



DEHNcare® protects  
workers exposed to arc faults







Safety and comfort when working on electrical installations

## Passive Arc Fault Protection DEHNcare®

Each and every day electrotechnical work is carried out all over the world. The risk that technical defects, human error, contaminants or foreign objects in the installation might cause arc faults cannot be excluded. If arc faults occur, workers are exposed to temperatures of more than 10,000°C and suffer severe burns.

In addition to technical systems, the arc-fault-tested personal protective equipment DEHNcare® protects workers against the thermal effects of an arc fault.

According to the International Social Security Association and national regulations in the country of use, employers shall include arc fault protection in the risk assessment. If this risk assessment indicates that there is a risk of an arc fault, employers must provide their employees with suitable personal protective equipment and ensure that it is worn. Personal protective equipment must be tested and approved by an accredited certification body.

DEHNcare® is tested to international standards. The safety helmet with visor made of nanoparticles, the gloves and the protective suit or coat made of neoprene and leather provide maximum protection and excellent wearing comfort.

DEHN stands for top-quality in safety equipment as well as lightning protection, earthing and surge protection products. Our high-grade protective clothing has been tested by renowned and accredited institutes in line with international standards. The DEHNcare® personal protective equipment is certified as follows:

### DEHNcare® jacket, trousers, coat and gloves:

- Institut für Ökologie, Technik und Innovation GmbH, independent institute with extensive expertise in textiles
- Öko-Tex-Standard, independent test and certification system for textile products

### DEHNcare® face shield and protective hood:

- ECS, independent test institute specialised in conformity assessment of eye protectors







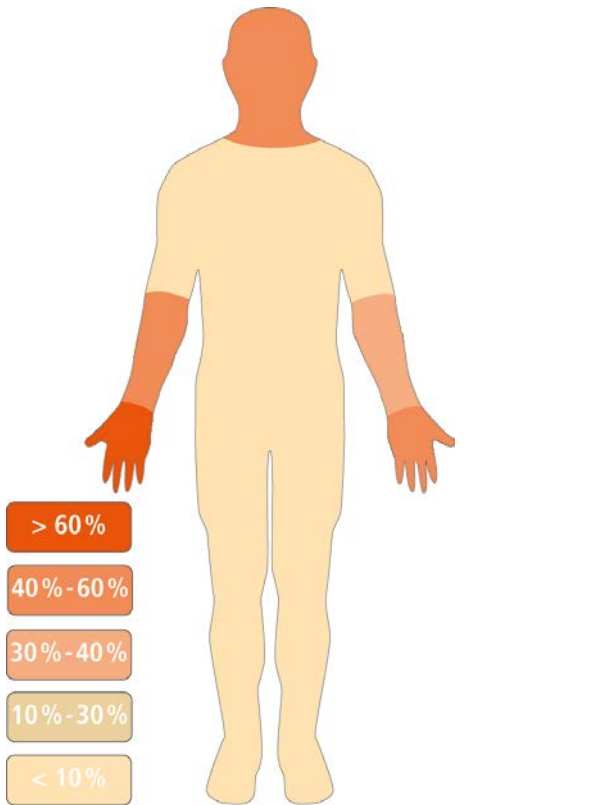
Photo: J. Vogler



## Arc faults put your employees at risk

According to the International Social Security Association and national regulations in the country of use, employers shall include arc fault protection in the risk assessment. Depending on the risks to be expected, employers must provide their employees with tested personal protective equipment (PPE) in compliance with the EEC directive 89/686/EEC<sup>1)</sup> and ensure that it is used properly.

### Body regions affected by thermal damage



The hand and forearm region is particularly at risk of being burnt by arc faults whilst working on electrical installations.<sup>2)</sup>

## Arc faults cause burns and other skin injuries

### Without arc fault protection



Standard protective gloves do not prevent injury and burns.

### With arc fault protection



DEHNcare® arc-fault-tested protective gloves provide adequate protection.



Wearing helmets without face shield can result in serious injuries.



