Notice on Electrical Installation Work on Exhibition Stands

Electrical installation work on exhibition stands is generally to be carried out in compliance with the latest EN and DIN VDE regulations and recognised technical practice. All work performed must be in accordance with the relevant safety requirements and, above all, with the provisions set out in DIN VDE 0108, VdS Guidelines and the accident prevention code BGV C1. The outdoor exhibition areas and loading yards are subject to the currently valid provisions set out under VDE 0100 Part 711 applying at the given time.

The following points require particular attention in this context:

Power supply / Main distributor panel

The stand must be equipped with a single switch (master switch) via which the complete electrical installation, with the exception of refrigerators, fax machines, electronic storage media, can be deactivated.
The master switch and the main distributor panel on the stand must be located in such a way that they are accessible at all times.
Any electrical faults must be rectified properly by persons qualified to do so without delay.
The power supply is provided in the form of a TN-S system (3 phases, 1 zero conductor, 1 earth conductor).
AC voltage: 230 V (± 10 %) / 50 Hz
Three-phase voltage: 400 V (± 10 %) / 50 Hz

Protective measures

As an additional safety precaution, all circuits must be fitted with fuses or miniature circuit breakers with a residual current device („FI" switch).
Maximum differential current 30 mA (I = 0.03 A).
If approved and coordinated with Messe München's electrical installation department, RCDs can be dispensed with in the case of **frequency-controlled machines** (e.g. robots, motors etc.). It is then essential that additional equipotential bonding (cross-section >= 16 mm²) be provided.
All appliances, lamps and other equipment must be properly earthed unless the items concerned are protectively insulated (safety class 2) or run on protective low voltage (voltage range 1, SELV).

Stand structures made of metal, conductively interconnected metal parts and large metal parts to which electrical cables or equipment are fitted must be connected to the voltage equaliser facility (properly earthed). If electrical distributor panels from Messe München GmbH are used, the earthing work may only be carried out by electrical contractors approved by Messe München GmbH.

Cabling

All cabling must be installed and secured properly by persons qualified to do so. The external insulation of the cable (sheathing) must be inserted into the given appliances, lamps, plug devices, etc. All cabling must be effectively pull relieved.
The cable used must be approved for usage in conjunction with the given type of installation and comply with the required sizes and specifications (DIN 57298 / VDE 298). The minimum sectional area should be 1.5 mm².

If cables are not connected via plugs, they must be connected via terminals in fully enclosed junction boxes. Open lustre terminals are prohibited.

If the cable runs where it may be trodden on, it must be provided with mechanical protection of some form and/or only such cable may be used as is explicitly approved for areas subject to high mechanical stress (minimum H05RN-F). The usage of flat cable is not permitted (with the exception of VDE-approved flat cable). The cable should be installed such that people cannot stumble over it.

Lamps in general

Lamps must be secured in such a way as to prevent them from falling down. All lamps must be secured via two mutually independent mountings (please note that support cables or chains count as secondary mountings) that are able to carry a load five times as heavy as their own weight. These are absolutely essential for installation heights of **2.50 metres** and more (see under conductor rails too) and/or weights of **2 kg** upwards. The usage of cable and straps made of either natural or synthetic fibres (e.g. cable ties) for this purpose is prohibited.
All lamps are to be equipped with some form of mechanical protection e.g. protective basket or safety screen or must have a retaining device that prevents the lamps or parts thereof from falling out.

The installation of lamps on inflammable materials, e.g. wood, is prohibited unless

a) the lamps carry one of the following markings:

Lamps – suitable for mounting directly on to normally flammable surfaces. Such surfaces include materials such as wood and wood-based materials with a minimum thickness of 2 mm.

Fitted lamps – suitable for mounting on to normally flammable surfaces and which are allowed to be covered with thermally insulating materials.

Lamps for discharge lights with integrated control units for fitting into furniture made of flame-retardant or normally flammable materials (as defined in DIN 4102-1). The furniture finish can be coated, veneered or varnished.

Lamps
- for accommodating light bulbs
- for discharge lights with integrated control units for fitting to furniture made of materials, the flammability characteristics of which are unknown.

