Notice

Electrical Engineering

Electrical installation work on exhibition stands is generally to be carried out in compliance with the latest EN, DIN and 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 0100 parts 410, 420, 520, 600 and 711, 712 and 722, DIN EN IEC 61439, the VdS guidelines and the accident prevention regulations DGUV A1, A3, and V17. Operating resources must be tested by a recognized European certification office (recognized testing bodies include VDE, OVE, etc.). A person responsible for the installation must be named in writing by the ordering party of the power connection for each exhibition stand. If no one has been appointed, the managing director of the exhibitor will be the person responsible in accordance with the Technical Regulations for Operational Safety (TRBS).

The following points require particular attention in this context:
Electrical installation work may only be carried out by qualified electricians in accordance with the provisions set out under VDE 0100-200 and / or VDE 0105-100. The electricians concerned must be equipped with appropriate tools and work aids. The electrical installation system may only operate in a defect-free state and subject to testing in accordance with VDE 0100-600 having been conducted and documented. The measures required for operational safety purposes must have therefore been taken prior to activation of the system. Work may only be carried out on equipment that has been disconnected from the power supply.
Anyone carrying out electrical installation work is individually responsible (i.e. personally liable) for assuring compliance with relevant electrical installation requirements and generally recognized rules of electrical engineering.

Power supply / Main distributor panel

The stand must be equipped with a single switch (master switch) – residual current protective devices do not count as master switches – via which the complete electrical installation can be deactivated (exception refrigerators, electronic storage devices).
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. Distribution panels must comply with DIN EN IEC 61439 and be provided with a CE marking with the normative minimum information. 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, one zero conductor, one 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 protected via fuses or miniature circuit breakers must also be fitted with a residual current device (RCD).
Type A fuses are permitted only for rated currents of 35 A or higher; for lower rated currents, only circuit breakers may be used.
Maximum differential current of the RCD 30 mA (IΔ = 0.03 A).
Frequency-controlled machinery (e.g. appropriate machines, robots, motors) are to be equipped with RCDs type B (all current-sensitive). Kindly consult a relevant Messe München GmbH-approved contractor in this respect. Connecting different types of RCD in series is not admissible, nor are type AC RCDs allowed!

Important to note: The permanently installed supply points (power sockets) in the exhibition halls are **not** operated via a residual current circuit breaker (RCD). Connection via via these sockets is not permitted. There are, however, special supply points with RCDs fitted upstream of them; please ask the hall inspector or the Technical Exhibition Services Division where they are located.

All appliances, lamps and other equipment must be properly earthed. The protective conductor (grounding / equipotential bonding) must be connected to all devices, lights and other equipment. Protective conductors (PE = yellow / green) must be carried and connected in all lines. Exception: The equipment is “protectively insulated” (protection class 2) or is operated on “protective extra-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 protective equipotential bonding (properly grounded). 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.
Cross-beams with lighting installations must be fitted with an additional protective equipotential bonding device (copper, min. 10 mm^2) by the company installing the equipment. The potential equalization device concerned must connect up with the master equipotential bonding facility in the utility duct (this also applies to conductive stand components where applicable). The transfer point on the hall floor must be ordered via form 3.1 / online in the Exhibitor Shop. The potential equalization connection between the transfer point and the cross-beam with the lighting installation can be fitted by exhibitors themselves or ordered via the service company responsible for suspension units.

Cabling

All cabling must be installed and secured properly, according to the generally recognized rules of electrical engineering. 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 and wire 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 mm^2.
If cables are not connected via approved plugs, these must be connected via clamp connections in hermetically sealed junction boxes. Clamp connections installed without enclosures 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 cabling is not permitted (with the exception of flat cabling certified by a recognized European certification office)! Tripping hazards caused by wires and cables are to be avoided.
The “cascading” of extension cables and cables with multiple sockets is not permitted.

Please note: As of 100 kW, the transfer point consists of open cable ends. Should a service partner connect these cable ends at the request of the exhibitor, there is no liability on his part and no obligation to check the exhibitor’s own distribution!
The exhibitor / stand builder is solely responsible for the proper laying of the power supply line (cable) on his stand beyond the cable exit point from the utility duct!

Lamps in general

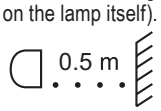
Lamps must be secured in such a way as to prevent them from falling down. All lamps must be secured via two mutually independent mountings (please note that support cables or chains count as secondary mountings) that are able to carry a load five times as heavy as their own weight. These are absolutely essential for installation heights of **3 m** and more (see also conductor rails / lighting bars) or weights of **2 kg** upwards. The usage of cable and straps made of either natural or synthetic fibers (e.g. cable ties) for this purpose is prohibited. Support cables must be made of a non-flammable material. This also applies to lighting bar systems!

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 flammable materials, e.g. wood, is only admissible if:
a) the manufacturer’s specifications do not prohibit this explicitly,
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 flammable materials. The same requirements also apply to lamps or light-track systems and LED strips installed in flooring.

Sufficient distance should be left between the lamp and any flammable 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 / lighting bars 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 lighting bars is 2.4 m. Installation below this height is only possible if the bar 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.). Plastic cable ties may be used only as additional mounting aids.

