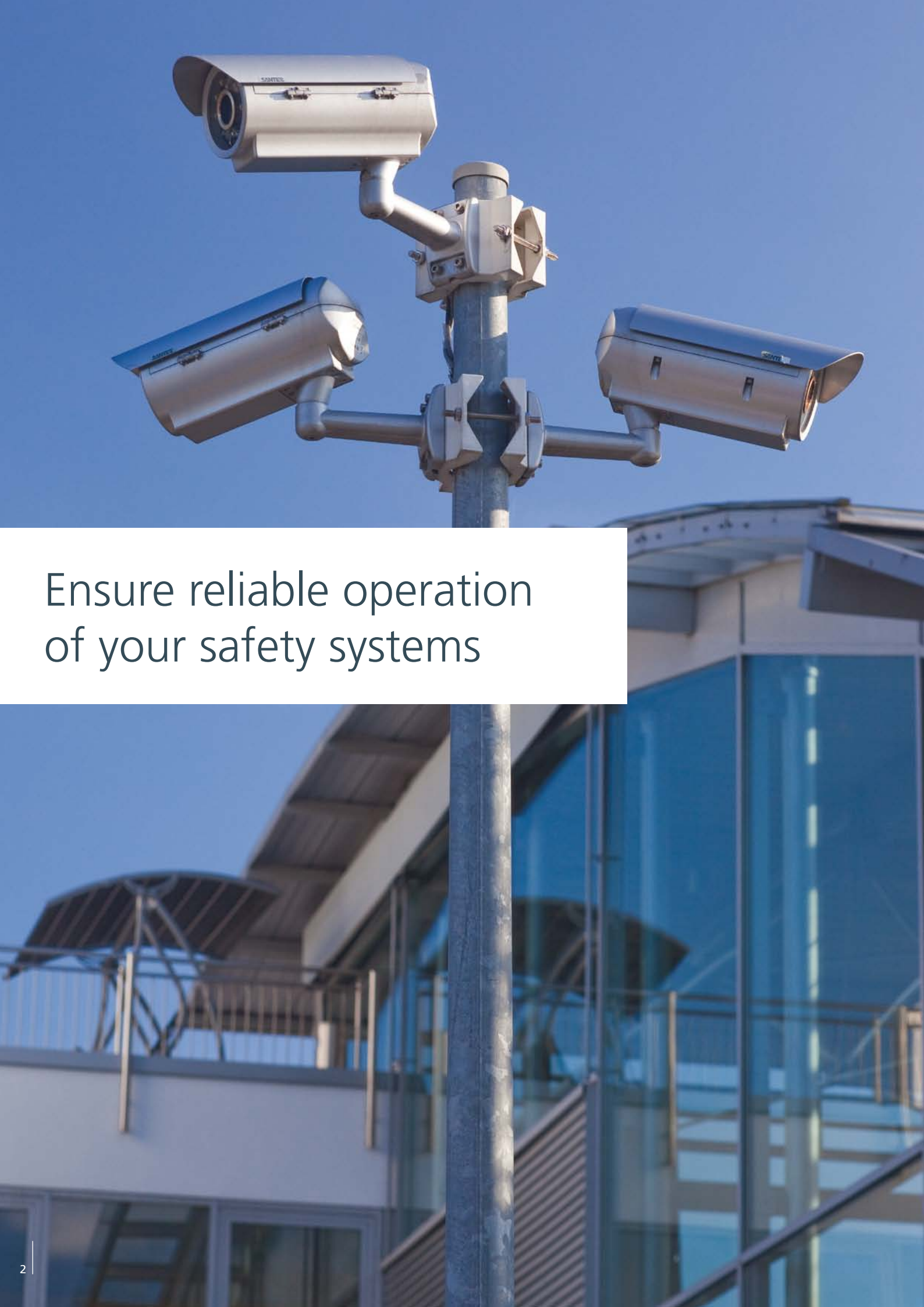




DEHN protects  
Safety Systems





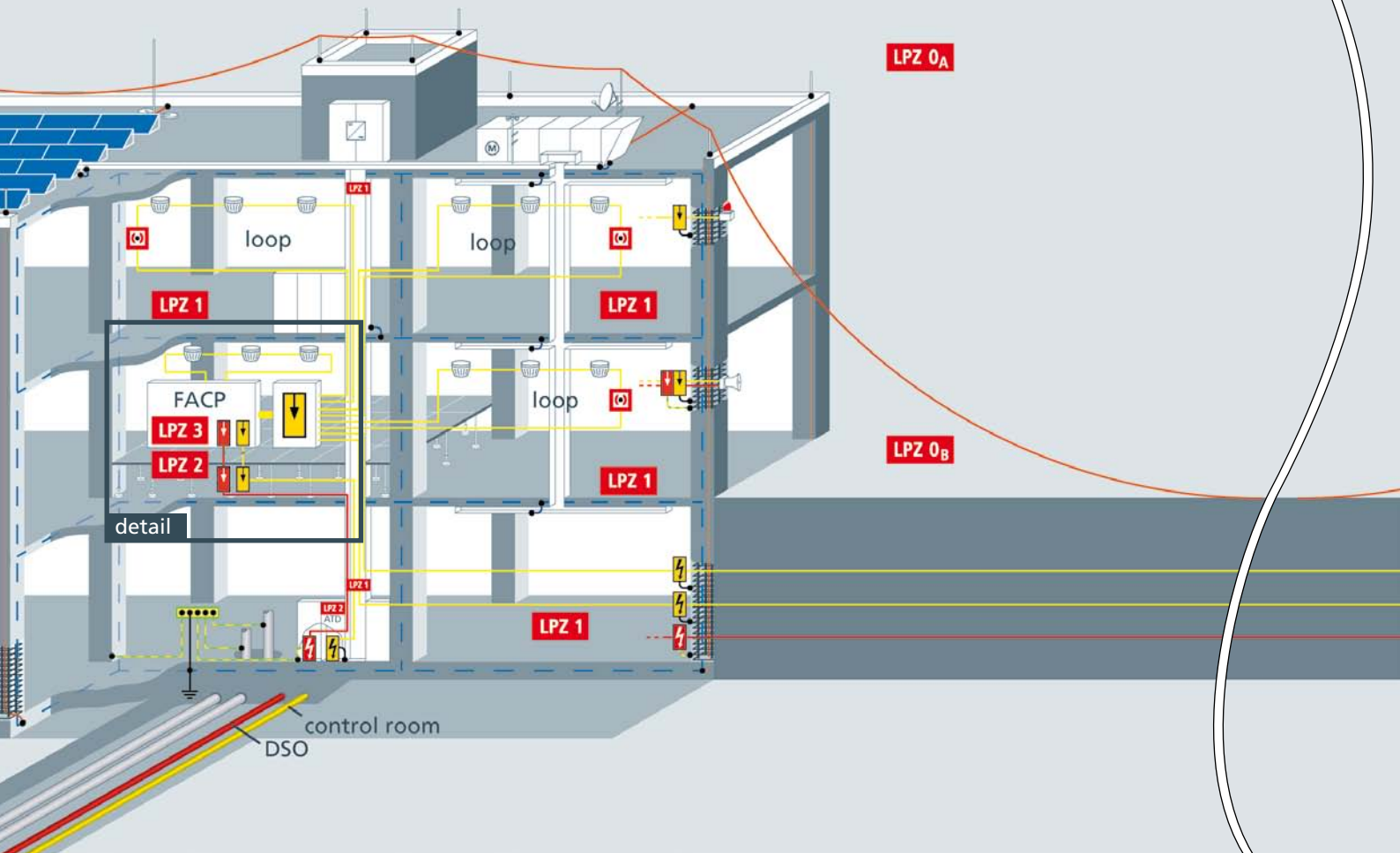
Ensure reliable operation  
of your safety systems

## No compromises on safety

Be it fire protection, burglary protection or emergency and escape route lighting: Electrical safety systems are only safe if they do not fail during thunderstorms which are most common in the summer months. If lightning strikes and surges destroy safety systems and safety-related functions are thus no longer available, human life is at risk. Surges may lead to false alarms and high follow-up costs. Therefore it is vital to integrate safety systems in a lightning and surge protection concept. To this end, manufacturers, consultants and installers must comply with legal and normative requirements.

