New DEHNcord Compact Type 2 Surge Protection Device

The DEHNcord is a flexible type 2 surge arrester that can be easily integrated into flush-mounted systems, cable ducts, flush-type boxes and end use terminal equipment. It is also ideally suited to the protection of LED lights and control panels.

Compact in design, the DEHNcord with its prewired connecting cables is also suitable for protecting electrical and electronic loads in final circuits where the performance of a conventional type 3 surge protective device for terminal equipment reaches its limits.

Since the DEHNcord is classed as a type 2 surge arrester, it can also be used at the transition from Lightning Protection Zone LPZ 0 to 1 or higher.

Despite its compact design and a total discharge current of 20 kA (8/20 µs), the device still houses a disconnector and a visual operating state indicator.

The DEHNcord can be easily incorporated into existing systems ensuring reliable protection of terminal equipment at minimum expense, taking up little space and saving installation time.

For more information please click here

DEHNpatch surge protection for Cat 6 Ethernet cabling

In today’s modern world the uninterrupted use of data communications is taken for granted. Lightning discharges resulting in induced surges and over-voltages can cause major problems to computer equipment resulting in physical damage, data loss and corruption and the associated misery of down time and lost production.

To offer protection against these damaging surges DEHN + SOHNE have designed a Patch cable with built-in surge protection. Simply plug in between the patch panel and the active component.

DEHNpatch fully complies the requirements of Category 6. It is well suited for existing services such as Gigabit Ethernet, ATM or ISDN as well as systems such as Voice over IP and Power over Ethernet. Due to its fully shielded design, DEHNpatch can be used in shielded and unshielded networks. Its width is similar to that of an RJ45; this allows up to 24 devices to be installed next to one another in one series and to be integrated into a 19” rack.

For more information please click here
Lightning protection for external thermal insulation composite systems (ETIC)

The telescopic test joint box is specifically designed for integration in thermal insulation composite systems (full thermal insulation).

It allows access to the disconnecting clamp to electrically isolate the air-termination / down conductors from the earth-termination system in case of electrical measurements.

Easy and proper installation
If existing or new buildings are insulated by means of thermal insulation composite systems made of e.g. mineral fibre or polystyrene, the relevant technical processing guidelines by the manufacturers of these insulating materials must be observed. In these guidelines, the connection of windows, doors and all components extending through the building (e.g. ventilation pipes, switch boxes) are described in detail. These requirements are also important for lightning protection components. These connections are made by means of compressed and re-expandable sealing tapes (also referred to as water stop). The test joint box for thermal insulation composite systems is provided with an adhesive surface which allows easy and proper integration in thermal insulation composite systems.

It is important to install the sealing tapes to ensure that the thermal insulation composite system is protected from wind-driven rain, thus preventing the ingress of moisture into the insulation.

The installer of the thermal insulation composite system is responsible for ensuring that the connections are protected from wind-driven rain.

Telescopic box
The test joint box can be adjusted to insulating materials with a thickness between 90 and 140 mm. Thus, it can be used for common insulating material thicknesses.

Heat-insulating spacer
When using insulating materials with a thickness between 140 and 320 mm, an additional spacer is required. In order to avoid heat bridges, a styrofoam core is integrated in the spacer.

The spacer can be quickly shortened by 50 to 200 mm at intervals of 10 mm by means of a saw.

Protected from wind-driven rain
The entire unit must be protected from wind-driven rain, that is also the cover of the test joint box. This stainless steel cover is robust, visually appealing and edged to ensure that the edge of the cover exerts sufficient surface pressure to the plaster. An UV and weather-resistant sealing made of foamed plastic is integrated in the cover to ensure protection from wind-driven rain.

The cover is tightened by means of four screws including sealing washers.

The required fixing elements (screws and dowel) and a styrofoam cover (protection from contamination during cleaning work) are included in delivery.

The test joint box provides different perforations for down conductor and earth entry.

The test joint box for thermal insulation composite systems is thus an innovative and practice-oriented solution for integrating a test joint in thermal insulation composite systems.

