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Current Carrying Capacity (Amps) of Cables (Copper Conductors)

Single core 70⁰c thermoplastic insulated cables (e.g. PVC Singles), non-armoured with or without sheath. All values assume an ambient temperature of 30⁰c and a conductor operating temperature of 70⁰c.

| Conductor CSA | Reference Method A (enclosed in conduit in thermally insulating wall etc) | | Reference Method B (enclosed in conduit on a wall or in trunking etc) | | Reference Method C (clipped direct) | | Reference method F (in free air or on a perforated cable tray horizontal or vertical) | | | | |
|--------------------|---|-----------------------|---|-----------------------|-------------------------------------|-----------------------|---|-----------------------|--------------------------|---|----------|
| | | | | | | | Touching | | | Spaced by one diameter | |
| | | | | | | | | | | 2 cables, 1ph ac or dc flat 3 cables, 3ph ac flat | |
| | 2 cables, 1ph ac or dc | 3 or 4 cables, 3ph ac | 2 cables, 1ph ac or dc | 3 or 4 cables, 3ph ac | 2 cables, 1ph ac or dc | 3 or 4 cables, 3ph ac | 2 cables, 1ph ac or dc flat | 3 cables, 3ph ac flat | 3 cables, 3ph ac trefoil | Horizontal | Vertical |
| 1mm ² | 11 | 10.5 | 13.5 | 12 | 15.5 | 14 | | | | | |
| 1.5mm ² | 14.5 | 13.5 | 17.5 | 15.5 | 20 | 18 | | | | | |
| 2.5mm ² | 20 | 18 | 24 | 21 | 27 | 25 | | | | | |
| 4mm ² | 26 | 24 | 32 | 28 | 37 | 33 | | | | | |
| 6mm ² | 34 | 31 | 41 | 36 | 47 | 43 | | | | | |
| 10mm ² | 46 | 42 | 57 | 50 | 65 | 59 | | | | | |
| 16mm ² | 61 | 56 | 76 | 68 | 87 | 79 | | | | | |
| 25mm ² | 80 | 73 | 101 | 89 | 114 | 104 | 131 | 114 | 110 | 146 | 130 |
| 35mm ² | 99 | 89 | 125 | 110 | 141 | 129 | 162 | 143 | 137 | 181 | 162 |

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Table 4D2A – Multicore 70⁰c thermoplastic insulated & thermoplastic sheathed cables (e.g. PVC T&E), non-armoured. All values assume an ambient temperature of 30⁰c and a conductor operating temperature of 70⁰c.

| Conductor CSA | Reference Method A (enclosed in conduit in thermally insulating wall etc) | | Reference Method B (enclosed in conduit on a wall or in trunking etc) | | Reference Method C (clipped direct) | | Reference Method E (in free air or on a perforated cable tray, horizontal or vertical) | |
|--------------------|--|--|--|--|--|--|---|--|
| | 1 two core cable*, 1ph ac or dc | 1 three core cable* or 1 four core cable, 3ph ac | 1 two core cable*, 1ph ac or dc | 1 three core cable* or 1 four core cable, 3ph ac | 1 two core cable*, 1ph ac or dc | 1 three core cable* or 1 four core cable, 3ph ac | 1 two core cable*, 1ph ac or dc | 1 three core cable* or 1 four core cable, 3ph ac |
| 1mm ² | 11 | 10 | 13 | 11.5 | 15 | 13.5 | 17 | 14.5 |
| 1.5mm ² | 14 | 13 | 16.5 | 15 | 19.5 | 17.5 | 22 | 18.5 |
| 2.5mm ² | 18.5 | 17.5 | 23 | 20 | 27 | 24 | 30 | 25 |
| 4mm ² | 25 | 23 | 30 | 27 | 36 | 32 | 40 | 34 |
| 6mm ² | 32 | 29 | 38 | 34 | 46 | 41 | 51 | 43 |
| 10mm ² | 43 | 39 | 52 | 46 | 63 | 57 | 70 | 60 |
| 16mm ² | 57 | 52 | 69 | 62 | 85 | 76 | 94 | 80 |

*with or without a protective conductor

Multicore 70⁰c armoured thermoplastic insulated cables (e.g. SWA cable). All values assume that air ambient temperature of 30⁰c, ground ambient temperature of 20⁰c & conductor operating temperature of 70⁰c.

| Conductor CSA | Reference Method C (clipped direct) | | Reference Method E (in free air or on a perforated cable tray, horizontal or vertical) | | Reference Method D (direct in ground or in ducting in ground, in or around buildings) | |
|--------------------|-------------------------------------|---|--|---|---|---|
| | 1 two core cable, 1ph ac or dc | 1 three core cable or 1 four core cable, 3ph ac | 1 two core cable, 1ph ac or dc | 1 three core cable or 1 four core cable, 3ph ac | 1 two core cable, 1ph ac or dc | 1 three core cable or 1 four core cable, 3ph ac |
| 1.5mm ² | 21 | 18 | 22 | 19 | 22 | 18 |
| 2.5mm ² | 28 | 25 | 31 | 26 | 29 | 24 |
| 4mm ² | 38 | 33 | 41 | 35 | 37 | 30 |
| 6mm ² | 49 | 42 | 53 | 45 | 46 | 38 |
| 10mm ² | 67 | 58 | 72 | 62 | 60 | 50 |
| 16mm ² | 89 | 77 | 97 | 83 | 78 | 64 |
| 25mm ² | 118 | 102 | 128 | 110 | 99 | 82 |
| 35mm ² | 145 | 125 | 157 | 135 | 119 | 98 |
| 50mm ² | 175 | 151 | 190 | 163 | 140 | 116 |
| 70mm ² | 222 | 192 | 241 | 207 | 173 | 143 |
| 95mm ² | 269 | 231 | 291 | 251 | 204 | 169 |

Flexible cords, non-armoured

| Conductor CSA (mm ²) | Current carrying capacity | | Max. supported weight (Kg) See Regs 522.7.2 & 559.6.1.5 |
|----------------------------------|---------------------------|--------|--|
| | 1ph ac | 3ph ac | |
| 0.5mm ² | 3 | 3 | 2 |
| 0.75mm ² | 6 | 6 | 3 |
| 1mm ² | 10 | 10 | 5 |
| 1.25mm ² | 13 | - | 5 |
| 1.5mm ² | 16 | 16 | 5 |
| 2.5mm ² | 25 | 20 | 5 |
| 4mm ² | 32 | 25 | 5 |