New 

Old 

Lamps with limited surface temperatures e.g. for operating facilities with an enhanced risk of fire due to dust or fibrous materials.

b) the lamps are located at a distance of at least 35 mm from the mounting surface or

c) the lamps are mounted on to a non-flammable, temperature-insulating surface with a minimum thickness of 10 mm.

This applies in equal measure for sockets or other equipment that is/are fitted to inflammable materials. The same requirements also apply to lamps installed in flooring.

Sufficient distance should be left between the lamp and any inflammable materials in accordance with the given manufacturer's specifications (relevant markings generally on the lamp itself). The minimum distance is 0.5 m!

e.g. 

minimum distance to the area to be lit (0.5 m in example shown)

If **conductor rails** are used, it is vital that the relevant insulating end pieces are inserted into the conductor rail to ensure that the current-carrying conductors cannot be touched. The minimum installation height of conductor rails is **2.50 metres**. Installation below this height is only possible if the rail is fully covered. Complete protection against touching must be guaranteed!
The conductor rail is to be fastened to the given surface in a mechanically effective manner using non-flammable connections (e.g. screws, metal straps etc.). Cable binders may be used only as additional mounting aids.

Low-voltage lighting

In the case of halogen lamps, bulbs must be prevented from falling out by means of suitable retaining devices (e.g. clamps, claws or springs). The plug-in connection with the base offers insufficient security on its own!

All cabling must be insulated up to the lamps (varnish/paint is not acceptable as insulation). This also applies to structural parts that are used as conductors.

Transformers:
Only such safety transformers as are approved for the specific area of application may be used. When installing such lighting, particular attention must be given to ensuring unrestricted heat deflection (distances to be observed in accordance with markings printed on product and/or manufacturer's specifications). Transformers require both primary and secondary fusing. Any transformers not equipped with secondary fusing must have it retrofitted.
Maximum fuse size is 25 A irrespective of the size of the transformer.
The fuse must be able to mechanically counter the anticipated short circuit current.
Ideally, electrical overload protectors (response tolerance in case of failure ± 60 W) should be used.
Electronic transformers may be operated without secondary fusing only if they have been certified by an authorised testing body e.g. VDE, OVE etc.
Caution: electronic transformer cabling may not exceed 2 metres in length!

Please note

Any instructions given by electricians appointed by Messe München GmbH must be followed. In the event that the aforementioned requirements and/or instructions are not complied with, the exhibition stand concerned will be cut off from the power supply for safety reasons.

Notice on "Fire Protection Measures at Trade Fairs and Exhibitions"

The provisions stated in form 1.2 of the Exhibitor Service Package must also be observed.

Alarming of fire brigade and fire-extinguishing facilities

Fire protection facilities and information as to the required behaviour in case of fire are located inside the given hall next to each exit.
In the event of fire or smoke being detected, alarm the fire brigade in all cases by pressing one of the push-button fire alarms.

The fire hydrants, push-button fire alarms, smoke extractor triggering devices and fire extinguishers located in the halls must not be obstructed, or rendered unrecognisable or inaccessible.

Areas designated for use by fire brigade

The areas designated for access and turning for use by the fire brigade must be kept clear. Vehicles, semi-trailers, containers, tanks and/or empty packaging of any kind may only be parked or stored on the areas designated for this purpose. Please consult the "Traffic Regulations" sheet for further information in this connection.

Emergency exits, hall aisles

All exits and aisles forming part of the permanent lay-out of the halls shall be kept free and unobstructed over their full width. The exits including the signs indicating them must not be blocked, covered by drapings or rendered inconspicuous in any other way. Information counters, tables or similar items are to be placed far enough away from entrances, exits and the approaches to staircases.

Stand design

Exhibition stands shall be so designed that they contain no rooms, corners or niches that are difficult to access. Floor coverings within the stands must be jointless. Each partitioned area within the stand must have an adequately clear view of the given escape route. Areas that are only accessible by way of another partitioned area (closed areas) are not permissible unless provided with a second escape exit.
If the maximum length of the escape route to a hall aisle is greater than 10 metres in an exhibition stand, a second exit and/or an aisle of at least 2.5 m width, which is situated within the stand and leads to a hall aisle, must be provided (see form 1.2 of Exhibitors' Service Booklet).