For more information please click here
Earth Points by Robin Earl from DEHN (UK) Ltd

“Section 444 on the measures against electromagnetic disturbances is not one of the best understood sections of BS7671 if feedback from our seminars is to be a guide.

These measures are well established but it is the last measure in the list in 444.4.2.1 which is very effective but is least implemented in practice. This section informs the installer that depending on the type of installation there are different options of the bonding network and that if the bonding cables are more than 1 metre long, measures are taken to reduce the effects of added inductive voltages on the cables.

- A444.1: The star network of earthing and bonding using the cables to bring the earths to the consumer unit and then the MET. This is the simplest method for small installations for example the domestic market.

- A444.1.2: The multiple mesh method of bonding network this method is effective in installation of interconnected communication equipment as found in commercial, retail or public service installations.

“How this is achieved is hotly debated, often in site surveys we see that the use of the star network is still being used in larger installations, when there is in fact a far more efficient method in terms of cost and material reduction.”

- A444.1.3: The installations with higher densities of communication equipment and to protect these the use of the common meshed bonding star network is used.

This is shown in fig A444.3 and the statement “a meshed equipotential bonding network is enhanced by the existing metallic structure of the building. It is supplemented by the conductors forming the square mesh”. This is the rebar system of the building and the mesh size also depends on the type of lightning protection system.

- A444.4: The bonding ring conductor (BRC). This is a surface mounted conductor so that all functional and protective earth cables can be connected to it.

In figure A444.4 we can see different methods of mesh, star common or multiple arrangements that can be installed and what is interesting for the installer is that there is a very simple cost effective way to bond to the mesh.

**DEHN supplies a fixed earth terminal to do this very function.**

Comprising of a flat earth plate complete with a threaded bush with an insulated protective disc which is the only visible sign of installation in the walls. A rod at the back of the plate is fixed to the rebar, this is the link from the mesh to the equipment being protected. The foundation clamp from the rod to bar can be in various sizes depending on the size of the installed rebar and another clamp added to attach the LPS.

Installed during the rebar installation and before the concrete is poured. Easy, cost effective and makes use of the rebar system.

The insulated disc is removed to then show a flat earth plate with a M10/M12 connection. This can be used to connect to the BRC, or act as the local bonding point for any installed equipment or shop floor machine, creating easy earthing access and the rebar can also be a measured and utilised earth.”

For more information on Earth Points please click here

If you would like more information on our seminars please click here.
Article by BIRAL

State of the art Lightning Detection Technology protected by DEHN (UK) Ltd

BIRAL, designer and manufacturer of high quality meteorological sensors, is proud to introduce a unique standalone lightning detector called the BTD-300.

This robust sensor is designed to meet US Federal Aviation Authority (FAA) performance requirements and uses a novel technique exploiting the thunderstorm’s electrostatic field.

Major advantages of Biral’s pioneering technique are the avoidance of false alarms from radio interference and the ability to detect both cloud-to-ground and cloud-to-cloud lightning, resulting in higher lightning detection efficiency. The BTD-300 provides accurate range estimation up to 50 miles (83 km) away and can detect between 50-250 % more flashes than established lightning location networks.

"Major advantages of Biral’s pioneering technique are the avoidance of false alarms from radio interference and the ability to detect both cloud-to-ground and cloud-to-cloud lightning, resulting in higher lightning detection efficiency."

An additional direction finding module is available with the BTD-300 providing data on thunderstorm direction as well as distance. Unlike conventional detectors using radio signals, Biral’s product has the ability to warn of potential overhead thunderstorm development several minutes before the first lightning flash has occurred. This is achieved by analysing the electric charge on individual raindrops as they strike the antennas, and monitoring the strength and variability of the electric field at the site. If either shows characteristics of a developing storm, an advanced warning is issued - alerting the user that the first lightning of the day could be right on their site!

The systems are protected by DEHN Red/line and Yellow/line surge protection products. Giving complete protection to this exciting product innovation.