



Surge Protection  
Lightning Protection / Earthing  
Safety Equipment

DEHN + SÖHNE  
GmbH + Co.KG.  
Hans-Dehn-Str.1  
Postfach 1640  
92306 Neumarkt  
Germany

Tel. +49 9181 906-0  
Fax +49 9181 906-1100  
www.dehn.de  
info@dehn.de

For more information material  
and services, for example

- Safety Equipment  
Main catalogue
- Appointment with  
our local partner

please visit our homepage:  
www.dehn.de ("Service" section)

© Copyright 2011 DEHN + SÖHNE



# Safe Working on Electrical Installations Earthing and Short-Circuiting Devices



DS191/E/1211



# Earthing and short-circuiting devices

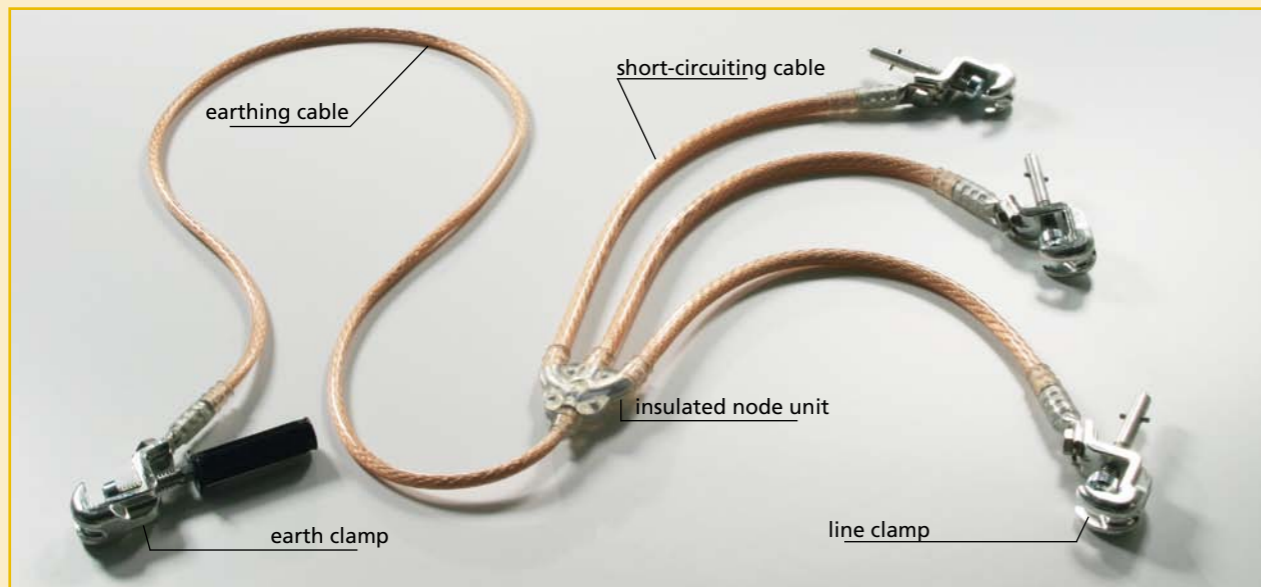
## Save your life during work on electrical installations

When working on electrical installations, the five safety rules must be observed. Earthing and short-circuiting at the work location is the key element of these rules. It ensures a de-energised state for the duration of the work in case of interference voltages, atmospheric overvoltages or accidental re-connection.

### Five safety rules in accordance with EN 50110-1 (DIN VDE 0105-100)

1. Disconnect completely
2. Secure against re-connection
3. Verify that the installation is dead
4. Carry out earthing and short-circuiting
5. Provide protection against adjacent live parts

The installation must be disconnected completely and secured against re-connection first. After testing and verifying with a voltage detector that the installation is dead, the earthing and short-circuiting device is connected to the earthing system. Then, it is connected to the parts to be earthed using an earthing stick. The earthing and short-circuiting device should be visible from the work location.



## A benefit for your safety

### Short-circuiting cable

The transparent node unit and cables ensure easy visual inspection and allow the user to immediately detect signs of damage and corrosion. The cables and the connection element are fixed, thus preventing this connection from becoming loose even in case of the dynamic load of short-circuit currents. The cables are particularly robust and available with a cable cross-section up to 150 mm<sup>2</sup>.

### Laser marking

The new laser marking on the short-circuiting cable ensures permanent marking with the most important product information – directly on the product.

