



T: 01246 455565  
F: 01246 455244  
W: [www.reconelectrical.co.uk](http://www.reconelectrical.co.uk)  
E: [sales@reconelectrical.co.uk](mailto:sales@reconelectrical.co.uk)

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

Single core 70<sup>0</sup>c thermoplastic insulated cables (e.g. PVC Singles), non-armoured with or without sheath. All values assume an ambient temperature of 30<sup>0</sup>c and a conductor operating temperature of 70<sup>0</sup>c.

| 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 <sup>2</sup>   | 11  | 10.5                  | 13.5  | 12                    | 15.5                                | 14                    |   |                       |                          |   |          |
| 1.5mm <sup>2</sup> | 14.5  | 13.5                  | 17.5  | 15.5                  | 20                                  | 18                    |   |                       |                          |   |          |
| 2.5mm <sup>2</sup> | 20  | 18                    | 24  | 21                    | 27                                  | 25                    |   |                       |                          |   |          |
| 4mm <sup>2</sup>   | 26  | 24                    | 32  | 28                    | 37                                  | 33                    |   |                       |                          |   |          |
| 6mm <sup>2</sup>   | 34  | 31                    | 41  | 36                    | 47                                  | 43                    |   |                       |                          |   |          |
| 10mm <sup>2</sup>  | 46  | 42                    | 57  | 50                    | 65                                  | 59                    |   |                       |                          |   |          |
| 16mm <sup>2</sup>  | 61  | 56                    | 76  | 68                    | 87                                  | 79                    |   |                       |                          |   |          |
| 25mm <sup>2</sup>  | 80  | 73                    | 101   | 89                    | 114                                 | 104                   | 131   | 114                   | 110                      | 146   | 130      |
| 35mm <sup>2</sup>  | 99  | 89                    | 125   | 110                   | 141                                 | 129                   | 162   | 143                   | 137                      | 181   | 162      |

Units 1-6 Ambrose Buildings, Broombank Road, Chesterfield, Derbyshire, S41 9QJ  
VAT Reg: 598 6371 75 Company Reg: 3191383

Table 4D2A – Multicore 70<sup>0</sup>c thermoplastic insulated & thermoplastic sheathed cables (e.g. PVC T&E), non-armoured. All values assume an ambient temperature of 30<sup>0</sup>c and a conductor operating temperature of 70<sup>0</sup>c.

| Conductor CSA      | Reference Method A<br>(enclosed in conduit in thermally insulating wall etc) |  | Reference Method B<br>(enclosed in conduit on a wall or in trunking etc) |  | Reference Method C<br>(clipped direct) |  | Reference Method E<br>(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 <sup>2</sup>   | 11   | 10   | 13   | 11.5   | 15                                     | 13.5   | 17  | 14.5   |
| 1.5mm <sup>2</sup> | 14   | 13   | 16.5   | 15   | 19.5                                   | 17.5   | 22  | 18.5   |
| 2.5mm <sup>2</sup> | 18.5   | 17.5   | 23   | 20   | 27                                     | 24   | 30  | 25   |
| 4mm <sup>2</sup>   | 25   | 23   | 30   | 27   | 36                                     | 32   | 40  | 34   |
| 6mm <sup>2</sup>   | 32   | 29   | 38   | 34   | 46                                     | 41   | 51  | 43   |
| 10mm <sup>2</sup>  | 43   | 39   | 52   | 46   | 63                                     | 57   | 70  | 60   |
| 16mm <sup>2</sup>  | 57   | 52   | 69   | 62   | 85                                     | 76   | 94  | 80   |

\*with or without a protective conductor

Multicore 70<sup>0</sup>c armoured thermoplastic insulated cables (e.g. SWA cable). All values assume that air ambient temperature of 30<sup>0</sup>c, ground ambient temperature of 20<sup>0</sup>c & conductor operating temperature of 70<sup>0</sup>c.

| 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 <sup>2</sup> | 21                                  | 18  | 22   | 19  | 22  | 18  |
| 2.5mm <sup>2</sup> | 28                                  | 25  | 31   | 26  | 29  | 24  |
| 4mm <sup>2</sup>   | 38                                  | 33  | 41   | 35  | 37  | 30  |
| 6mm <sup>2</sup>   | 49                                  | 42  | 53   | 45  | 46  | 38  |
| 10mm <sup>2</sup>  | 67                                  | 58  | 72   | 62  | 60  | 50  |
| 16mm <sup>2</sup>  | 89                                  | 77  | 97   | 83  | 78  | 64  |
| 25mm <sup>2</sup>  | 118                                 | 102   | 128  | 110   | 99  | 82  |
| 35mm <sup>2</sup>  | 145                                 | 125   | 157  | 135   | 119   | 98  |
| 50mm <sup>2</sup>  | 175                                 | 151   | 190  | 163   | 140   | 116   |
| 70mm <sup>2</sup>  | 222                                 | 192   | 241  | 207   | 173   | 143   |
| 95mm <sup>2</sup>  | 269                                 | 231   | 291  | 251   | 204   | 169   |

Flexible cords, non-armoured

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