

YSHIELD

EMR - PROTECTION

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Important safety guidelines

Only skilled electricians listed in the register of your electricity supplier are permitted to execute grounding measures! Pay attention to the following points: Protective measures against electric shock to DIN 57100/VDE 0100 part 410 + part 540, grounding to DIN/VDE 0100 part 410 + part 540, visual inspection and process testing to DIN/VDE 0100 part 610 part 4+5 and EMC to VDE 0100.

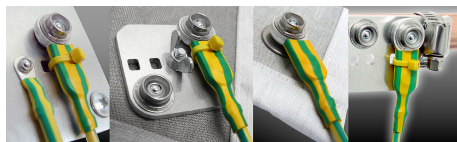
Grounding measures are only permitted in TNS or TT networks! Grounding measures may never be executed in network forms with combined PEN wiring!

A leakage/fault circuit breaker (FI / RCD) with less than 30 mA must be installed. If possible, a FI / RCD with 10 mA should be retrofitted!

Proper grounding sequence: ❶ With a 4 mm² cable (16 mm² for facade shielding) directly at the potential equalization. ❷ With a 2.5 mm² cable at the PE lead in the electric installation. If possible use a special potential equalization socket, see picture at "grounding straps". ❸ At a (heating) pipe that is connected to the potential equalization. Check the low impedance! Install a decal information in the heating room that indicates to the shielding!

YSHIELD refuses any liability for damages resulting from incorrectly executed installations and groundings. The performing electrician is personally liable for all measures!

Grounding system with press studs



Many of our grounding components and products can be connected directly to each other with our grounding cables EK! We use stiff closing, very stable sockets and press studs normally used in boat-building. **If local regulations require it, the plugs can be mechanically fixed.** Mounting hint for the cable ties: Fold it to a curve 5 mm away from the front end so you can easily push it through both holes under the plug!

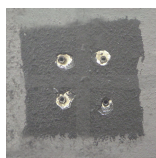
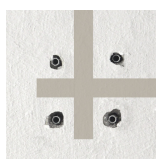
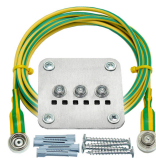
Grounding set ESW (plate EPW)

Grounding set for shielding paints, fleeces and nettings in the interior. Per each continuous connected area (per room), one ESW is needed.

❶ Mounting at an easily accessible point, close to the final ground connection.

❷ **Drill 6 mm holes.** Make sure you do not drill cables in the proximity of power outlets and switches!

❸, ❹ **For shielding paints:** Stick grounding strap EB2 as shown under „Grounding straps“. **Paint the area with the shielding paints** as recommended in the corresponding technical data sheet. After drying, apply a second coat under and around the plate. **Let it dry.**

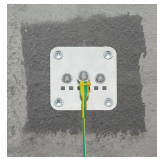


❺, ❻ **For nettings, fleeces:** Stick grounding strap EB as shown under „Grounding straps“. **Adhere the materials on the area with some overlap** as recommended in the corresponding technical data sheets. Although our compatible dispersion glue DK90 is electrically nonconductive, there will still be a low electrical resistance (which is necessary for proper grounding) which results from the fleece structure of the ground strap after its drying. This also applies to various wallpaper paste. But no guarantee on that! **Let it dry.** Drill out holes again.

❻ **Insert dowels and screw down the plate tightly.**

❼ Mask the grounding plate, but do not overpaint it! **Over-paint the area with commercial wall paints,** wallpapers or use fine plaster as recommended in the corresponding technical data sheets.

❽ Press down the grounding plug tightly. Fix it with a cable tie.



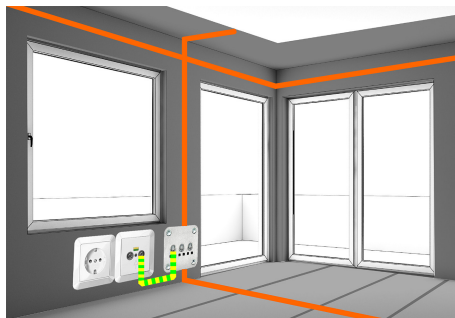
Grounding straps EB + EB2

Self-adhesive grounding straps for shielding paints, fleeces and nettings in the interior.



