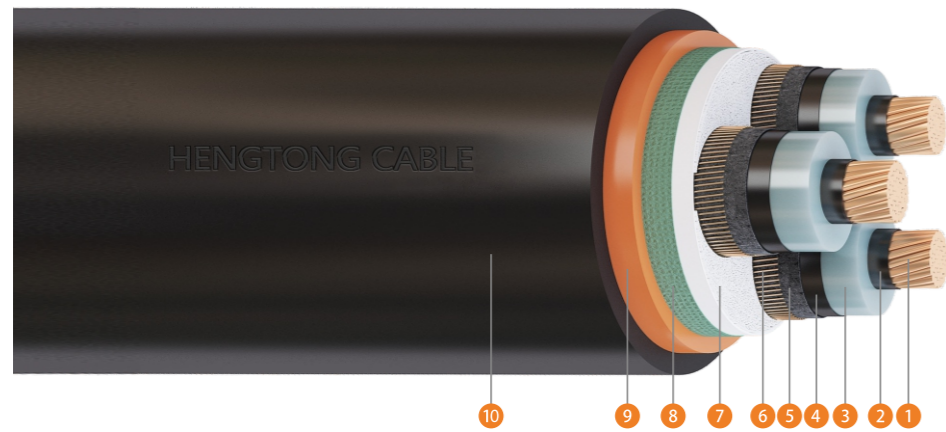


19/33kV Three Core Cu/XLPE/CWS/PVC/HDPE



- 1 Compacted Cu conductor
- 2 Conductor screen
- 3 XLPE insulation
- 4 Insulation screen
- 5 Semi conductive water-blocking tape
- 6 Copper wire screen
- 7 Non-hygroscopic filler
- 8 Non-hygroscopic tape
- 9 PVC inner sheath
- 10 HDPE outer sheath

Properties:

| | |
|--|---------------------------------------|
| Rated voltage | 19/33kV |
| Max. operating temperature of conductor | 90°C |
| Max. short-circuit operation temperature of conductor (5s Max. duration) | 250°C |
| Ambient temperature range for operating | from -40°C to +50°C |
| Relative air humidity at temperature lower than +35°C | up to 95% |
| Min. temperature for installing without preheating | +0°C |
| Standard | AS/NZS 1429.1 |
| Fault Level | up to 10kA/s or customer requirements |

Application:

Cables are designed for fixed installation, for laying in the ground, for indoor application and in cable ducts.


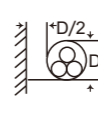



Structural Parameters:

| Nominal conductor area mm ² | Approx. diameter of conductor mm | Nominal thickness of insulation mm | Nominal diameter over insulation mm | Nominal screen area mm ² | No. & diameter of screen wire No./mm | Nominal diameter over wire screen mm | Nominal thickness of outer sheath | | Approx. overall diameter of cable mm | Approx. weight of cable kg/km | Max. allowable pulling force of conductor kN | Min. bending radius | |
|---|-------------------------------------|---------------------------------------|--|--|---|---|-----------------------------------|-------------------|---|----------------------------------|---|---------------------------|-----------------|
| | | | | | | | Inner layer mm | Outer layer mm | | | | During installation mm | Installed mm |
| 50 | 8.1 | 8.0 | 27.0 | 49.4 | 29/0.85 | 29.6 | 1.5 | 1.7 | 70.5 | 4732 | 10.5 | 1760 | 1050 |
| 70 | 9.8 | 8.0 | 28.7 | 68.1 | 40/0.85 | 31.3 | 1.6 | 1.7 | 74.3 | 5769 | 14.7 | 1850 | 1110 |
| 95 | 11.4 | 8.0 | 30.3 | 68.1 | 40/0.85 | 32.9 | 1.7 | 1.7 | 78.0 | 6770 | 20.0 | 1950 | 1170 |
| 120 | 12.9 | 8.0 | 31.8 | 68.1 | 40/0.85 | 34.4 | 1.7 | 1.8 | 81.5 | 7700 | 25.2 | 2030 | 1220 |
| 150 | 14.4 | 8.0 | 33.3 | 68.1 | 40/0.85 | 35.9 | 1.8 | 1.8 | 84.9 | 8731 | 31.5 | 2120 | 1270 |
| 185 | 16.0 | 8.0 | 34.9 | 68.1 | 40/0.85 | 37.5 | 1.8 | 1.9 | 88.6 | 10017 | 38.9 | 2210 | 1320 |
| 240 | 18.4 | 8.0 | 37.3 | 68.1 | 40/0.85 | 39.9 | 1.9 | 2.0 | 94.1 | 12033 | 50.4 | 2350 | 1410 |
| 300 | 20.6 | 8.0 | 39.5 | 68.1 | 40/0.85 | 42.1 | 2.0 | 2.0 | 99.1 | 14122 | 63.0 | 2470 | 1480 |
| 400 | 23.4 | 8.0 | 42.3 | 68.1 | 40/0.85 | 44.9 | 2.1 | 2.2 | 105.6 | 16974 | 84.0 | 2640 | 1580 |
| 500 | 26.2 | 8.0 | 45.5 | 68.1 | 40/0.85 | 48.1 | 2.2 | 2.3 | 112.8 | 20619 | 105.0 | 2820 | 1690 |