Our safety helmet for electricians with face shield protects the face and head region from injuries and burns.

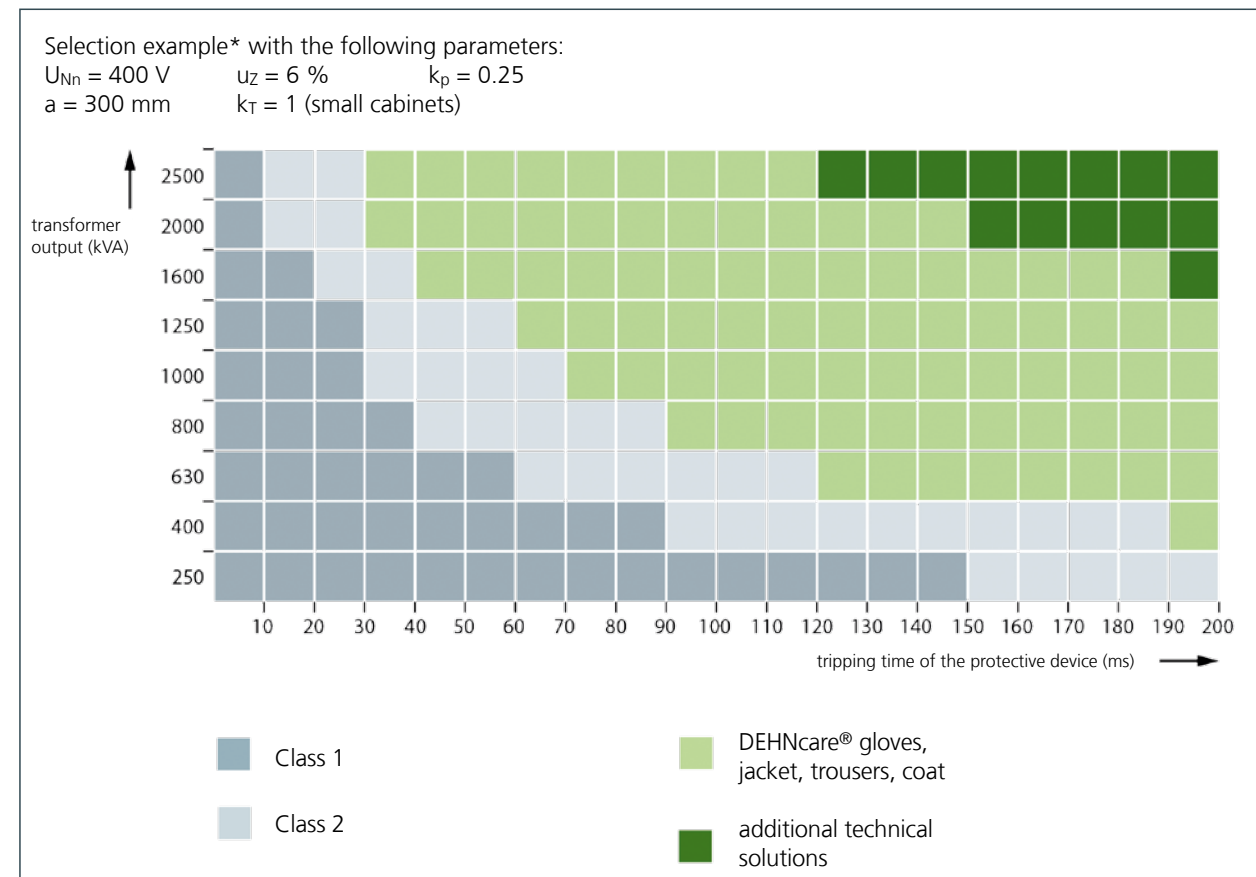
<sup>1)</sup> Directive 89/686/EEC on the approximation of the laws for Member States concerning personal protective equipment  
<sup>2)</sup> Source: BG ETEM – German trade association for energy, textiles, electrical goods and media products





## Selecting arc-fault-resistant protective clothing

The diagram shows suitable arc-fault-resistant protective clothing depending on the tripping time of the protective device and the transformer output.



