

ATEX

Electric Systems in Areas with Risks of Explosions Directive 94/9/CE (ATEX)

The ATEX directive (directive 94/9/CE) applies to all products for systems designed to be used in explosive atmospheres. ATEX stands for:

AT= Atmosphere EX= Explosive 94/9/CE (year, no, European Community). It defines the requirements for protecting the safety and health of people, pets and property , and states the various procedures to be followed for demonstrating the conformity of devices to the directive's requirements.

An "explosive atmosphere" means a mixture of air and flammable substances (gas, vapors, mists or dusts) at ambient temperature and pressure, which rapidly spreads combustion when it comes in contact with a source of ignition.

Components conforming to the above safety requirements should be used in all areas classified as hazardous in terms of the risks of explosion due to the presence of gases or dusts. The risk is divided into three levels, each of which have a particular construction category:

Category 1: covers the level of maximum risk (areas 0 to 20)

Category 2: covers the highest risk level (areas 1 and 21)

Category 3: covers the "normal" risk level (areas 2 and 22). The definition "normal" has not been given by chance, as all community laws impose the maximum possible levels of prevention against the formation of explosive atmospheres, so that only areas 2 and 22 should exist in normal conditions.

A number of different methods of protection can be employed. The protection method used should be clearly marked on the device. ATEX SKINTOP® conform to protection method "e" (increased safety) which consists in taking provisions intended to prevent the formation of hot spots.

Protection modes

Ex n

Protection method **Ex n** is fundamentally based on provisions for prevention and is divided into two main categories.



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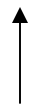
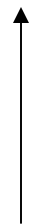
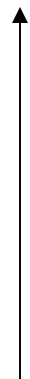
The category applicable to SKINTOP® is: EEx nA applicable to non-sparking appliances, namely those that do not produce arcs, sparks or hot spots during normal operation (junction and connectors boxes, fuse holders, lighting appliances, etc). The nA category bases the protection criteria on increased safety provisions. Those apply to SKINTOP® are as summarized below:

- Protection levels suitable for the environment
- Possible loss-proof gaskets
- Recommended minimum resistance of the enclosure to impacts: 5J (>IK08)
- Resin housings with adequate resistance to temperature and surface current effects
- The maximum temperature of any surface in contact with the outside air must not exceed the limits applicable to the temperature class

ATEX Compliance Marking

ATEX compliant product must be clearly marked to show the specifics of the compliance. Products may be marked in several different ways. There can be a combined gas/dust marking, or gas and dust can be done separately. A combined mark for ATEX SKINTOP® would be:

EEx e II 2G - 1D



1D= Type of Construction (Suitable for Area 20 where explosive dust may be present continuously or for prolonged periods. Pertains to IP6X rated device protection)

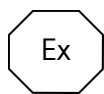
2G= Type of Construction (suitable for Area 1 where explosive gas may occasionally be present)

II= Group Symbol (potentially explosive atmospheres not found in mines)

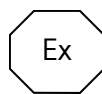
e= Protection Mode Used (increased safety)

EEx=Safe Construction Prefix

An example of the above listing in this alternate presentation is shown below:



II 2G



II 1D IP6X



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