LED lighting

The operation of risk group 2 and 3 high-power or high-intensity LED installations and / or spots must be registered with Messe München GmbH's Technical Exhibitor Service! Suitable fire-extinguishing agents must be kept ready for use in the immediate vicinity of all high-power or high-intensity LED installations!

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 alone does not provide sufficient safety as mounting bracket!
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 live 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 dissipation (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 depending on 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 tested by an approved European certification body.

Caution: electronic transformer cabling may not exceed 2 m in length!

Neon lighting systems / signs

Systems with electrical discharge lamps: systems with any form of fluorescent signs or lamps used as illumination units on a stand or as exhibits with a rated power supply in excess of AC 230 / 400V must comply with the following requirements: the illuminated sign or lamp must be out of arm's reach (minimum height 2.5 m) or adequately protected to reduce the risk of injury (break-proof, transparent cover).

Photovoltaic systems / Electric power generation plants and Electric cars as exhibits

When presenting photovoltaic systems or charging and discharging equipment for electric vehicles as exhibits or other electrical self-generating systems, these must be fitted with an isolating device ('fireman's switch') in a clearly visible position that is accessible at all times for deactivating the system or plant in the event of danger (with the exception of such systems or plants as do not generate open-circuit voltage in excess of 60 V DC). DIN VDE 0100 T 712, DIN VDE 0126 and VDE-AR-4105 requirements are to be observed and a test report is to be drawn up and presented on request. The given stand is to be registered with the Technical Exhibitor Service in advance and identified with a sign marked "PV System".
The installation and operation of battery systems of any size (DC or AC) is generally subject to registration and approval. Possible mains parallel operation for demonstration purposes must be agreed with the Technical Exhibitor Service. Charging electric road vehicles in the halls and loading yards is generally not permitted.
Charging and discharging (also bidirectional) of electric road vehicles as an exhibit requires prior coordination and approval with / by the Technical Exhibitor Service.
Alternative energy sources for exhibition stand supply such as batteries, off-grid solar power generation systems and the like are not permitted.

Use of electrical equipment

All electrical equipment used at the exhibition center of Messe München GmbH and on its grounds must be in a proper, safe and tested state and handled in the designated manner. This includes fixed-site equipment such as permanently installed steam cookers, permanently installed hot-air ovens, exhibition machines and installations, etc. (see definition) and mobile equipment such as electric drills, hand-held circular saws, coffee machines, etc. (see definition).
All equipment (including private devices) brought to the exhibition center must have an inspection sticker affixed to them, showing the month and year of the latest and next inspection. At the request of Messe München GmbH, the inspection report of the last inspection conducted is to be presented setting out details of the basis of the inspection, the inspection procedure and the nature and scope of the inspection. The inspections must have been conducted by a person authorized to do so in accordance with the Operating Safety Directive (BetrSichV) in conjunction with the Technical Rules for Operating Safety 1203 (TRBS 1203). The interval between the inspections to be carried out should be determined via a risk assessment process. Equipment is to be secured after the workplace has been vacated such that it poses no risk to persons or property.
Manipulation of protective and safety equipment is prohibited for all work equipment used, see in particular DGUV Regulation 1 (BGV A1) paragraphs 15 and 16 and StGB para. 145. Any equipment found to be defective must immediately be taken out of service. Instructions given by persons authorized by Messe München are to be followed without delay.

Definition:
Mobile electrical equipment is such equipment as can be moved during operation or easily taken from one place to another while it is connected to the power supply circuit (see also section 826-16-04 DIN VDE 0100-200).
Fixed-site electrical equipment is such as is permanently installed or as has no carrying fixtures and is so large that it cannot be moved easily. This also includes such electrical equipment as is permanently installed for a temporary period and is operated via mobile connecting cables (see also section 826-16-06 DIN VDE 0100-200).

Please note

Any instructions given by professional staff appointed by Messe München GmbH, such as electrical installation experts, must be followed. In the event that the aforementioned requirements and / or instructions are not complied with, the exhibition stand concerned will be denied access to the power supply for safety reasons. For safety reasons, Messe München GmbH reserves the right to cut off the power supply for exhibitors one hour after the event closes.

Gastronomy

All electrical work equipment used on the Messe München GmbH exhibition grounds must be in a proper, safe and tested condition and handled as intended. This applies to stationary work equipment, such as permanently connected steam cookers, permanently connected hot-air ovens and mobile work equipment, such as coffee machines, heating appliances, plug-in dishwashers and other plug-in large appliances, etc. (see definition). All work equipment (including private appliances) must be provided with a valid inspection sticker stating the month and year of the last and forthcoming inspection. At Messe München GmbH's request, the inspection report for the last inspection carried out must be submitted, stating the basis for the inspection, the inspection procedure including the type and scope of inspection. All inspections must have been carried out by a qualified person in accordance with the German Ordinance on Industrial Safety and Health (BetrSichV), in conjunction with the Technical Rules for Industrial Safety 1203 (TRBS 1203). Inspection intervals required are to be determined by a risk assessment (see also DGUV V3). When leaving the workplace, work equipment must be secured in such a way that it poses no danger to persons or property. Manipulation of protective and safety equipment is prohibited for all work equipment used.
Work equipment should be visually inspected daily before starting work. Appliances identified as defective must be shut down immediately.
The "cascading" of extension cables and cables with multiple sockets is not permitted.