Aerial Bundle Conductor (ABC) Cable

Electrical Properties

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cable  size | Current  Rating  (Note 1) | Short Circuit  Rating  (Note 2) | Conductor  Resistance  @ 20oC | Conductor  Resistance  (ac) @ 80oC | Self-supporting System | | Supporting Core System | | |
| Induction  Reactance  @ 50Hz | Impedance  (z) @ 50Hz  At 80oC | Supporting  Core Size | Induction  Reactance  @ 50Hz | Impedance  (z) @ 50Hz  At 80oC |
| mm2 | (A) | kA | (Ω/km) | (Ω/km) | (Ω/km) | (Ω/km) | mm2 | (Ω/km) | (Ω/km) |
| 50 | 183 | 4.6 | 0.641 | 0.796 | 0.090 | 0.801 | 54.6 | 0.089 | 0.801 |
| 95 | 277 | 8.5 | 0.320 | 0.397 | 0.086 | 0.406 | 54.6 | 0.081 | 0.405 |

NOTES:

1. Continuous current ratings are given for ambient temperature of 35oC and maximum conductor temperature of 80oC. For other ambient temperatures using adjoining rating factors.
2. Short Circuit ratings of 1 second duration, for a final conductor temperature of 130oC.

Mechanical Properties

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cable  Size | Conductor  Diameter | | Core  Diameter | | Self-Supporting System | | | Self-Supporting System | | | |
| Phase Cores | Min | Max | Min | Max | Approx.  Assembly  Diameter | Approx.  Assembly  Mass | Maximum  Design  Load | Supporting  Core Size | Approx.  Assembly  Diameter | Approx.  Assembly  Mass | Maximum  Design  Load |
| mm2 | (mm) | | (mm) | | (mm) | (kg/km) | (kN) | mm2 | (mm) | (kg/km) | (kN) |
| 50 | 7.7 | 8.6 | 10.9 | 12.3 | 29 | 697 | 9 | 54.6 | 32 | 730 | 6 |
| 95 | 11.0 | 12.0 | 14.6 | 16.2 | 37 | 1302 | 19 | 54.6 | 38 | 1183 | 6 |
| Above Plus 25mm2 Auxiliary Core | | | | | | | | | | | |
| 50 | N/A | N/A | N/A | N/A | 34 | 802 | N/A | N/A | 36 | 835 | N/A |
| 95 | 42 | 1407 | 42 | 1288 |