Product note
International IECEx certification for hazardous area motors

IECEx Conformity Mark for low voltage motors

IECEx Conformity Mark for high voltage motors

What is the IECEx System?

The IECEx System is a certification system which verifies compliance with IEC international standards relating to safety in hazardous areas. It covers equipment, service facilities and the competency of personnel.

IECEx is a voluntary system which provides an internationally accepted means of proving compliance with IEC standards. It also means that the products can be supplied to the market without the need for additional tests. In the case of equipment, IECEx certification confirms that products have the appropriate protection for use in explosive atmospheres and that they have been manufactured under systems subject to ongoing surveillance by IECEx Certification Bodies (ExCBs). It is recognized in many countries around the world, including all the countries participating in the IECEx System, with the United Nations formally endorsing IECEx in November 2009.

The IECEx Conformity Mark (illustrated on this page) is used on Ex motors and other products which have been granted an IECEx Certificate of Conformity. It provides confidence for end-users that the equipment meets the requirements of the relevant standards.

The Mark includes the IEC logo and a code identifying both the Certification Body and license number.

How is the IECEx System organized?

IECEx has established comprehensive procedure to develop a single internationally standardized approach to Ex testing and certification. This approach includes a standardized evaluation process for bodies seeking to become IECEx Testing Laboratories and Competent Bodies and a standardized “IECEx way of Ex Testing and Certification”. There is a single set of operational procedures, and Ex test procedures are always applied in the same way. A dedicated Technical and Operational Secretariat maintains the operations. Ex test procedures are evaluated and monitored on a centralized basis.

What does the certification process involve?

IECEx certification is a quality based system which involves – in addition to product tests – assessment of quality control procedures and testing plans, audits of manufacturing plants, and routine on-going surveillance and inspections. IECEx certification differs from the Certifier’s own IEC certification, which is usually based on product type testing alone.

The table overleaf summarizes the main steps in a quality based certification system like IECEx. For comparison it also shows the activities involved in type test certification.

Activity	IECEx (quality based product certification)	IEC (type test product certification)
Select suitable standard	x	x
Develop plan for testing representative samples	x	x
Test samples	x	x
Issue Test Report	x	x
Perform technical review of Test Report	x	x
Assess manufacturer's quality control procedures and testing plans	x	
Conduct audit to verify quality control systems are appropriate and correctly implemented	x	
Issue certificate	x	x
Perform full re-testing to re-issue certificate		x
Issue online certificate via central website	x	
Ensure all Certifiers use single set of Operational Procedures	x	
Operate centralized assessment process for Test Laboratories and Certifiers	x	
Conduct routine, on-going surveillance and audits of manufacturers	x	
Maintain central process for independent sample surveillance of Certifiers' certificates and reports	x	

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IECEx certification is particularly useful in certain markets. In Australia, New Zealand, and Singapore, for example, IECEx certificates are accepted, but not all Certifiers' own IEC certificates are accepted. Certain other countries, including Korea and China, accept IECEx Test Reports (ExTRs) as a basis for their own national certificates. There are also many countries that are willing to accept products covered by current IECEx certificates, even though the countries in question are not members of the IECEx Management Framework.

Who is responsible for the certification work?

A manufacturer needing to have equipment IECEx certified can apply to an ExCB in any member country. The ExCB performs or coordinates the activities shown in the table above.

Samples of the products are tested at the ExCB's test laboratory and a factory inspection is organized. Periodic audits ensure that stringent standards are maintained by the manufacturer.

The IECEx Scheme provides an IECEx Test Report (ExTR), Quality Assessment Report (QAR) and Certificate of Conformity (CoC). These documents are available on the IECEx website, providing verification that the certification procedures have been undertaken for the product and manufacturer in question. Approved Certification Bodies can issue IECEx Conformity Mark Licenses, allowing manufacturers to display the IECEx Conformity Mark on products covered by an IECEx Certificate of Conformity.

How do I know if a motor is IECEx certified ?

The IECEx Conformity Mark clearly shows which products are covered by an IECEx Certificate of Conformity.

In addition, IECEx certificates are publicly available on the IECEx website, which is kept permanently updated. They can therefore be viewed and printed by anyone with access to the Internet. See 'Online Certificates' at www.iecex.com.

IECEx Conformity Mark for ABB motors

ABB is the first motor manufacturer in the world to be granted a License to use the IECEx Conformity Mark. ABB can display the IECEx Conformity Mark on products covered by an IECEx Certificate of Conformity, and on packaging and promotional materials. The IECEx Conformity Mark License considerably enhances ABB's ability to market its products globally. It complements ABB's existing ATEX approval, which is based on two EU Directives governing the use of equipment in potentially explosive atmospheres.

Which ABB motors and generators are IECEx certified?

Certificate includes both DOL and VSD-applications for motors for hazardous areas in low voltage motor types M3GP, M3JP, M3KP and in high voltage motor types AMI and HXR.

For more information please contact:

www.abb.com/motors&generators

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