

## Maintenance according to VDE 0105-100

### Scope of application

### Repair, servicing, maintenance

#### 1. Scope of application

Equipment exchange/replacement

#### 2. Hazards to people and electrical installations



- Electric shock from touching live parts
- Risk of burns from electric arc
- Secondary accidents

#### 3. Protective measures and rules of conduct



- Use of measurement instruments pursuant to VDE 0413
- Comply with range of use of measurement instrument (rated voltage, protection rating, duty cycle, temperature range, category of voltage tester, preferably CAT IV)
- Electrician working clothing worn tightly and closed

#### 4. Conduct in case of irregularities



- In the event of hazards before or during work, the superior and/or the work supervisor must be informed.
- The work supervisor is entitled and required to stop or suspend works
- Upon suspension of works, the work site must be secured

#### 5. Conduct in the event of accidents



Employees must be trained in first aid (including heart-lung reanimation) and in the rules of conduct and measures in case of electrical accidents.  
Disconnect the installation and rescue the injured! Secure accident site, first aid



Emergency number: 110 security centre  
112 internal fire service  
113 company physician  
Emergency number from mobiles: 06131-66-1610

#### 6. Inspections by the work supervisor



- Prior to commencing work, the workstation, the condition of the installation and the apparatus used must be inspected for proper condition.
- Damaged apparatus must be discarded, and measurement instruments must be inspected for suitability.
- If more than one person is working at a workstation, the work supervisor shall release the workstation following instruction.

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## 7. Workflow and safety measures

- As part of maintenance works, a visual inspection must be carried out to check whether:
  - Protective conductors, earthing conductors and equipotential bonding conductors are still correctly laid, marked and safely connected;
  - Protective devices, e.g. overload and residual current protection devices, insulation monitoring devices, surge arresters, are still present, functional and correctly adjusted;
  - Wiring diagrams, markings and permanent labelling of electric circuits, instructions for use or operating instructions are available and applicable;
  - Accident prevention and fire fighting installations, e.g. protective devices, tools, safety signs, partitioning of line and cable feedthroughs, are present and functional;
  - The conductors required for equipotential bonding (main equipotential bonding conductor, main protective conductor and other earthing conductors) are still connected with the equipotential bonding bars or main earthing bars and are accessible.
- Maintenance works shall be documented by way of a remark in the maintenance report.
- During maintenance works, an existing RCD must be activated at least once half-yearly by pressing the test button. This action must be recorded on location in the *PC\_GP\_09 RCD Activation Protocol*.
- Following a change of equipment with a rated voltage > 50 V AC or > 120 V DC, at least the low impedance of the protective conductor connection must be measured and the protective measures to be used verified.
- The inspections must be documented using the *PC\_GP\_10 Equipment exchange inspection protocol*

## 8. Completing works

- Restore proper and safe condition of the installation.
- Clear the work site.
- Inspect and clean equipment and tools.

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