

Ensuring Safety from the Very Beginning



Component Testing

Safety and Quality, for Local and International Markets

Testing the Safety and Quality of your Components

Ensuring that your customers are receiving safe components of high quality is imperative to the longevity of your business. Every part of an electrical appliance can be hazardous and one sub-standard component can lead to disastrous results.

As the largest certifier within the CB Scheme, the TÜV Rheinland Group, has vast experience in a broad range of component conformity testing. We offer a one-stop component testing solution, which consequently allows you to access multiple markets.

Residual current devices

Conformity Assessment

- Safety testing according to IEC/EN 61008-1 or IEC/EN 61009-1 and relevant product standards, such as IEC/EN 61008-2-x or IEC/EN 61009-2-x
- Annual factory inspection



Transformers, power supplies

Conformity Assessment

- Safety testing according to IEC/EN 61558-2-x, which include; heating tests, overload tests, abnormal tests, performance tests, insulation tests and environmental tests. TÜV Rheinland Group also tests and certifies power supplies.
- Annual factory inspection



Cables and cords

Conformity Assessment

- Safety testing according to; IEC 60502 series, IEC 60227 series, IEC 60245 series, HD 21 or HD 22 series standards
- Factory inspection annually



Protective Devices

Conformity Assessment

- Safety testing according to; IEC/EN 60127, IEC/EN 60269, IEC/EN 60730-1, IEC/EN 60730-2-9, IEC/EN 60691, IEC/EN 60898, IEC/EN 61008, IEC/EN 61009, IEC/EN 60947-2, IEC/EN 60947-4-1, IEC/EN 61643, IEC/EN 60099.
- Factory inspection annually



The standards mentioned in this brochure have been valid at the time of printing and can be subject to change. Please visit our website to ensure the latest versions of the standards.

Capacitors

Conformity Assessment

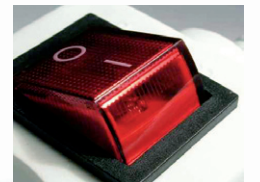
- Safety testing according to; IEC/EN 61048 for lamp capacitors, IEC/EN 60252-1 for motor capacitors, IEC 60384-2-14 for interference suppressors.
- Factory inspection annually



Switches, circuit breakers, contactors

Conformity Assessment

- Safety testing according to; IEC/EN 60947 series, IEC/EN 60934, IEC/EN 61058
- Factory inspection annually



Controls

Conformity Assessment

- TÜV Rheinland Group conducts safety testing according to; IEC/EN 60730 and other series standards as applicable.
- Factory inspection annually



Plugs and socket-outlets

Conformity Assessment

- Safety testing according to; IEC/EN 60884, EN 50075, EN 61242, IEC/EN 60320-1 and other series standards as applicable
- Factory inspection annually



Other Components





- | | |
|------------------------------------|----------------------------------|
| ▪ Controllers (PLC e.t.c.) | IEC/EN 61131 |
| ▪ Relays | IEC/EN 61810 |
| ▪ Connectors | IEC/EN 61984 |
| ▪ Motors | IEC/EN 60034 |
| ▪ Linear Actuators (Linear Motors) | DIN VDE 0580 |
| ▪ Solenoid Valves | DIN VDE 0580 |
| ▪ other electrical components | other IEC/EN component standards |

One Stop Testing for Multiple Market Entry

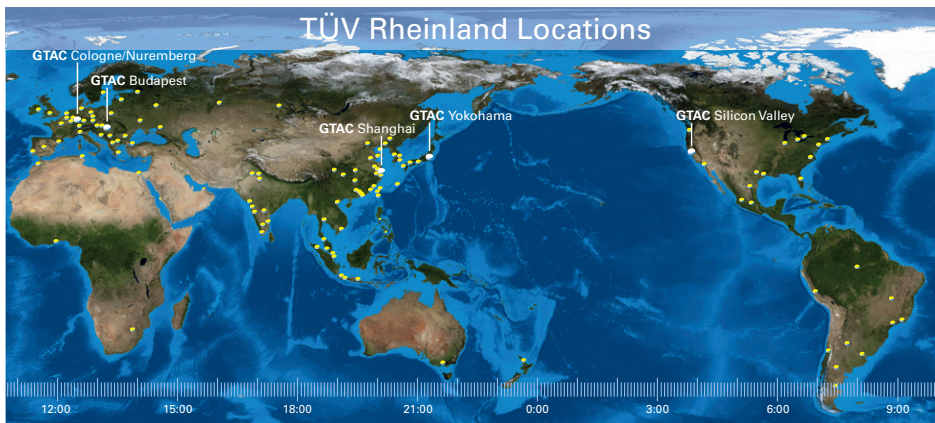




The TÜV Rheinland Group is proud to introduce the DIN certification to serve the internationally growing electrical component market.

The DIN certification follows the European market requirements and provides you with a mark that demonstrates your compliance to international standards including DIN EN, DIN IEC, DIN EN ISO and other product related safety standards. Prove your dedication to safety and quality by selling a component that is compliant with the international standards included in the DIN mark.

| Components |  DIN Mark |  ENEC Mark |  HAR Mark |  CB Scheme* |
|--|--|--|--|--|
| Capacitors | ✓ | ✓ | | ✓ |
| Cables and cords | ✓ | | ✓ | ✓ |
| Controls | ✓ | ✓ | | ✓ |
| Plugs and socket-outlets | ✓ | | | ✓ |
| Installation | ✓ | | | ✓ |
| Switches Circuit breakers Contactors | ✓ | ✓ | | ✓ |
| Protective devices | ✓ | | | ✓ |
| Residual current operated circuit breakers | ✓ | | | ✓ |
| Power transformers, Power supplies | ✓ | ✓ | | ✓ |

*) The IECEE scheme is relevant when organizations wish to acquire further country specific marks that are not covered by DIN. Affected countries include among others Argentina (S mark), China (CCC) and Russia (GOSTR mark).



-  5 Global Technology Assessment Centers (GTAC)
Our network provides 24-hour access to all TÜV Rheinland Group services & capabilities
-  Office & Laboratory Location

- Represented worldwide with more than 12,500 employees in 62 countries at 360 locations.
- Our business portfolio includes: Industrial Services, Mobility, Products, Life Care as well as Education & Consulting and Systems.
- The goal and guiding principle of the corporation – the sustainable development of safety and quality – is achieved through a strong commitment to Corporate Social Responsibility and ethical values.
- TÜV Rheinland Group has more than 135 years of experience.

For contact details please visit www.contact.tuv.com