\*The representative selection does not replace a risk assessment according to DGUV Information 203-077.

## DEHNcare® protective gloves

The hand and forearm region is particularly at risk of being burnt by arc faults whilst working on electrical installations. DEHNcare® protective gloves of type APG provide reliable protection in the event of an arc fault. They comply with applicable laws and regulations and have been extensively tested in box tests.

### DEHNcare® protective gloves (APG)

Protection against

- second-degree skin burns caused by arc faults
- cut and stab wounds

Protective gloves with long gauntlet:

- enhanced arc fault protection up to the crook of the arm

Maximum wearing comfort thanks to

- minimised sweat
- exceptional touch sensitivity
- excellent fit
- easier to put on

The following tests have been conducted:

- Box test to IEC 61482-1-2 class 2 (7 kA/0.5 s)
- ATPV test to IEC 61482-1-1 Value: 32.8 cal/cm<sup>2</sup>



Type	Part No.
APG 8	785 796
APG 9	785 797
APG 10	785 798
APG 11	785 799
APG 12	785 800
APG 8 L	785 808
APG 9 L	785 809
APG 10 L	785 810
APG 11 L	785 811
APG 12 L	785 812

#### EN 407:2004



4 X 3 X X

Protection against thermal risks according to EN 407: 2004

Performance levels: 4 X 3 X X (Test performed with practically new protective gloves)

- X - Large splashes of molten metal
- X - Small splashes of molten material
- X - Radiant heat
- 3 - Convective heat
- X - Contact heat
- 4 - Flammability

Performances levels marked X are not applicable

#### EN 388:2003



2 1 3 3

Protection against mechanical risks according to EN 388: 2003

Performance levels: 2 1 3 3 (Test performed with practically new protective gloves)

- 3 - Puncture resistance (Important: No protection against sharp objects such as injection needles,...)
- 3 - Tear resistance
- 1 - Cut resistance
- 2 - Abrasion





## DEHNcare® protective clothing

DEHNcare® protective clothing protects workers from burns caused by arc faults. The combination of breathable leather and neoprene ensures protection as per IEC 61482-1-2 (class 2)\* and provide a high wearing comfort.

The flame-retardant lining and the reflective strips ensure maximum protection. All the materials used such as zip and hook-and-loop fasteners are also made of flame-retardant material. The overall appearance is rounded off by the piping and the side pockets with flaps on the arms and legs. The suit is available in six sizes to ensure the right fit. The coat is available in three double sizes.

### The following tests have been conducted:

- Box test to IEC 61482-1-2 class 2 (7 kA/0.5 s)
- ATPV test to IEC 61482-1-1  
Value (jacket): 33.1 cal/cm<sup>2</sup>  
Value (trousers): 29.2 cal/cm<sup>2</sup>  
Value (coat): 33.1 cal/cm<sup>2</sup>

### DEHNcare® jacket (APJ)

Arc-fault-tested protective jacket, sizes 46 to 58

- flame-retardant zip and hook-and-loop fasteners
- reinforced stand-up collar
- reflective strips
- useful side pockets on arm



Type	Part No.
APJ 46	785 769
APJ 48	785 770
APJ 50	785 771
APJ 52	785 772
APJ 54	785 773
APJ 56	785 774
APJ 58	785 775

### DEHNcare® trousers (APT)

Arc-fault-tested protective trousers, sizes 46 to 58

- flame-retardant fasteners
- reflective strips
- pockets for knee pads
- useful cargo pockets
- adjustable belt
- pair of braces
- knee pads



Type	Part No.
APT 46	785 779
APT 48	785 780
APT 50	785 781
APT 52	785 782
APT 54	785 783
APT 56	785 784
APT 58	785 785

### DEHNcare® coat (APC)

Arc-fault-tested protective coat, sizes 48/50 to 64/66

- flame-retardant zip and hook-and-loop fasteners
- reinforced stand-up collar
- reflective strips
- useful side pockets



Type	Part No.
APC 48 50	785 755
APC 52 54	785 756
APC 56 58	785 757
APC 60 62	785 758
APC 64 66	785 759

# Safety helmet for electricians with DEHNcare® face shield and protective hood

Accident statistics show that the face region is frequently affected by severe burns. The DEHN safety helmet with arc-fault-resistant face shield protects workers from second-degree skin burns, flying debris and splashes. The visor is extremely robust and scratch-proof.

