

Description: Copper Milliken conductor, XLPE, W/B, CSA, LLDPE, HS
Voltage & Specification: 50.8/88kV, SANS IEC 60840/ NRS 077
Water blocking: Core is standard, conductor on request

Last updated: April 2018

PHYSICAL DIMENSIONS:

| Conductor size (Milliken construction) | mm ² | 1200 | 1600 | 2000 | 2500 |
|--|-----------------|-------|-------|-------|-------|
| Conductor diameter | mm | 43.4 | 50.7 | 56.1 | 62.8 |
| Diameter over s/c conductor screen | mm | 47.6 | 54.9 | 61.1 | 67.8 |
| Diameter over XLPE insulation | mm | 72.0 | 79.4 | 86.3 | 92.9 |
| Diameter over s/c core screen | mm | 75.1 | 82.3 | 89.2 | 95.8 |
| Diameter over CSA metallic sheath | mm | 98.2 | 105.8 | 112.9 | 120.2 |
| Final diameter of cable (D) | mm | 111.4 | 119.0 | 126.1 | 133.4 |
| Cable mass (approximate) | kg/m | 18.9 | 23.4 | 27.8 | 33.6 |
| Gross mass (500 m) (approximate) | kg | 10950 | 13200 | 15400 | 18300 |
| Minimum installation bending radius | m | 3.3 | 3.6 | 3.8 | 4.0 |

RATINGS:

| | | Trefoil | Flat (2D) | Trefoil | Flat (2D) | Trefoil | Flat (2D) | Trefoil | Flat (2D) |
|---|------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Current rating in ground @ 90°C | Amps | 992 | 1133 | 1084 | 1268 | 1147 | 1368 | 1206 | 1465 |
| Current rating in air @ 90°C | Amps | 1551 | 1901 | 1750 | 2197 | 1893 | 2417 | 2030 | 2647 |
| AC Resistance @ 90°C | Ω/km | 0.0214 | 0.0212 | 0.0171 | 0.0169 | 0.0147 | 0.0144 | 0.0128 | 0.0125 |
| Reactance | Ω/km | 0.1196 | 0.1777 | 0.1140 | 0.1721 | 0.1113 | 0.1693 | 0.1077 | 0.1658 |
| Impedance | Ω/km | 0.1215 | 0.1789 | 0.1153 | 0.1729 | 0.1122 | 0.1699 | 0.1085 | 0.1663 |
| Sheath standing voltage (flat - centre phase) | V/km | 56.02 | 113.31 | 60.37 | 125.79 | 63.11 | 134.78 | 66.03 | 144.03 |

ELECTRICAL PARAMETERS:

| | | | | | |
|--|---------|--------|--------|--------|--------|
| DC Resistance @ 20°C | Ω/km | 0.0151 | 0.0113 | 0.009 | 0.0072 |
| Max Electric stress at conductor screen | kV/mm | 5.2 | 5.0 | 4.8 | 4.7 |
| Max Electric stress at insulation screen | kV/mm | 3.4 | 3.5 | 3.4 | 3.5 |
| Capacitance | μF/km | 0.3364 | 0.3758 | 0.4028 | 0.4397 |
| Zero Sequence Resistance | Ω/km | 0.0625 | 0.0552 | 0.0503 | 0.0461 |
| Zero Sequence Reactance | Ω/km | 0.0631 | 0.0583 | 0.0562 | 0.0529 |
| Symmetrical fault rating (@ 250°C limit) | kA (1s) | 172.3 | 229.7 | 287.1 | 358.9 |
| Earth fault rating (@ 150°C limit) | kA (1s) | 58.3 | 62.9 | 67.1 | 71.4 |

Ratings above are based on standard soil conditions for a single circuit in isolation as follows:

Soil thermal resistance = 1.2Km/W

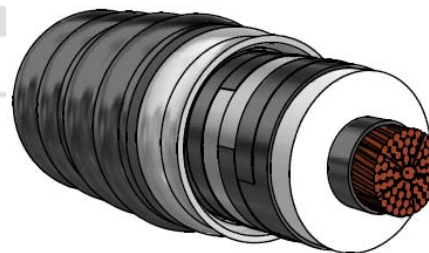
Soil temperature = 25°C

Depth of burial = 1.2m

Air temperature = 30°C

Earthing: Cross bonded or single point bonded

Tolerance on dimensions = +5%



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