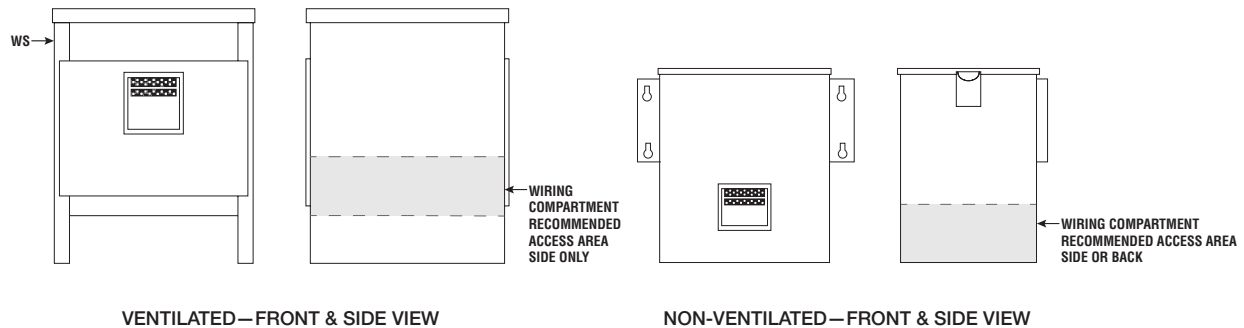
Grounding

- ⚠ **DANGER:** Always permanently and adequately ground the transformer case to prevent shock, fire, and personal injury.
- Ensure the grounding or bonding meets national safety codes and all local codes.
- Grounding is necessary for safety. Make sure the grounding conductor between the core/coil assembly is properly grounded to the case.

Connections

⚠ DANGER: Never make connections while the transformer is energized.

- Conduit should enter through the recommended wiring compartment access area (see figures below). **NOTE:** Wiring connections through the cover are not recommended.



- Please refer to the wiring diagram on the unit for correct line and tap connections.
- Before changing taps on ventilated units, scrape the protective varnish from the tap terminals (to expose the bare metal).
- Ensure all connections are tight.
- All input and output field connections must be properly installed per the National Electrical Code (NEC), Canadian Electrical Code (CEC), and all local codes as applicable.

Maintenance

⚠ DANGER: De-energize the transformer before performing any maintenance or service work.

Periodic Inspection

For clean, dry locations, annual inspections should suffice. When the air is contaminated with dust or chemical fumes, monthly inspections may be required. After the first few inspections, set up a schedule based on the existing conditions. During the inspections, follow the steps listed below.

- De-energize the transformer.
- Remove the enclosure covers/panels.
- Check for loose connections, rust, corrosion, and inspect the overall condition of the transformer.
- Look for signs of overheating or voltage creepage over insulation surfaces (indicated by tracking or carbonization).
- Check for dents in ventilated enclosures, as dents may reduce the insulation clearances to an unsafe level. Replace or repair as necessary.

Cleaning

- With a vacuum cleaner, blower, or low-pressure compressed air, clean any accumulated dirt found on the unit.
- Carefully clean both ends of the winding assemblies and ventilating ducts on ventilated units.

Relocation & Storage

- Replace the shipping bolts and/or braces prior to relocation of ventilated units.
- Protect ventilated units from dust and moisture at all times.

Accessories for Ventilating Units

- Wall mounting brackets are available for ventilated transformers with a 500 lb. maximum weight.
- Weather shields are available for ventilated transformers rated 15–500 kVA. Units with the weather shield are UL-3R listed for outdoor applications. To install the weather shield, loosen the top cover bolts and insert between the cover and side panel.