

3 Core Medium Voltage ABC

Aluminium, TR XLPE insulated, FR PVC + catenary support.
(Type B) non-armoured.

Application

For use in power circuits of 19/33kV earthed systems.
Suspended in air.

Voltage Rating: 19/33kV

Specification: SANS 1713

Construction

3 Core, circular Aluminium stranded conductor, TR XLPE Insulated, individually Copper tape screened, flame retardant PVC sheathed + steel catenary, flame retardant PVC sheathed.

SIZE CODE AS 3x(conductor size)+(catenary size)CAT 33kV Type B

Phase Core

| Conductor size | mm ² nom | 50 | 70 | 95 | 120 | 150 | 185 |
|----------------------|---------------------|------|------|-------|-------|-------|-------|
| Conductor diameter | mm app. | 8.25 | 9.95 | 11.80 | 13.10 | 14.80 | 16.35 |
| Insulation diameter | mm app. | 27.8 | 29.5 | 31.4 | 32.7 | 34.0 | 35.5 |
| Core Sheath diameter | mm app. | 33.7 | 35.4 | 37.4 | 38.7 | 40.2 | 41.8 |

Catenary (Support Core)

| Conductor size | mm ² nom | 50 | 50 | 50 | 70 | 70 | 70 |
|--|---------------------|------|------|------|-------|-------|-------|
| Conductor diameter | mm app. | 9.00 | 9.00 | 9.00 | 10.80 | 10.80 | 10.80 |
| Insulation diameter | mm app. | 11.5 | 11.5 | 11.5 | 13.3 | 13.3 | 13.3 |
| Maximum Tensile Strength and Pulling force of Catenary | kN | 26 | 26 | 26 | 37 | 37 | 37 |

Cable

| | | | | | | | |
|-------------------|-----------|-------|-------|-------|-------|-------|-------|
| Cable diameter | mm app. | 73 | 76 | 81 | 84 | 87 | 90 |
| Cable mass | kg/m app. | 4.12 | 4.53 | 5.06 | 5.37 | 5.82 | 6.33 |
| Gross mass (500m) | kg app. | 1,535 | 1,658 | 1,819 | 1,910 | 2,046 | 2,200 |
| Bending radius | mm min. | 1007 | 1058 | 1114 | 1179 | 1218 | 1264 |

Current rating

| In air | Amps | 185 | 230 | 280 | 325 | 370 | 430 |
|--------|------|-----|-----|-----|-----|-----|-----|
|--------|------|-----|-----|-----|-----|-----|-----|

Resistance

| | | | | | | | |
|-----------|----------|-------|-------|-------|-------|-------|-------|
| dc @ 20°C | Ω/km max | 0.641 | 0.443 | 0.320 | 0.253 | 0.206 | 0.164 |
| ac @ 90°C | Ω/km max | 0.822 | 0.568 | 0.411 | 0.325 | 0.265 | 0.211 |

Reactance

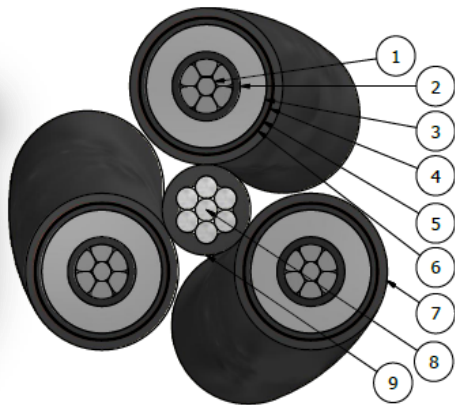
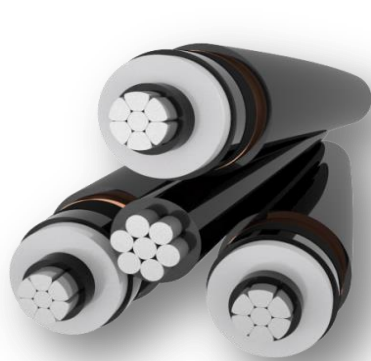
| | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|
| | Ω /km | 0.124 | 0.121 | 0.114 | 0.111 | 0.106 | 0.103 |
|--|-------|-------|-------|-------|-------|-------|-------|

Impedance

| | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|
| | Ω /km | 0.832 | 0.581 | 0.426 | 0.342 | 0.284 | 0.233 |
|--|-------|-------|-------|-------|-------|-------|-------|

Short circuit ratings

| | | | | | | | |
|-------------|-----------|-----|-----|-----|------|------|------|
| Symmetrical | kA (1sec) | 4.0 | 5.8 | 8.0 | 10.2 | 12.5 | 15.7 |
| Earth fault | kA (1sec) | 1.6 | 1.7 | 1.9 | 2.0 | 2.1 | 2.3 |



| Item | Description |
|------|----------------------------------|
| 1 | Aluminium conductor |
| 2 | Semi-conductive conductor ccreen |
| 3 | TR XLPE insulation |
| 4 | Semi-conductive core ccreen |
| 5 | Semi-conductive tape |
| 6 | Copper tape screen |
| 7 | Sheath |
| 8 | Steel catenary strand |
| 9 | Catenary insulation |

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