Over 100 years of experience make DEHN an acknowledged expert in the field of lightning and surge protection. Our top-quality products were approved by leading manufacturers of hazard alarm systems. Arresters which are used, for example, in fire, burglar alarm and CCTV systems were extensively tested in our in-house test laboratory. Our tried and tested lightning and surge protection as well as earthing and equipotential bonding concepts are developed by DEHN experts. DEHN products are VdS-certified and provide high quality which is continuously improved.

Do not compromise on safety: Protect your safety systems by top-quality DEHN products. Profit from our practical experience, technical support and broad range of seminars. We will be happy to assist you with the planning and installation of your safety systems.



## Lightning protection zones in buildings equipped with safety systems

Building management, telecommunication, control and safety systems are increasingly used in all areas of residential and functional buildings. These networked systems make the building intelligent and ensure its optimised use. Building owners and operators make high demands on the availability and reliability of these systems. An external lightning protection system protects persons and material assets in a building from fire, however, electrical and electronic systems are not protected against failure as a result of surges caused by a lightning discharge. A lightning protection zone concept in conformity with the IEC 62305-4 standard provides effective protection against surges caused by a lightning electromagnetic impulse (LEMP). According to this principle, the structure to be protected must be subdivided into inner lightning protection zones with different LEMP threat values. It is advisable to match the lightning protection zones and their LEMP threat values with the withstand capability of the relevant electronic system.

The above figure exemplarily shows the lightning protection zones of a fire alarm system according to the type of lightning threat:

Outer zones:

LPZ 0<sub>A</sub>: Zone in which the threat is due to direct lightning strikes and the undamped lightning electromagnetic field. Systems such as cables extending beyond the building may be subjected to the full lightning current.

LPZ 0<sub>B</sub>: Zone protected against direct lightning strikes, in which, however, the undamped lightning electromagnetic field is present. Systems such as alarm lights or sirens may be subjected to partial lightning currents.

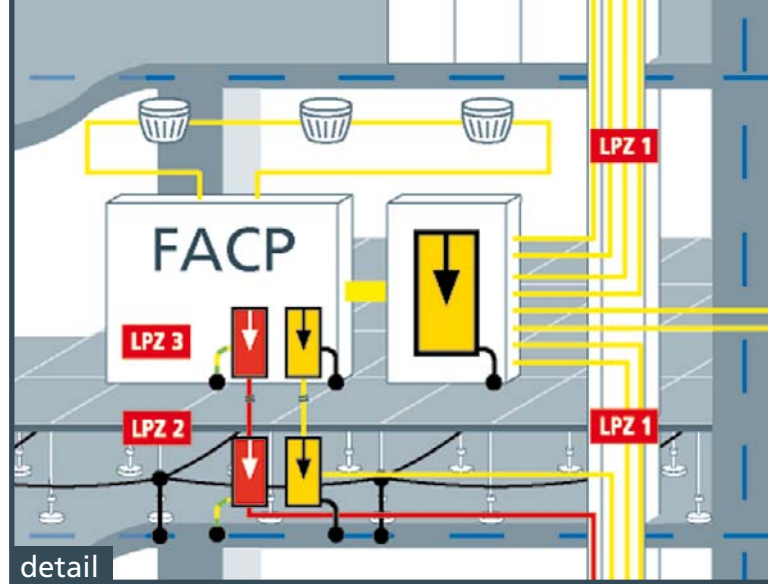
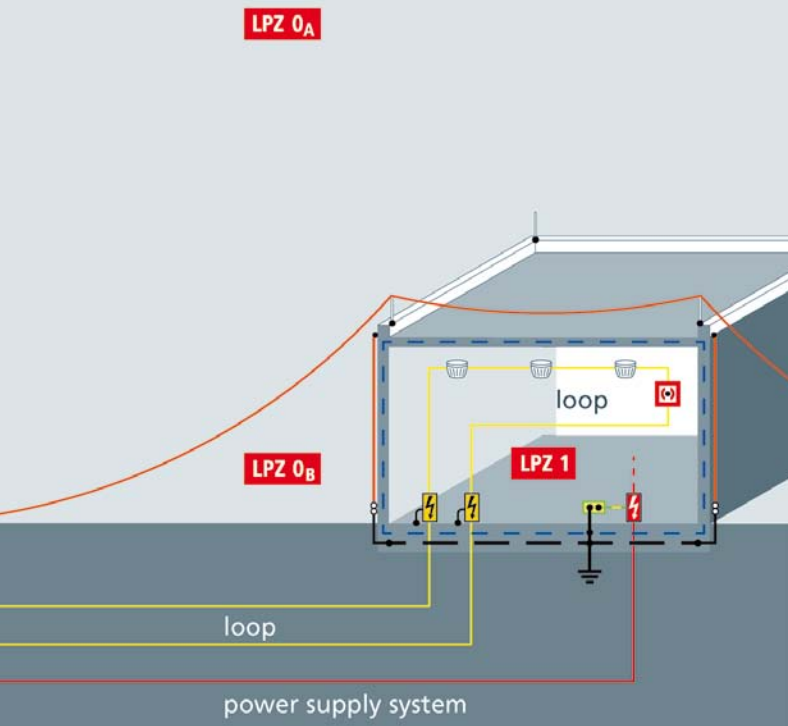
Inner zones:

