

RF GREEN®

GROUNDING - TECHNICAL DATA

2022/05



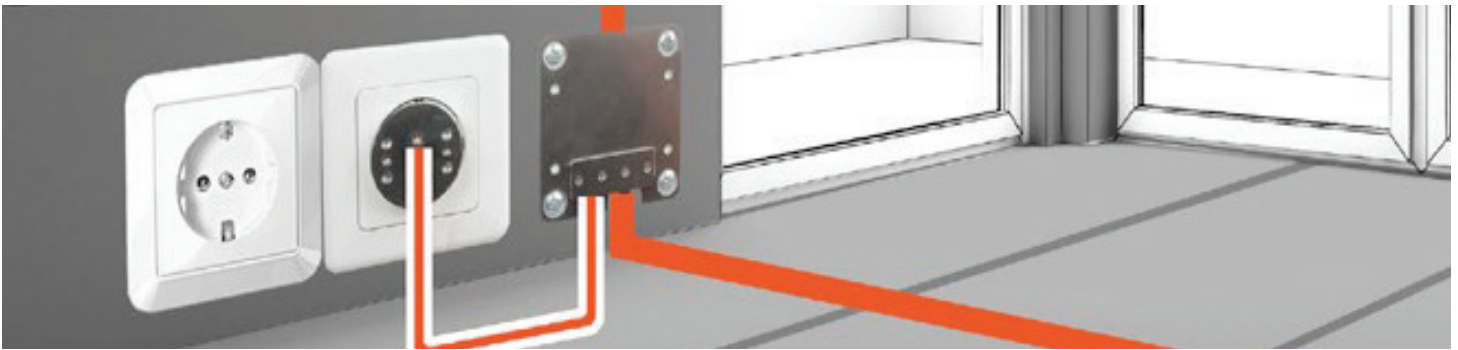
CPC-G
Grounding Plates
1 Grounding plate
1 Covering cap
4 Screws & dowels
3 Solder plugs



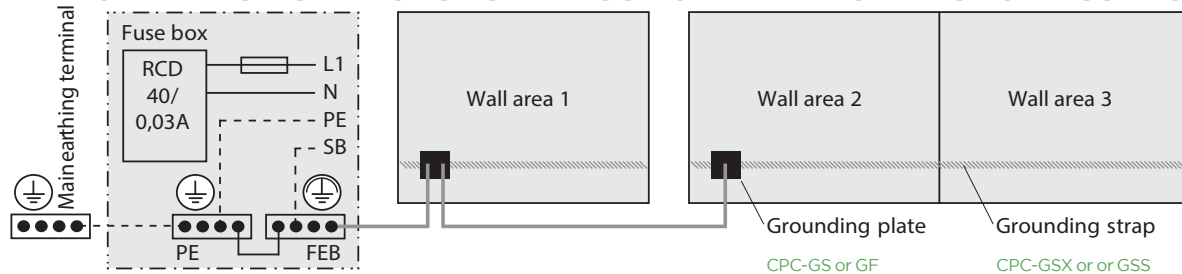
CPC-GC
Grounding Cables
1 Highly flexible cable



CPC-EB
Grounding Straps
1 Self-adhesive strap



INSTALLATION OF A FUNCTIONAL EQUIPOTENTIAL BONDING TO A FUSE BOX



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GROUNDING SYSTEM

Many of our grounding components can be connected to each other with our grounding cables GL. The 4 mm gold plugs are fixed very firm and contact safe in the tight 3.8 mm connectors. Many grounding plates includes covering caps, that serve as protection against an accidental unplug of the cables.

IMPORTANT SAFETY GUIDELINES

Large shielding measures with shielding materials are no electrical equipment but “new conductive parts” according to IEC 826-03-03 or IEC 195-06-11 and thereby a new method of DIN VDE 0100-100:2009-06. By connecting the material(s) to the potential equalization they are inherent part of the electrical system. Generally accepted rules of technology have to be respected.