If hall exits are located within a stand, the width of the exit is not to be narrowed. The escape routes in the hall must be indicated and approved by the Fire Department. Exit signs must not be obstructed from view.
As a rule, the defined hall aisles must not be built over.

Decorations

All materials used for decorative purposes should be at least flame-retardant (B1 in accordance with DIN 4102 or DIN EN 13501-1) – certification must be provided. If flame-retardance is to be applied after the stand is set up, only officially approved flameproofing agents may be used in accordance with the instructions for use.

The use of synthetic materials which melt or drip when exposed to heat is not permitted.
The use of synthetic materials (e.g. polystyrene, polyurethane rigid foam, expanded polystyrene, etc.) which produce large amounts of soot when on fire, is not permitted. Proof must be provided of the flame-retardant properties of the materials when installed.

Cut trees and plants

may only be used for decorative purposes when green. If during the course of the trade fair it is ascertained that trees and plants will dry out and thereby become more easily inflammable they must be removed. Trees must be free of branches up to about 50 cm above the floor. Peat must always be kept damp (risk of ignition by cigarette butts, matches, etc.)

Electrical installation and electrical appliances

All electrical equipment must be installed in compliance with the safety regulations of the VDE (Association of German Electrical Engineers).

Electrical distribution points are to be kept clear of storage areas.

Electric cooker plates, irons, grills, cookers, immersion heaters and other electrical appliances are to be adequately supervised during operation. They must be placed on fire-proof, heat-resistant bases so that even in the case of excessive heat inflammable objects in their vicinity cannot be ignited.

Fire extinguishers

If fire extinguishers are kept on the exhibition stand, then as a general rule water extinguishers as per EN 3 or DIN 14406 are to be used (In kitchen and technical areas, carbon-dioxide extinguishers as per EN 3 or DIN 14406 should be provided).

Safety lighting

Safety lighting is to be switched on at nightfall. If exhibition stands or parts of the exhibition hall are darkened for operational purposes, sufficient safety lighting as specified in VDE 0108 is to be provided.

Packing material

Packing material, transport crates and the like which are not needed during the exhibition are to be kept outside the halls and loading yards. During the stand set-up and dismantling periods, vehicle access routes within the halls are to be kept clear; any transport and packing materials and items of equipment no longer needed are to be removed immediately from the halls.

Ashtrays

An adequate number of ashtrays and wastepaper baskets (cigarette butts, matches, etc. separate from paper) are to be made available in the exhibition stands and emptied into non-combustible, tightly closing containers.

Internal combustion engines

Internal combustion engines must not be demonstrated in operation in the halls. Fuels must not be stored on the stand.
The contents of vehicle tanks must be reduced to the volume necessary for entering and leaving the grounds.
Fuel tanks must be locked and batteries disconnected.

Ceilings and canopies

Irrespective of their size, horizontal ceilings and canopies above stands must be reported – form 1.2 "Application for Preventive Fire Protection Measures" in the Exhibitors' Service Booklet.
They must be fireproofed to at least class (B1 in accordance with DIN 4102 or DIN EN 13501-1) – certification must be provided – and must be fitted with a sprinkler system when constituting a single covered surface of more than 30 m^2. In this case, one sprinkler unit must be installed for every 12 m^2 of covered space or part thereof; all rooms or booths contained within this area must be incorporated within scope of the sprinkler system.

Other regulations apply to **Hall B0**. Please contact the Technical Exhibition Services Division for further information.

Further information is available from Messe München's Technical Exhibition Services Division.

We expressly reserve the right to impose further conditions if the need for them only becomes apparent during the course of the trade fair.

Notice: Installation of Sprinkler-compatible Materials and Fabrics

Stand ceilings and canopies – general information

Stand ceilings and canopies in Halls A1 –6, B1-6 and C1-4 must generally be fireproofed (to DIN 4102, B1 or DIN EN 13501-1,B) and, if constituting a single covered area of 30 m², equipped with a sprinkler system.

Sprinkler systems can only be dispensed with
- if the ceiling or canopy concerned is of a metal grid design with openings measuring at least 1 x 1 cm and, taking light units and similar fitments into account, the horizontal area of the openings amounts to at least 50 %, or
- the ceiling or canopy is of a textile design that has been approved by VdS Schadenverhütung GmbH in Cologne for usage in conjunction with sprinkler-protected risks.
  Companies supplying such materials are listed below.

