

# Occupational safety and health

## Cable safety in office areas

Numerous electrical devices are operated in offices today. Such equipment should always be connected directly to a wall outlet. Using extension cords and blocks with multiple sockets entails the risk of overloading the sockets, which can result in overheating and ultimately a fire. Due to their high power rating, the use of coffee machines, kettles, fan heaters and other devices that generate heat from electricity is particularly critical.

**Background:** Every electrical device requires a specific amount of energy, its so-called power rating, which has to be specified on the type label (see Figure 1). The permissible maximum values can be supplied via wall outlets and sockets in parapet ducts without any issues. As a result of the length and cross-section of the cable, extension cords and blocks with multiple sockets are only designed for a certain maximum (total) connected load of all devices plugged into them. This maximum connected load must be specified on the extension cord or block (see Figure 2). Depending on its power rating, a single device can reach this limit even if the extension block has more sockets. These additional sockets may not be used in this case.

### Wattage of some office equipment as examples:

- Computer ..... 250 watts
- Laser printer ..... 600 watts
- Flat-screen monitor ..... 30 watts
- Halogen uplighter ..... 300 watts

### Wattage of some other devices used in offices as examples:

- Coffee machine ..... about 2,000 watts
- Refrigerator (maximum) ..... 600 watts
- Kettle ..... about 2,000 watts
- Microwave ..... 600–1,000 watts

Coffee machines, kettles, etc. can overheat if they are not switched off even if they are equipped with a thermal circuit breaker.

**Measures:** Please check whether the use of electrical devices is covered in your risk assessment and include it if necessary. In doing so, consider the use of extension blocks in particular. Subsequently instruct the members of your team accordingly (to be documented in writing!). In offices, appliances should be distributed across all sockets in the room. The red sockets (also labelled 'EDV') are reserved exclusively for IT equipment (PC, monitor, printer, etc.). Extension cords and blocks with multiple sockets may only be used if an insufficient number of sockets is available. In such cases, make sure the extension is long enough as it is not permitted to plug multiple extension cords into one another (i.e. in a chain). In order to prevent overheating of appliances, it is helpful to remove the plug from the socket after use (see Figure 3). – In addition, coffee machines should be placed on a non-flammable base, e.g. a sufficiently large tile (see Figure 4).

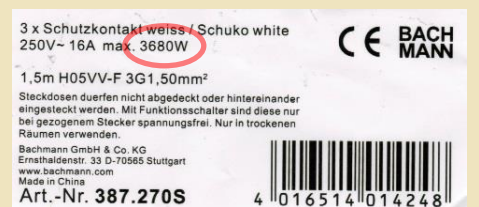
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[1] Power rating on the type label



[2] Connected load on an extension block with multiple sockets



[3] Pulling out a plug after use



[4] Coffee machine on a non-flammable base (tile)