The state of the technology differentiates between protective equipotential bonding and functional equipotential bonding (FEB). The protective equipotential bonding (green/yellow cable) is a protective measure and ensures that, in the event of a fault, sufficient fault current flows to operate the disconnection device (e.g. line circuit breaker). **The functional equipotential bonding (transparent cable) has the function to reduce the emission of low-frequency electrical fields, i.e. prevents from leaking electrical field.**

1. Grounding earthing measures are only permitted in TN-S, TT and IT networks. Grounding measures must never be executed in network forms with combined PEN-wiring.
2. A leakage/fault circuit breaker with ≤ 30 mA must be installed.
3. DIN EN 62305-3 (VDE 185-305-3:2006-10) applies to buildings with outer lightning protection system.

PROPER GROUNDING SEQUENCE

1. The FEB-balancing circuit has to be connected directly to the FEB-busbar with a 4 mm² cable in the electric circuit distributor (fuse box).
2. In exceptional cases, the FEB-balancing circuit can be connected with a 2.5 mm² cable to a suitable protective earth conductor or balancing line in existing installations.

3. Grounding with our grounding plug GP by screwing in the power socket.

Grounding is to be completed by a licenced electrician.

4. Less recommended are our grounding rods GR50, GR100. It is nevertheless possible to use them in network forms with combined PEN-wiring. Please be sure to follow all local laws and standards.

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GROUNDING PLATES WALL GS / GF

Grounding plates for shielding paints, nettings and fleeces for interior use. Per series of connected areas there is one GS / GF required.



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

2. Drill .6mm holes. Make sure you do not drill cables!



3.1 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.



3.2 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. Our dispersion glue DKL90 is electrically conductive, why there is a low electrical resistance after drying, which is necessary for proper grounding. This also applies to various wallpaper paste, but there is no guarantee on that! Let it dry.

4. Insert dowels and screw down the plate tightly.



5. Make sure, that the grounding plate is not overpainted! Overpaint the area with commercial wall paints, wallpapers or use fine plaster as recommended in the corresponding technical data sheets.

6. Insert the plugs. Clip on the covering cap, that serve as protection against an accidental unplug of the cable.



GROUNDING CABLES GC

Grounding cables for connecting our grounding components: GS (wall), GB (baseboard) & GE (exterior).



GROUNDING STRAPS GSX

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

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

2. 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 GS / GF. The strap can be stuck under the baseboard if there are no doors.

GROUNDING PLATE EXTERIOR GF

Grounding plate for shielding paints for exterior use. Per series of connected areas there are two GE required.



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



2. 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.



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



4. 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.



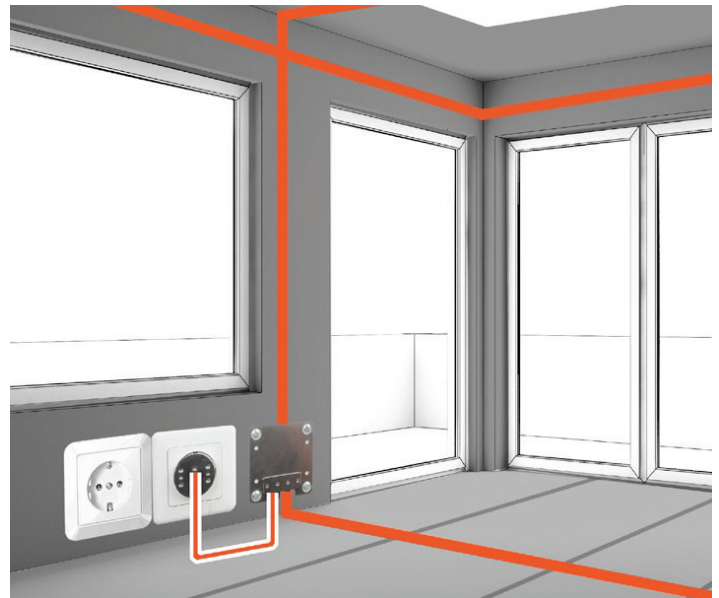
5. Bolt down the cable lug with the grounding cable tightly on the plate. Don't forget this, its not possible subsequently!



6. Screw down the plate tightly. Seal the edges of the cover cap with the included waterproof glue. Clip on the cover cap.

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

8. 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.



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