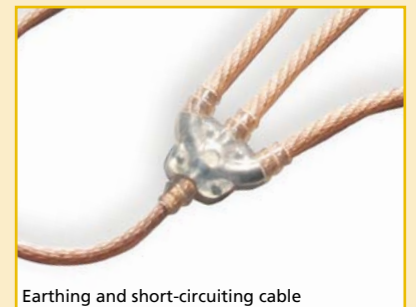
### Universal clamp

We have clamps for every application: For fixed ball points with a diameter of 20 mm and 25 mm and flat clamps for copper bars. The PVC-sheathed cable lug ensures protection against twisting and damage.

### Ball head cap

Ball head caps are available as rigid and adjustable ball head caps. A ball head cap that can be rotated by 4 x 90° allows the earthing and short-circuiting device to be used in the most favourable position. The connection between the fixed ball point and the ball head cap ensures an extremely high degree of short-circuit strength.

Earthing and short-circuiting devices are produced in a standard-compliant and proven manner and are extensively tested in our test laboratories.



Earthing and short-circuiting cable



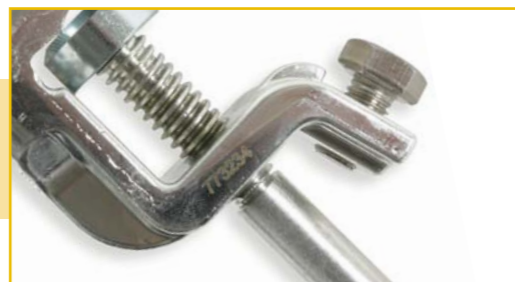
Laser marking



Cable lug and universal clamp



Ball head cap



In-house production of all components ensures maximum quality and safety in terms of function and handling. With earthing and short-circuiting devices from DEHN you are always on the safe side.

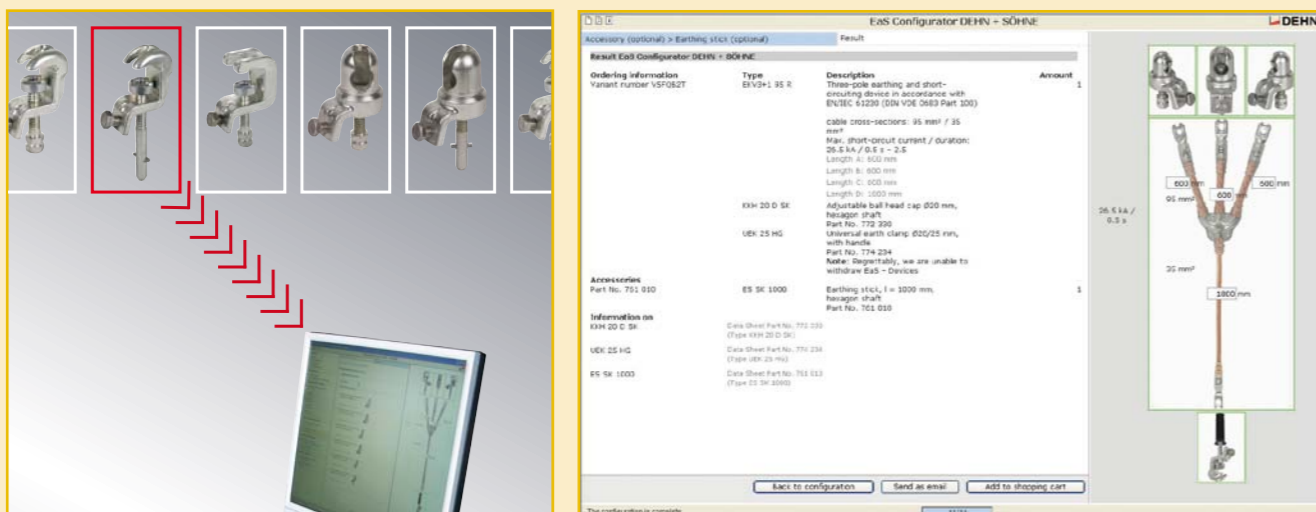
# Earthing and short-circuiting configurator

## Easy online configuration of earthing and short-circuiting devices

Safe working on electrical installations is only ensured if the earthing and short-circuiting device is configured correctly. Thus, the selection of the earthing and short-circuiting device is always the first step. The new earthing and short-circuiting configurator makes selection easy:

- The intuitive menu navigation allows quick selection of the right earthing and short-circuiting device for your application.
- Precise and perfectly harmonised selection of the connection elements and earthing and short-circuiting cables.
- The variant number allows to clearly identify the finished product and order it at a later date.
- You may also use the Part No. of your previous orders for configuration.
- The selected product can be added to the shopping cart, sent via e-mail or printed.
- The technical data on the product are directly linked - online and thus always up to date.

