

## TABLE BEC 105. Current ratings for 600/1000 Volts Grade XLPE /Lead sheathed/Armoured/PVC cables to EEMUA133

The maximum sustained ac current ratings given in this table are based, where applicable, on ERA Report 69-30: Part V - sustained current ratings for armoured cables with thermosetting insulation to BS5467. Any other current rating will have been calculated using agreed formulae and methods in IEC287.

### Conditions of installation:

Ambient air temperature: 25°C  
 Ground thermal resistivity: 1.2K.m/W  
 Ground temperature: 15°C  
 Depth of laying: 0.5m  
 Maximum conductor temperature: 90°C

| Nominal area of conductor<br><br>mm <sup>2</sup> | IN GROUND     |                                       |               |                                       | IN DUCTS      |                                       |               |                                       | IN AIR        |                                       |               |                                       |
|--|---------------|---------------------------------------|---------------|---------------------------------------|---------------|---------------------------------------|---------------|---------------------------------------|---------------|---------------------------------------|---------------|---------------------------------------|
|  | 2 Core        |                                       | 3 & 4 Core    |                                       | 2 Core        |                                       | 3 & 4 Core    |                                       | 2 Core        |                                       | 3 & 4 Core    |                                       |
|  | Rating<br>amp | Volt Drop<br>per amp<br>per mtr<br>mV | Rating<br>amp | Volt Drop<br>per amp<br>per mtr<br>mV | Rating<br>amp | Volt Drop<br>per amp<br>per mtr<br>mV | Rating<br>amp | Volt Drop<br>per amp<br>per mtr<br>mV | Rating<br>amp | Volt Drop<br>per amp<br>per mtr<br>mV | Rating<br>amp | Volt Drop<br>per amp<br>per mtr<br>mV |
| 1.5  | 38            | 31                                    | 32            | 27                                    | 31            | 31                                    | 26            | 27                                    | 31            | 31                                    | 26            | 27                                    |
| 2.5  | 49            | 19                                    | 42            | 17                                    | 41            | 19                                    | 34            | 17                                    | 41            | 19                                    | 35            | 17                                    |
| 4  | 65            | 12                                    | 55            | 10                                    | 53            | 12                                    | 45            | 10                                    | 55            | 12                                    | 47            | 10                                    |
| 6  | 81            | 7.90                                  | 69            | 6.80                                  | 67            | 7.90                                  | 56            | 6.80                                  | 70            | 7.90                                  | 59            | 6.80                                  |
| 10   | 109           | 4.70                                  | 92            | 4.10                                  | 89            | 4.70                                  | 75            | 4.10                                  | 95            | 4.70                                  | 82            | 4.10                                  |
| 16   | 141           | 2.90                                  | 119           | 2.50                                  | 115           | 2.90                                  | 96            | 2.50                                  | 126           | 2.90                                  | 107           | 2.50                                  |
| 25   | 183           | 1.90                                  | 152           | 1.65                                  | 148           | 1.90                                  | 124           | 1.65                                  | 164           | 1.90                                  | 140           | 1.65                                  |
| 35   | 219           | 1.35                                  | 182           | 1.15                                  | 178           | 1.35                                  | 149           | 1.15                                  | 202           | 1.35                                  | 172           | 1.15                                  |
| 50   | 259           | 1.00                                  | 217           | 0.87                                  | 211           | 1.00                                  | 177           | 0.87                                  | 244           | 1.00                                  | 209           | 0.87                                  |
| 70   | 317           | 0.69                                  | 266           | 0.60                                  | 260           | 0.69                                  | 218           | 0.60                                  | 306           | 0.69                                  | 263           | 0.60                                  |
| 95   | 381           | 0.52                                  | 319           | 0.45                                  | 313           | 0.52                                  | 263           | 0.45                                  | 378           | 0.52                                  | 324           | 0.45                                  |
| 120  | 433           | 0.42                                  | 363           | 0.37                                  | 357           | 0.42                                  | 300           | 0.37                                  | 437           | 0.42                                  | 376           | 0.37                                  |
| 150  | 485           | 0.35                                  | 406           | 0.30                                  | 401           | 0.35                                  | 338           | 0.30                                  | 499           | 0.35                                  | 430           | 0.30                                  |
| 185  | 547           | 0.29                                  | 458           | 0.26                                  | 455           | 0.29                                  | 382           | 0.26                                  | 579           | 0.29                                  | 485           | 0.26                                  |
| 240  | 632           | 0.24                                  | 529           | 0.21                                  | 527           | 0.24                                  | 442           | 0.21                                  | 680           | 0.24                                  | 584           | 0.21                                  |
| 300  | 708           | 0.21                                  | 592           | 0.19                                  | 592           | 0.21                                  | 496           | 0.19                                  | 775           | 0.21                                  | 666           | 0.19                                  |
| 400  | 799           | 0.19                                  | 667           | 0.17                                  | 669           | 0.19                                  | 570           | 0.17                                  | 892           | 0.19                                  | 766           | 0.17                                  |

| Rating factors for other ambient temperatures: |      |      |      |      |      |      |      |
|--|------|------|------|------|------|------|------|
| Ambient air temperature °C :                   | 25   | 30   | 35   | 40   | 45   | 50   | 55   |
| rating factor:                                 | 1.00 | 0.95 | 0.91 | 0.86 | 0.80 | 0.75 | 0.69 |

| Rating factors for other ground temperatures: |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|
| Ground temperature °C:                        | 15   | 20   | 25   | 30   | 35   | 40   | 45   |
| rating factor:                                | 1.00 | 0.97 | 0.93 | 0.89 | 0.86 | 0.82 | 0.76 |

[battindustrial.sales@batt.co.uk](mailto:battindustrial.sales@batt.co.uk)