Inner zones are protected against direct lightning strikes and are subdivided into:

LPZ 1: Zone in which impulse currents are limited by current distribution and SPDs at the zone boundaries. Spatial shielding may attenuate the lightning electromagnetic field. Ring conductors with detectors are frequently installed in LPZ 1.

LPZ 2: Zone which, in comparison to LPZ 1, is additionally protected against impulse currents and the lightning electromagnetic field and is thus subjected to a lower interference.

LPZ 3: Zone which requires maximum protection against the effects of a lightning strike. Electronic systems such as fire control panels are frequently installed in LPZ 3. Surge arresters and shielding measures reduce impulse currents and electromagnetic fields to an acceptable level for the system technology.



- lightning equipotential bonding lightning current arrester / combined arrester
- local equipotential bonding surge arrester
- LPZ lightning protection zone
- ATD automatic telephone dialer
- FACP fire alarm control panel
- DSO distribution system operator
- fire detector
- smoke detector

## Safety systems

Safety systems allow data exchange as well as monitoring and control of the individual systems of hazard alarm systems. Depending on the system requirements, data must not only be reliably and correctly transmitted, but also available around the clock. It is therefore important to protect safety systems against the effects of a lightning strike.

### BLITZDUCTOR® XT combined arrester

The BLITZDUCTOR XT base part is a universal and space-saving four-pole feed-through terminal, accommodating a protection module without signal interruption. The snap-in mechanism at the supporting foot of the base part allows the protection module to be safely earthed via the DIN rail.\*\*



Type	Part No.
BXT BAS	920 300

### BLITZDUCTOR® XT

The space-saving combined arrester module with LifeCheck protects pairs of high-frequency transmission systems which are galvanically isolated.\*\*



Type	Part No.
BXT ML4 BD HF 24	920 375

### DEHNrapid® LSA

The combined arrester for LSA disconnection blocks reliably protects sensitive hardware against surges and allows testing, disconnecting and patching of the connected lines.\*\*



Type	Part No.
DRL 10 B 180	907 400
EF 10 DRL	907 498
DRL RD 24	907 442

\*\* VdS-certified



## Manufacturer-specific solutions

Since the interfaces of hazard alarm systems to be protected differ from manufacturer to manufacturer, surge protective devices frequently have a different design or different nominal data. In cooperation with renowned manufacturers, we offer surge protective devices for all common interfaces in safety systems.

### BLITZDUCTOR®

The DIN rail mounted and energy-coordinated combined arrester protects unearthed d.c. supply systems.