Important:
Irrespective of their size and design, stand ceilings and canopies must always be registered via Form 1.2 in the Exhibitors' Service Booklet and always require the written approval of Messe München GmbH's Technical Exhibition Services, coordinated with Munich Municipal Fire Department.
Other regulations apply to **Hall B0**. Please contact the Technical Exhibition Services Division for further information.

Your team of the Technical Exhibition Services would be pleased to assist with further information.

Fundamental requirements of grid-like net fabrics and materials with smoke-out safety facilities

The aforementioned materials can be used to cover areas in excess of 30 m² on single-storey stand structures to the extent that they are fireproofed and certified to DIN 4102 (B1) or EN 13501-1 (B) and, at the same time, approved by VdS Schadenverhütung GmbH in Cologne for usage in conjunction with sprinkler-protected risks.

When installing grid-like net fabrics and smoke-out safety facilities on exhibition stands, it should be noted that:
- the fabric covering should be stretched tightly to prevent it sagging
- the fabric covering should fitted horizontally and as a single layer
- the manufacturer's installation instructions ensuring the given fabric's sprinkler compatibility must be observed
- hall ailes may not be covered over.

When installing grid-like net fabrics, it should also be noted that:
- the maximum permissible freely covered area (i.e. without any strut support) is 30 m²
- the maximum permissible size of a continuous covered area in the exhibition halls is variable depending on the installation height and lies between 100 m² (h = 7.5 m) and 400 m² (h = 3.0 m)
- the vertical distance between the given sprinkler and a fabric covering may not be less than 0.5 m at any point.

When installing smoke-out safety facilities, it should also be noted that:
- the maximum permissible freely covered area (i.e. without any strut support) is 80 m²
- the maximum permissible size of a continuous covered area in the exhibition halls is also 80 m². Areas larger than this require the explicit approval of Munich Municipal Fire Department
- the covering must be fitted in the lower third of the overall distance between the given sprinkler and the floor, generally max. 5 m above the hall floor in the case of Munich Trade Fair Centre halls
- materials and fabrics with smoke-out safety facilities are prohibited in **Hall B0**.

Supply sources for sprinkler-compatible materials and fabrics

Dieter Cronenberg GmbH & Co. KG
Worringer Str. 17
40211 Düsseldorf
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Tel.: + 49 (0) 2 11 1 77 50-12
Fax: + 49 (0) 2 11 1 77 50-50
c.sobczak@cronenberg-buehnenbedarf.de
www.cronenberg-buehnenbedarf.de

Ellermann GmbH
Bokelerstr. 100
33397 Rietberg
Germany
Tel.: + 49 (0) 52 44 90 38 0
Fax: + 49 (0) 52 44 90 38 28
info@ellermann-konzepte.de
www.ellermann-konzepte.de

Gerriets GmbH
Im Kirchenhürstle 5-7
79224 Umkirch bei Freiburg
Germany
Tel.: +43 (0) 7 66 59 60-0
Fax: +43 (0) 7 66 59 60-125
info@gerriets.com
www.gerriets.com

GVW Interieur GmbH
Karl-Carstens-Str. 17
52146 Würselen
Germany
Tel.: + 49 (0) 24 05 60 16-18
Fax: + 49 (0) 24 05 60 16-17
www.flex-plain.com

MediaSol GmbH & Co. KG
Eusterbrockstr. 44
33378 Rheda-Wiedenbrück
Germany
Tel.: + 49 (0) 52 42 37 74 44
Fax: + 49 (0) 52 42 37 78 44
info@mediasol.de
www.mediasol.de

Plaspack Netze GmbH
Dr.-Grobben-Str. 1
4690 Schwanenstadt
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Tel.: +43 (0) 76 73 2 47 80
Fax: +43 (0) 76 73 2 47 82 66
sales@plaspack.at
www.plaspack.at

Procédés Chénel - Deutschland
Beilken Digital Printing Werbegesellschaft mbH
Flughafenstraße 4
27809 Lemwerder
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Tel.: +49 (0) 4 21 69 35 20
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