

USACE AED-N PANELBOARD APPROVAL INFORMATION

USACE AED-N Requires:

Panelboards shall meet one of the following requirements:

- UL67 listed
- Tested and Marked by another NRTL
- BS/EN 60439 or **IEC 60439-manufactured, AND type-tested assembly (TTA)**

IEC 60439 Requires the following tests:

Routine Tests (by manufacturer)

1. Inspection of the Assembly including of inspection of wiring and, if necessary, electrical operation test.
2. A dielectric test
3. Checking of Protective measures and of the electrical continuity of the protective circuit

Type Tests (by 3rd part laboratory)

1. Verification of Temperature-rise Limits
2. Verification of Dielectric properties
3. Verification of Short-circuit withstand strength
4. Verification of Effectiveness of Protective Circuit
5. Verification of Clearances and Creepage
6. Verification of Mechanical Operation
7. Verification of Degree of Protection
8. EMC Tests

Laboratories able to perform Panelboard Testing:

Nationally Recognized Testing Laboratories (NRTLs):

- Canadian Standards Association (CSA)
- Communication Certification Laboratory, INC (CCL)
- Curtis-Straus LLC (CSL)
- FM Approvals LLC (FM)
- **Intertek Testing Services NA, INC. (ITSNA)**

This testing laboratory has tested Afghan-built panelboards in the past (and AED-N Engineering has subsequently approved these panelboards as long as the recommendations by Intertek were implemented by both the electrical subcontractor, and the panelboard manufacturer.)

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- MET Laboratories, INC (MET)
- NSF International (NSF)
- National Technical Systems, Inc. (NTS)
- SGS U.S. Testing Company, Inc. (SGSUS)
- Southwest Research Institute (SWRI)
- TÜV SUD America, Inc. (TÜVAM)
- TÜV SUD Product Services GmbH (TÜVPSG)
- TÜV Rheinland of North America, Inc. (TÜV)
- Underwriters Laboratories Inc. (UL)
- Wyle Laboratories, Inc. (WL)

European Test Laboratories:

<http://www.iecee.org/cbscheme/html/cbofaceptance.htm>

A few notable examples:

DEMKO (Denmark)
FIMKO (Finland)
LCIE (France)
VDE (Germany)
IPH (Germany)
TÜV (Germany)
DEKRA (Netherlands)
NEMKO (Norway)
SEMKO (Sweden)
TSE (Turkey)
BSI (UK)