Type	Part No.
BVT ALD 60	918 409

### DEHNpatch

The universal arrester for information technology is ideally suited for cabling systems according to class E up to 250 MHz. It protects all pairs due to heavy-duty gas discharge tubes and a filter matrix per pair.



Type	Part No.
DPA M CLE RJ45B 48	929 121



## Power supply

The a.c. voltage supply of fire and burglar alarm systems places especially high demands on surge protective devices. DEHNguard® and DEHNrail which have a high discharge capacity due to their zinc oxide varistors meet these demands and ensure safe system operation. The fact that our surge protective devices are VdS-certified contributes to the high quality of our products.

### DEHNguard®

The modular two-pole type 2 surge arrester for single-phase TN systems consists of a base part and plug-in protection module with floating changeover contact.\*\*



Type	Part No.
DG M TN 275 FM*	952 205

### DEHNrail

The two-pole type 3 surge arrester consists of a base part and plug-in protection module with floating changeover contact.\*\*



Type	Part No.
DR M 2P 255 FM*	953 205

\* FM = floating changeover contact

\*\* VdS-certified



## Safety lighting systems

Due to their application and normative requirements, safety lighting systems require maximum system availability. The d.c. and a.c. voltage supply of these systems places especially high demands on surge protective devices. DEHNsecure meets these demands for both supply systems thanks to its special spark gap technology.

### DEHNsecure M

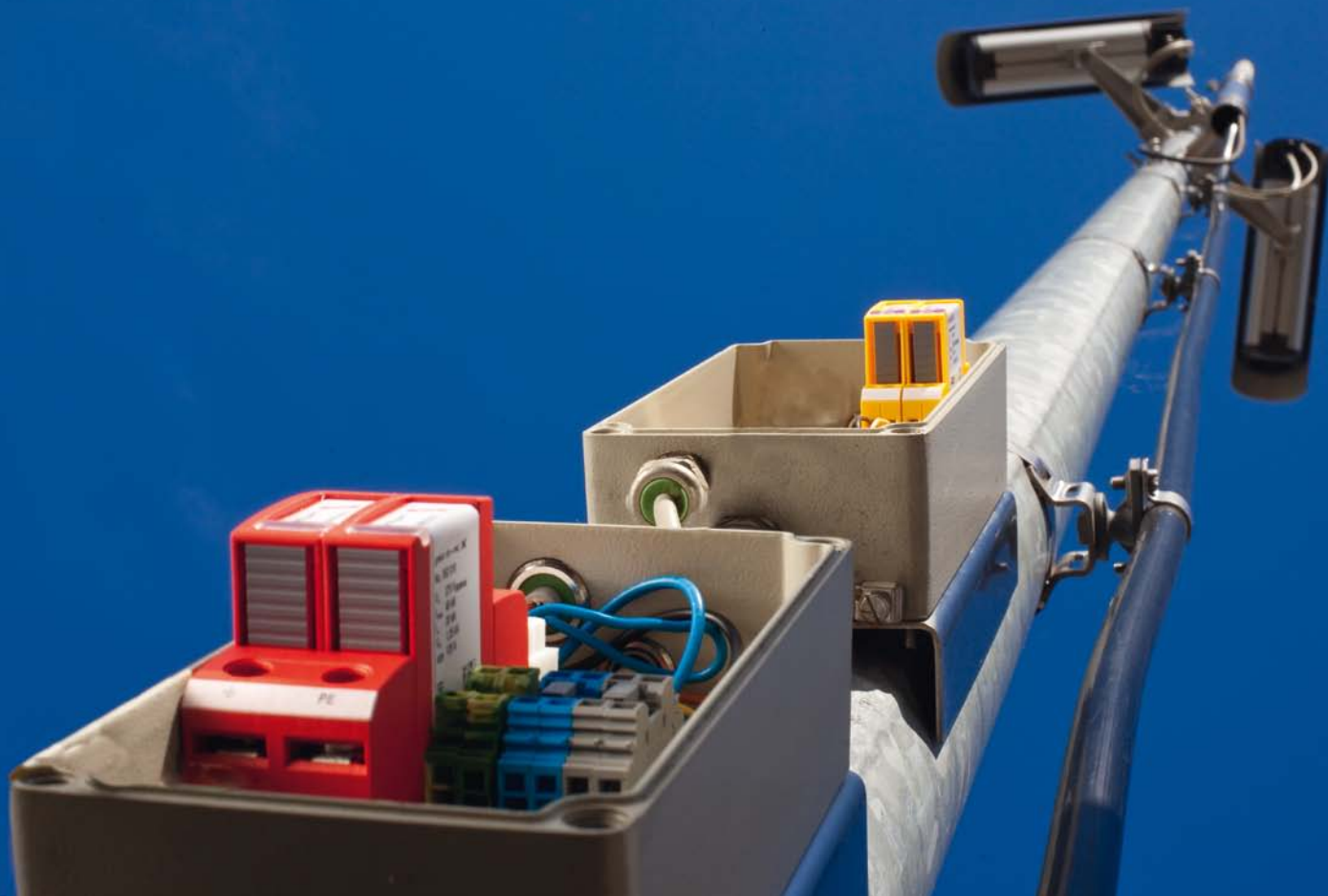
The modular and coordinated single-pole lightning current arrester for d.c. applications is available with or without remote signalling contact for the monitoring device.



