

New VDE guideline makes fiber optic expansion in buildings cheaper, faster, and easier

Around 24 million households in Germany have fiber optic cables laid up to the property boundary, but only around 13 million are actually connected. The reason: fiber optic expansion in buildings has not been sufficiently defined until now. The new VDE Guideline 0800-730 now creates a technical basis that also simplifies and accelerates expansion and saves costs – even before the EU Gigabit Infrastructure Act (GIA) is transposed into federal law in Germany.

(Frankfurt am Main, February 9, 2026) Data transmission via fiber optics is many times faster, significantly more stable, and more energy-efficient than transmission via copper cable. In addition, there is hardly any latency, i.e., delays in transmission. This makes fiber optic expansion the key to all future applications in the field of digitalization and artificial intelligence. Thomas Sentko, Standards Manager for Broadband, Fiber Optic & Connector Technology at VDE, explains: "Germany wants to replace copper cable Internet access with fiber optics in the medium term. However, according to the Federal Association for Broadband Communication (Bundesverband Breitbandkommunikation e.V.), only around 7 million fiber optic connections are currently in active use, which is far too few. That is why market participants have agreed on the new VDE Guideline 0800-730 for installation in buildings in order to create certainty and accelerate expansion." The guideline describes the implementation of the requirements from the EU GIA, which are currently being transposed into federal law.

New guideline on fiber optic expansion in buildings simplifies construction

Until now, fiber optics had to be treated in the Model Directive on Fire Protection Requirements for Cable Systems (MLAR) as if they posed an intrinsic fire hazard, just like electrical cables. Due to this technically incorrect specification, installation in escape routes was only permitted

with a fire protection duct, an expensive and complex solution. Alternatively, riser areas were used, which is by no means possible in all buildings.

While working on VDE Guideline 0800-730 in the DKE working group DKE/AK 412.6.7, this problem was identified and fed into the ongoing revision of the MLAR. The new MLAR version will stipulate that fiber optics with building classification can be laid in a metal duct or as adhesive fibers in escape routes. "Since the MLAR is highly complex, our aim in developing the guideline was to present the technical requirements in a practical and understandable way," says Sentko. "This will make it possible to lay fiber optic cables easily, cost-effectively, and in a time-saving manner in the future." More than 30 experts from the fields of network operation, planning, and installation, as well as various consultants, were involved in the development of the guideline in order to cover the topic comprehensively.

Consistently promoting fiber optic expansion

Since 2019, the DKE has been developing quality standards for fiber optics, as there had been insufficient normative foundations up to that point. The result was VDE Guideline 0800-720, which defines binding quality criteria and ensures that installations are reliable and have a long service life. With the VDE guidelines for the qualification of infrastructure specialists in the Broadband Committee Association (IGVB.net) initiative, the standardization world has also created practical foundations for consistently advancing and accelerating fiber optic expansion.

About DKE:

The DKE German Commission for Electrical, Electronic & Information Technologies (DKE) is the national platform for about 10,000 experts from industry, science and public administration to elaborate standards and safety specifications for electrical engineering, electronics and information technology. Standards support global trade and, among other things, the safety, interoperability and functionality of products and systems. As a competence centre for electrotechnical standardization, the DKE represents the interests of German industry in European (CENELEC, ETSI) and international standardization organizations (IEC). In addition, the DKE provides comprehensive services in the field of standardization and VDE specifications.

For more information, visit www.dke.de

About VDE:

VDE, one of the largest technology organizations in Europe, has been regarded as a synonym for innovation and technological progress for more than 130 years. VDE is the only organization in the world that combines science, standardization, testing, certification, and application

consulting under one umbrella. The VDE mark has been synonymous with the highest safety standards and consumer protection for more than 100 years.

Our passion is the advancement of technology, the next generation of engineers and technologists, and lifelong learning and career development “on the job”. Within the VDE network more than 2,000 employees at over 60 locations worldwide, more than 100,000 honorary experts, and around 1,500 companies are dedicated to ensuring a future worth living: networked, digital, electrical.

Shaping the e-dialistic future.

The VDE (VDE Association for Electrical, Electronic & Information Technologies) is headquartered in Frankfurt am Main. For more information, visit www.vde.com

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