

Safety precautions*

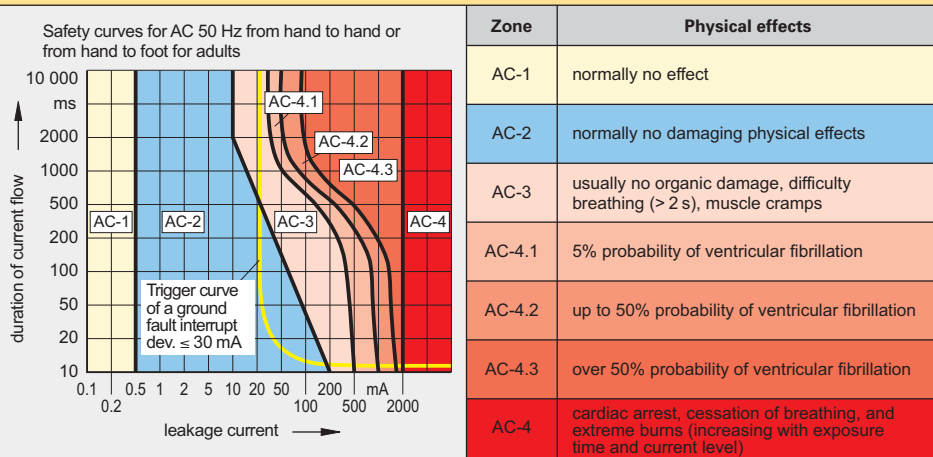
Safety precautions against electrical shock

cf. DIN VDE 0 100-410 (2003-06)

| | | |
|---|--|--|
| Protection against direct and indirect contact | Protection against electric shock under normal conditions: against direct contact | Protection against electric shock under fault conditions: for indirect contact |
| Protection by: – Safety Extra Low Voltage (SELV) – Protective Extra Low Voltage (PELV) – Functional Extra Low Voltage FELV | Protection by: – protective insulation of active parts, e.g. cable – coating as insulation, e.g. housings on electr. devices – distance, e.g. protective hoods, housings of machine screen – barriers, e.g. protective screen, enclosure | Protection by: – automatic disconnect or warning, e.g. residual current protective device – potential equalization – non-conductive areas; e.g. by insulating coverings – protective insulation, e.g. housings encapsulated with insulating material |
| ↑ ↑ Additional protection by residual current circuit breaker GFI's: Ground Fault Interrupter | | |

Effects of alternating current

vgl. IEC 60479-1 (1994)



Automatic fuses and wire cross-sectional areas

cf. DIN VDE 0 1000-430 (1991-11)

| Rated current of fuse I_n in A | Color code of fuse | Minimum cross-sectional area in mm ² for Cu wires by method of installation | | | | | | | | Rated current of fuse I_n in A | Color code of fuse | Minimum cross-sectional area in mm ² for Cu wires by method of installation | | | | | | | | | | | | |
|----------------------------------|--------------------|--|-----|-----|-----|-----|-----|-----|-----|----------------------------------|--------------------|--|-----|----|--------|----|----|-----|----|----|----|----|-----|-----|
| | | A1 | | | | B1 | | | | | | B2 | | | | C | | | | | | | | |
| | | and number of loaded strands | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | | | | | | | |
| 10 (13) | red | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 25 | yellow | 4 | 4 | 2.5 | 4 | 4 | 4 | 4 | 2.5 | 2.5 |
| 16 | gray | 1.5 | 2.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 35 | black | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 4 | 4 |
| 20 | blue | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 1.5 | 2.5 | 1.5 | 2.5 | 1.5 | 2.5 | 50 | white | 10 | 16 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |

Method of installation of cables and insulated wires

cf. DIN VDE 0 298-4 (2003-08)

| | | | | | |
|----|--|--|----|--|--|
| A1 | | Installation in thermally insulated walls, in electrical conduit | B2 | | Installation in electrical conduit or in the wall, in cable channels or behind base boards |
| B1 | | Installation in electrical conduit or in the wall or in cable channels | C | | Installation directly on or in the wall |

*) According to European Standards