
Certification Knowledge

EN 54 Products for Fire Detection and Alarm Systems (FDAS) in NFPA 72 installations

The NFPA 72

Issued by the US National Fire Protection Association, the NFPA 72 is an internationally recognized standard for planning and installation of FDAS; primarily used in countries where no such standards or guidelines are available as a basis for e.g. tenders or building permits.

Like the worldwide recognized European standards, such as VdS 2095, VDE 0833-2, or BS 5839, the NFPA 72 also provides a comprehensive list of requirements:

Listed products according to NFPA 72

These requirements include

- the suitability of products for use in FDAS and of course also the important
- testing, listing (often also named “approval” or “certification”) and
- regular monitoring of products

by a competent organization accepted by authorities having jurisdiction (NFPA 72/2019, chapter 10.3).

Although sometimes assumed, it is by no means required that testing and listing shall be based on an American product standard. NFPA 72 leaves this open by purpose, allowing for solutions that provide an equivalent or better safety level (NFPA 72/2019, chapter 1.5).

So provided planning- and installation-specific requirements are met, products certified in accordance to the EN 54 series like those with VdS-Approval can be used in installations according to NFPA 72.

FDAS for use in Europe: CE marking

For products offered on the EU markets, compliance with applicable requirements is to be confirmed by the manufacturer and/or distributor by acquiring a certificate of conformity and placing the CE mark. (please note: The CE mark is not a quality mark directed to users. It is merely the confirmation of compliance with the legislative rules of the EU authorities for market surveillance — and is, by the way, always included in VdS-Approvals.)

For products in FDAS, another European regulation applies: the Construction Products Regulation EU 305/2011. Requiring standards specifically mandated by the EN 54 series with further safety characteristics that the manufacturer must confirm.

In short: All fire protection products sold in Europe fulfill important reliability features supplemented by specifically created standards.

Confirmation requirements

Product performance abilities are to be confirmed by a notified body. But the manufacturer has not to confirm all features described in the relevant part of the EN 54. In the minimum case, it is sufficient to declare a single requested feature.

This is one of the main differences between the CE mark and the private quality marks for proven reliability issued by the European certification bodies of the EFSG (European Fire and Security Group), the cooperation of the major certifiers on the continent with founding member VdS.

Europe's No.1 Quality Seal: VdS-Approval CE always included — accepted worldwide

The VdS Quality Seal, approved with German engineering, is the No.1 purchase criterion for decision-makers in Europe (WIK/ASW-Enquête, the largest industry survey on the continent — over many years in succession), preferred and recommended by safety officers, insurers and authorities all over the world. 110 years of trust accumulated on all continents are engraved into VdS-approved products.

Basis for VdS-Approval is

- the full compliance with all required performance features of the corresponding EN 54 series
- with some important necessities added ensuring highest and clearly proven reliability when in use (exceptions only possible in very rare cases when justified technically and by their purpose).

EN/VdS-Added Value: System approvals

FDAS consist of many components such as detectors, control panels, alarm devices etc. — combined and set into operation by an installer. The EN 54-13 requires to prove the compatibility of all individual products in their combination with each other. Goal: ensuring reliable functioning of the systems entirety.

Thus, EN/VdS-certified products guarantee a decisive sales advantage, as the interaction of all components of the FDAS is tested and certified by a state-accredited body. Clearly documented in a system certificate listing all respective products and described in a system manual by the manufacturer.

EN/VdS-Added Value: Product monitoring

In order to ensure that the products in use for protecting human life and entire institutions reliably comply with those tested and certified in the laboratory, the EFSG certification bodies carry out extensive monitoring measures. In addition to the compulsory annual inspection of the manufacturer's final quality control, selected currently sold products are also checked and verified (confirmatory tests, response behavior etc.).

Purpose: Ensuring that the customer who relies on a quality seal will always receive exactly the promised features.

Summary

The reliability of safety products sold in Europe results not only out of measures by the market surveillance authorities, but also out of strictly controlled high quality standards monitored regularly. The EN requirements ensure that only reliable, effective products can be distributed.

Of course, products that meet these high and worldwide unique requirements can also be used in systems planned and designed according to NFPA 72 on all continents. The NFPA 72 allows explicitly the installation of components listed/approved according to other strong standards.

Adding the strong sales benefit of proven compatibility within safety systems, EN 54-certified products in combination with a reliable Quality Mark such as the VdS-Approval ensure optimal fire protection.

Briefly about us:

Long-term reliability made visible at first sight: The clearly proven safe functioning of all relevant fire protection technologies is a decisive competitive edge for VdS-approved partners. VdS-approved products can be used in systems according to NFPA, ISO, VDE, BS, FM, SES and many other standards. All from a single source.

In addition to the Approval with German engineering, we offer certificates of the renowned EFSG institutes with minimum effort: One test — all top certificates in Europe.

Founded in 1908, VdS is one of the world's leading certification institutes for corporate safety and security and of course state-accredited. The VdS Quality Mark is accepted and recommended by authorities all over the world. Furthermore, VdS sets international protection standards as a technical pioneer.

You will find many of our guidelines — preferred for their precise practicality — for free at

> vds-shop.de/en.

Further information:

> vds-global.com