❶ **The glue on EB is electrically conductive. Therefore the EB can be stucked under and on the materials. Application under and on nettings, fleeces** to connect the lengths of material. With an adhesive force of 3N/cm, it sticks relatively poor on difficult undergrounds (e.g. plasterboards). Use a primer first!

❷ **The glue on EB2 is electrically non-conductive. Therefore the EB2 can be stucked only under the materials. Application under shielding paints** to bridge cracks in the underground. With an adhesive force of 10 N/cm it sticks very well even on difficult undergrounds.



The grounding straps must be pressed down tightly to adapt perfectly to the underground. Mounting: Cross all areas once and connect them with each other, starting from ESW (EPW). The strap can be stucked under the baseboard e.g. if there are no doors.

Grounding set ESA

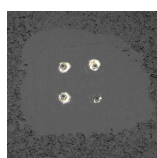
Grounding set for shielding paints in the exterior. For each continuous connected area two ESA are required.

❶ Mounting at an easily accessible position, near to the final ground connection point.

❷ **The underground has to be smoothed** on 20 x 20 cm with a fine filler (fine mortar) that is suitable for your facade. It is important that the plate has an absolute plane underground for a good contact to the shielding paint. **Let the fine filler dry.**

❸ **Drill 6 mm holes.** Make sure you don't drill cables! **Insert dowels.**

❹ **Paint the area with the shielding paint,** as recommended in the corresponding technical data sheet. After drying, apply a second coat under and around the plate. **Let it dry.**



❺ **Screw down the plate tightly. Stick the protective housing around the plate** with the enclosed waterproof glue. Use much glue, especially on the cable outlet, that the plate is completely protected against water all around.



❻ **Paint the area with water-repellent facade paints,** as recommended in the corresponding technical data sheet.

❼ As required extend the cable end. The enclosed shrink tubing is filled with a glue which seals the cable clamps waterproof.

❸ The grounding of facades has to be included in the potential equalization of the building to which the lightning protection systems are connected to as well! Use lightning protection components!



Grounding set ESR (plate EPR)

Grounding set to connect our grounding components to grounded (heating) pipes.



❶ Put the plate on a bright position on the (heating) pipe and screw it down with the both worm drive clamps. ❷ Press down the grounding plug tightly. Fix it with a cable tie.

Grounding set ESV (plate EPV)

Grounding set for loosely laid nettings, fleeces, canopies, floor mats, etc.



❶ Unscrew the wing nut and disassemble the both plates. ❷ Take a textile cutter or a knife (risk of injury!) and pierce a small hole of 4 mm in the material. ❸ Insert the plate with the screw-nut from behind through the hole. ❹ Put on the front plate and screw it down with the wing nut. ❺ Press down the grounding plug tightly and fix it with a cable tie.

Grounding set EST

Grounding plug for loosely laid nettings, fleeces, canopies, floor mats, etc.



Suitable in the following countries only: Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Sweden.

❶ Only a licensed electrician is allowed to push this grounding plug into a power outlet, see „Important safety guidelines!“ ❷ The mounting of the plates is generally the same as with grounding set ESV!

Stainless steel tape ELB

Grounding tape for stainless steel gauzes, under plaster or in drywall constructions.



❶ The groundable materials have to be screwed, stapled or glued with 5 cm overlap. ❷ To electrically connect the limited width of the materials, the steel tape has to be screwed across all paths as often as possible, especially at the overlapping positions. In case of processing under plaster you should not plaster over the tape before you have screwed it. ❸ Screw on your own grounding cable with a suitable screw, screw-nut and cable clamp directly to the steel tape.

Grounding cables EK

Grounding cables for connecting our grounding components and groundable products.



To directly connect ESW and EPW (on walls), ESV and EPV (for loosely laid nettings, fleeces and fabrics), ESR and EPR (on pipes), canopies (Perspective, New-Curtain, New-Cotton) and floor mats with integrated press studs.