## Safety helmet for electricians of type ESH

Protection of the head and face region with maximum wearing comfort

- Easy to use thanks to
- push / rotary knob for adjusting the size
  - plug-in system (helmet, face shield)



Type	Part No.
ESH U 1000 S SY, yellow	785 705
ESH U 1000 S SW, white	785 706
ESH U 1000 S SO, orange	785 707
ESH U 1000 S SB, blue	785 708
ESH U 1000 S SR, red	785 709

## DEHNcare® arc-fault-resistant face shield of type APS

Excellent visibility due to

- anti-mist coating
- natural colour reproduction
- high light transmittance

High degree of protection due to nanotechnology

- energy absorbing
- low wear



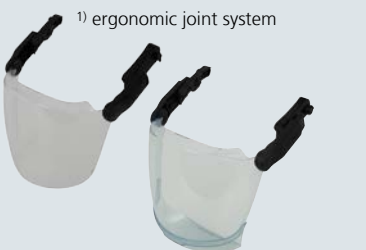
Type	Part No.
APS T CL2 SC <sup>1) 2)</sup>	785 761
APS T 12C SC <sup>1) 2)</sup>	785 762
APS T 20C SC <sup>1) 2)</sup>	785 763

Type	Part No.
APS T CL2 FS <sup>2) 3)</sup>	785 764
APS T 12C FS <sup>2) 3)</sup>	785 765
APS T 20C FS <sup>2) 3)</sup>	785 766



Type	Part No.
APS CL2 SC <sup>1)</sup>	785 746
APS 12C SC <sup>1)</sup>	785 747

Type	Part No.
APS CL2 FS <sup>3)</sup>	785 748
APS 12C FS <sup>3)</sup>	785 749



Type	Part No.
APS CL1 MEHA <sup>1)</sup>	785 721
APS CL2 MAHA <sup>2)</sup>	785 722

<sup>2)</sup> ergonomic joint system + magnetic closure system

## DEHNcare® Arc-fault-tested protective hood (APHO)

All-round protection for face, head and neck thanks to the 3-zone protective system. In case of an arc fault the DEHNcare® protective hood will protect you in combination with our safety helmet for electricians.



Type	Part No.
APHO	785 760

### The following tests have been conducted:

- Box test to IEC 61482-1-2 class 2 (7 kA/0.5 s)
- ATPV test to IEC 61482-1-1 Value: 37.2 cal/cm<sup>2</sup>

# Accessories for DEHNcare®

## Chin strap (KR)

Chin strap for safety helmets



Type	Part No.
KR ESH U 1000	785 738

## Sweatband (SB)

Replacement part for ESH 1000... safety helmet for electricians



Type	Part No.
SB ESH U 1000	785 739

## LED helmet lamp

For safety helmet for electricians ESH U



Type	Part No.
LED HL ESH	785 723

## Visor holder with clip (VH)

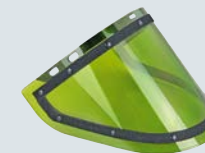
For arc-fault-tested face shields with clip



Type	Part No.
VH SC APS	785 753

## Replacement visor

For arc-fault-tested protective hood



Type	Part No.
APS HO	785 754

## Storage bag (AT)

Storage bag for safety helmet, face shield and protective gloves



Type	Part No.
AT 50 30	785 442

## Storage backpack (ARS)

Storage backpack for the complete DEHNcare® protective equipment



Type	Part No.
ARS 65 40	785 443



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

DEHN + SÖHNE  
GmbH + Co.KG.

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