You will find the new earthing and short-circuiting configurator and a demo version at [www.dehn.de/en/euk](http://www.dehn.de/en/euk)



The new earthing and short-circuiting configurator:  
[www.dehn.de/en/euk](http://www.dehn.de/en/euk)

## Earthing and short-circuiting device in 8 steps

### 1. Selection mode

First select

- Product view or
- System view

Select the product view if you already know which cable cross-section and clamps are to be used. In the system view the parameters of the switchgear installation are entered, for example the maximum short-circuit current and the type of earthing. Whether product or system view – both solutions lead to a technically sound earthing and short-circuiting device.

### 2. Basic structure

Define the basic structure of the earthing and short-circuiting device.

### 3. Phase cable end cross-section

Select the phase cable end cross-section of the short-circuiting cables.

### 4. Earth cable end cross-section

Decide whether the earth cable ends should have the same cable cross-section or a reduced cable cross-section.

### 5. Phase cable end equipment

Select the shaft type and connection element to be used on the phase cable end.

### 6. Earth cable end equipment

Select the operation and connection element for earth cable ends.

### 7. Earthing stick

Optional earthing sticks are available as accessory in different lengths and versions.

### 8. PDF of your selection

You can print the result of your selection, add it to the shopping cart or send it via e-mail. You may certainly return to your selection to make changes.







# DEHN protects.

## Our promise: DEHN protects.

We are committed to the protection of workers and material assets. The energy and the spirit of innovation of our more than 1,400 employees are reflected in our developments and innovative products in the field of lightning protection, surge protection and safety equipment.

It was our pioneering spirit and innovative ideas that have defined our company for more than 100 years and made us the market leader we are today. As early as in 1923 Hans Dehn, who founded the company in 1910 as an electrical installation company, started production of external lightning protection components for the protection of buildings and installations. During industrialisation in the 1950s, DEHN launched the first generation of surge protective devices in 1954 – a milestone for the safety and availability of electrical installations. Also in the 1950s, with the launch of safety devices for safe working on electrical installations, our third sector, safety equipment, was added to our portfolio.

The continuous growth of our company, the DEHNgroup, reflects our strong commitment to lightning protection, surge protection and safety equipment. Our global network of 11 subsidiaries and numerous sales partners passes on know-how and distributes high-quality products that are produced in our headquarters.

We ensure that your buildings and installations are protected during operation, maintenance and repair. Our focus is particularly on wind energy, photovoltaic, process industry, traffic and communication solutions. Also in these fields of application you can be assured: DEHN protects.

**Surge Protection  
Lightning Protection / Earthing  
Safety Equipment**

## Our offer: Always at your service

### We offer the best solution

Our local partners are at your service every day and provide competent advice with a clear focus on the best solution. DEHN employees are also always well-regarded referees at various events. Simply call the hotline in our headquarters or send us an e-mail and we will gladly answer any questions you might have on products, applications and planning of lightning protection systems.

### Extend your expertise thanks to our wide range of seminars

Broaden your knowledge of physical interactions and standardisation in our surge protection, lightning protection and safety equipment seminars. Specific applications and protection recommendations will round off your practical knowledge. Seminars are held all over Germany and around the globe through our subsidiaries.

### Tests and analyses in our test laboratory

In our highly specialised test fields we are able to generate impulse currents and impulse voltages of different amplitudes, rise times and duration and thus we are able to test whether installations and systems are protected against lightning. Our tests are carried out in compliance with the latest standards and we share our knowledge with the various standards committees we serve on.

### Tested equipment for your safety

As your reliable partner, we offer to test your earthing and short-circuiting devices, voltage detectors as well as switching and insulating sticks at the intervals specified by the German trade association and the DIN VDE standard, and, if requested or a product is damaged, even earlier. We remind you of the test date and offer rental devices. The test result is documented on a test label and in a test report.



**WIND ENERGY • PHOTOVOLTAICS • PROCESS INDUSTRY • TRANSPORTATION SYSTEMS • COMMUNICATION SYSTEMS**