Type	Part No.
DSE M 1 242	971 122
DSE M 1 242 FM*	971 127

\* FM = floating changeover contact





## CCTV systems

Our economically and technically sound lightning and surge protection concepts allow reliable planning and installation of your safety systems. BLITZDUCTOR® XT and DEHNguard® arresters are ideal for use in CCTV systems.

### BLITZDUCTOR® XT combined arrester

The combined arrester is a pluggable and universal multipole lightning current and surge arrester for safety systems. It is ideally suited for installations and systems that require maximum availability. The two-part arrester consists of a DIN rail mounted base part and protection module and features an integrated LifeCheck® function for fast and easy arrester testing.\*\*



Type	Part No.
BXT BAS	920 300
BXT ML4 BD HF 5	920 371

### DEHNguard® M type 2 arrester

The modular two-pole type 2 surge arrester for single-phase TN system consists of a base part and plug-in protection module with floating changeover contact.



Type	Part No.
DG M TN 275 FM*	952 205

\* FM = floating changeover contact

\*\* VdS-certified



Our promise

## DEHN protects

Our key objective is to protect workers and material assets. It was our pioneering spirit and innovative ideas that have defined our company for more than 100 years and made us a market leader with more than 1,400 employees. Our products and developments reflect our market feasibility, commitment and ideas.

As early as in 1923 our founder Hans Dehn started production of external lightning protection and earthing components to optimise the protection of buildings and installations. In 1954, we launched the first series of surge protective devices. Constant further development of these devices ensures safe operation and permanent availability of electrical and electronic installations. Also in the 1950s, our third sector, safety equipment, was added to our portfolio.

The Bavarian town of Neumarkt is the heart of our activities where product managers and developers advance our protection technologies. Here we manufacture our high-quality safety products.

## We offer the best solution

Our concern is to be a reliable and fair partner for our industrial, commercial and technical customers all over the world. To this end, we always focus on the best solution to protection problems. Our sales teams in Germany and our global network of 11 subsidiaries as well as more than 70 international sales partners are committed to competent and customer-oriented distribution of our products. Proximity and close contact with our customers is of utmost importance to us, be it on-site support by our experienced field staff team, our telephone hotline or personal contact at trade fairs.

In hundreds of seminar, workshops and conferences held every year throughout the world we impart practical knowledge on products and solutions. Our specialised book "Lightning Protection Guide" and our brochures will broaden your practical knowledge. Or visit us at [www.dehn.de](http://www.dehn.de) for information around the clock.



**Surge Protection  
Lightning Protection  
Safety Equipment  
DEHN protects.**

DEHN + SÖHNE  
GmbH + Co.KG.

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