

Similarities and differences between ATEX and IECEx certifications for power supplies

From an initial glance, the ATEX and IECEx standards seem very similar, both referring to equipment used in hazardous environments. Upon deeper examination there are some important differences which should be carefully examined.

This white paper is intended for electronics engineers and designers working with power systems for the industrial environment, and explains the Similarities and differences between ATEX and IECEx certifications.

References

www.uk.tdk-lambda.com/df

www.uk.tdk-lambda.com/din

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ATEX was initially introduced in the European Union to facilitate the free movement of goods and services of equipment used in hazardous environments. It includes one harmonised standard which is applicable to electronic power supplies; the ATEX 95 equipment directive 94/9/EC. In Europe it is mandated by law to comply with that directive and compliance is indicated through the CE mark and distinctive ATEX symbol. Non-electrical equipment in category 2 and all equipment in category 3 can be self-certified by manufacturers, although it is normal practice to support compliance through third party testing of products to the EN60079 series of standards.

IECEx on the other hand is an international certification based on the IEC 60079-0 standard (no government involvement) and like the more common certification for power supplies, IEC 60950-1, is aimed at being accepted worldwide providing one standard and one certificate. Certification by an approved IECEx test house for both the product and the factory (along with a surveillance procedure) enables the manufacturer to be listed on the IECEx directory <http://iecex.iec.ch/>. Certificates of Conformity can then be viewed accordingly. These will be recognised and accepted by other 'certification bodies' in the scheme. Countries currently participating in (but not necessarily recognising) the IECEx Scheme include most of Europe, Australia, Canada, China, Russia, South Africa and the US.

From a power supply viewpoint, both standards are now technically identical. The major difference is, because ATEX can allow manufacturers to self-certify in some instances, other national bodies outside of Europe may not accept the compliance. An ATEX certificate can be based on an IECEx test report, but ATEX documentation does not necessarily support an IECEx certificate. Even though IECEx is

accredited globally, ATEX is mandatory in the EU. It is for this reason IECEx and ATEX dual marking is now quite common, with the power supply rating label listing both ATEX and IECEx certificate numbers and the joint code.

TDK-Lambda's DRF series of DIN Rail power supplies have dual marking, and the DRF120-24-1/HL for example has a marking on the power supply rating label as shown below. Part of the nomenclature is common, describing the explosion protection type(s) and the temperature class.



Although the US and Canada markets are still more comfortable with products certified to ANSI/ISA 12.12.01 and marked "Class 1 Div 2", the IECEx scheme is a very good step towards a global certification system. Having a product with both IECEx and ATEX markings can greatly assist global sales of the end equipment.

For more information and to access our world-leading power supply experience and comprehensive product range, please visit:

www.uk.tdk-lambda.com/df

www.uk.tdk-lambda.com/din

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