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DRY TYPE DISTRIBUTION TRANSFORMERS

# Performance Compliance

## Type QL – Enclosed and Core & Coil

ABB manufactures low voltage (600 V Class) dry type transformers in the ISO-9001 certified factory in Nogales, Mexico. These transformers are Underwriter's Laboratories (UL) listed (XQNX:E79145) for enclosed models and UL recognized (XQNX2:E79145) for core & coil models. Further, most DOE-2016 compliant models also have the UL Energy Verification credential of ZXPC:EV519886.

### UL Testing & Construction details

UL 1561 (Dry Type General Purpose Transformers) mandates several key tests and construction requirements to demonstrate and assure safety and performance while providing consistency in producing products that meet or exceed the standard. UL also has follow-up services that raises the level of factory performance that assures consistency in manufacturing.

One of the most critical parts of the transformer is its insulation system. The insulation system itself must comply with requirements of UL 1446 (Safety Systems of Insulating Materials). ABB's QL transformer Class 220(R) insulation system is UL recognized to UL 1446 as OBJY2:E37573. This insulation system UL designation is IS-19C and is used throughout the Type QL line of transformer products manufactured in Nogales, MX. The insulation system designation is indicated on the product nameplate.

Part of the UL qualification testing is the Overload Test (Sec. 25 of UL 1561). This is a destructive test operating the transformer at 200% of its designed load for 20 minutes (for a Class 220 insulation system). This test is not required in the NEMA standard ST-20 (Dry Type Transformers for General Applications) as this standard is for construction details and design & routine performance testing.

With the similarities of the construction and designs of the QL transformers, most design tests are recorded as non-model/catalog specific; instead, an unrelated code is used. ABB assures that the design and proto-type tests shown in NEMA ST-20 are required in some form or fashion to attain and keep the UL 1561 certification.

As an OSHA Nationally Recognized Laboratory (NRTL), UL is a credible and reputable third party product certification body. All the ABB Type QL transformers are UL Listed or Recognized.

Frank Basciano  
Global Product Manager  
LV Dry Type Transformers  
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