Electrical Characteristics:

| Nominal conductor area mm ² | Max. DC resistance of conductor at 20°C Ω/km | Max. AC resistance of conductor at 90°C Ω/km | Fault current carrying of conductor for 1 second kA | Fault current carrying of screen for 1 second kA | Insulation resistance at 20°C MΩ/km | Conductor to screen capacitance μF/km | Charging current per phase A/km | Dielectric loss per phase W/km | Maximum dielectric stress kV/mm | Inductive reactance at 50Hz and 90°C Ω/km | Screen DC resistance at 20°C Ω/km | Zero sequence resistance at 20°C Ω/km | Zero sequence reactance at 50Hz Ω/km |
|---|---|---|--|---|--|--|------------------------------------|-----------------------------------|------------------------------------|--|--------------------------------------|--|---|
| 50 | 0.387 | 0.494 | 7.2 | 7.3 | 17000 | 0.142 | 0.847 | 64.4 | 4.04 | 0.141 | 0.384 | 0.771 | 0.1010 |
| 70 | 0.268 | 0.342 | 10.0 | 10.1 | 15300 | 0.158 | 0.942 | 71.6 | 3.81 | 0.132 | 0.279 | 0.547 | 0.0911 |
| 95 | 0.193 | 0.247 | 13.6 | 10.1 | 14000 | 0.173 | 1.03 | 78.3 | 3.65 | 0.126 | 0.279 | 0.472 | 0.0849 |
| 120 | 0.153 | 0.196 | 17.2 | 10.1 | 12900 | 0.186 | 1.11 | 84.5 | 3.53 | 0.121 | 0.279 | 0.432 | 0.0801 |
| 150 | 0.124 | 0.159 | 21.5 | 10.1 | 12000 | 0.200 | 1.19 | 90.7 | 3.43 | 0.117 | 0.279 | 0.403 | 0.0760 |
| 185 | 0.0991 | 0.128 | 26.5 | 10.1 | 11200 | 0.214 | 1.28 | 97.2 | 3.34 | 0.113 | 0.279 | 0.378 | 0.0723 |
| 240 | 0.0754 | 0.0978 | 34.3 | 10.1 | 10200 | 0.236 | 1.41 | 107.0 | 3.24 | 0.108 | 0.279 | 0.354 | 0.0675 |
| 300 | 0.0601 | 0.0788 | 42.9 | 10.1 | 9400 | 0.256 | 1.53 | 115.9 | 3.16 | 0.104 | 0.279 | 0.339 | 0.0640 |
| 400 | 0.0470 | 0.0628 | 57.2 | 10.1 | 8600 | 0.280 | 1.67 | 127.2 | 3.08 | 0.100 | 0.279 | 0.326 | 0.0602 |
| 500 | 0.0366 | 0.0504 | 71.5 | 10.1 | 7800 | 0.308 | 1.84 | 139.9 | 3.00 | 0.097 | 0.279 | 0.315 | 0.0575 |

Current Ratings:

| Nominal conductor area mm ² | Continuous current-carrying capacity, A | | | | |
|---|---|---|---|---|---|
| | In air | | In ground | | |
| |  |  |  |  |  |
| 50 | 204 | 217 | 156 | 205 | 170 |
| 70 | 252 | 269 | 198 | 250 | 213 |
| 95 | 306 | 328 | 238 | 299 | 255 |
| 120 | 352 | 377 | 271 | 341 | 290 |
| 150 | 397 | 427 | 304 | 381 | 324 |
| 185 | 454 | 488 | 345 | 431 | 366 |
| 240 | 533 | 575 | 402 | 499 | 424 |
| 300 | 609 | 658 | 456 | 563 | 478 |
| 400 | 701 | 759 | 542 | 640 | 562 |
| 500 | 797 | 864 | 610 | 718 | 630 |