

**CIRCULAR PVC**

4C + E

COPPER

4c+ecircross

**STANDARD** AS/NZS 5000:2

**VOLTAGE** 450/750V

**CONDUCTOR** Copper 1.5 – 6.0mm2

**STANDARD** AS/NZS 5000.1

**VOLTAGE** 600/1000V

**CONDUCTOR** Copper 10 - 240mm2

**INSULATION** PVC, V-90

Red, White, Blue, Black & Green/Yellow

**SHEATH** PVC, 5V-90

Orange

**MAX. OPERATING TEMP.** 90 **°**C

**APPLICATION**

For mains, submains and subcircuits unenclosed, enclosed in conduit, buried direct or underground ducts for buildings and industrial plants where not subject to mechanical damage and where out of balance currents may require a neutral equal in size to the active.

Suitable for glanding.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Item**  **Number** | **Conductor** | | **Overall Diameter** | | **Approx.**  **Mass**  **kg/km** | **Minimum**  **Installed**  **Bending**  **Radius**  **mm** |
| **mm2** | **(No./mm)** | **Minimum**  **mm** | **Maximum**  **mm** |
| DC520 | 1.5 | 7/0.50 | 9.97 | 9.90 | 230 | 80 |
| DC540 | 2.5 | 7/0.67 | 11.91 | 12.11 | 330 | 85 |
| DC550 | 4 | 7/0.85 | 13.71 | 13.91 | 410 | 100 |
| DC560 | 6 | 7/1.04 | 14.94 | 15.14 | 520 | 105 |
| DC570 | 10 | 7/1.35 | 19.13 | 19.58 | 730 | 120 |
| DC580 | 16 | 7/1.70 | 21.70 | 22.20 | 1040 | 135 |
| DC590 | 25 | 19/1.35 | 26.13 | 26.63 | 1550 | 165 |
| DC5100 | 35 | 19/1.53 | 28.72 | 29.22 | 1950 | 175 |
| DC5110 | 50 | 19/1.78 | 33.14 | 33.64 | 2630 | 200 |
| DC5120 | 70 | 19/2.14 | 38.45 | 38.99 | 3810 | 230 |
| DC5130 | 95 | 37/1.78 | 43.48 | 43.98 | 4870 | 260 |
| DC5140 | 120 | 37/2.03 | 48.04 | 48.69 | 5490 | 280 |
| DC5150 | 150 | 37/2.25 | 53.48 | 54.13 | 7370 | 340 |
| DC5160 | 185 | 37/2.52 | 59.81 | 60.46 | 9450 | 380 |
| DC5170 | 240 | 61/2.25 | 68.02 | 68.72 | 12260 | 430 |

Larger size available on application

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CONDUCTOR** | **CURRENT RATING (a)** | | | **ELECTRICAL CHARACTERISTICS** | | | |
| **Nominal Area**  **mm2** | **Unenclosed**  **In Air**   A | Non-metallic **wiring enclosure in air**  **4C+E_NONMETENCL** A | Buried In Ducts   A | **Maximum**  **DC Resistance @20°C**  **Ω/km** | **Maximum AC Resistance @90°C**  **Ω/km** | **Equivalent Star Reactance**  **Ω/km** | **3 Phase Voltage Drop**  **@90°C**  **mV/Am (b)** |
| 1.5 | 15 | 14 | 18 | 13.6 | 17.3 | 0.111 | 30.0 |
| 2.5 | 22 | 20 | 25 | 7.41 | 9.45 | 0.102 | 16.4 |
| 4 | 29 | 25 | 33 | 4.61 | 5.88 | 0.102 | 10.2 |
| 6 | 37 | 33 | 42 | 3.08 | 3.93 | 0.0967 | 6.80 |
| 10 | 51 | 44 | 55 | 1.83 | 2.33 | 0.0906 | 4.05 |
| 16 | 68 | 58 | 73 | 1.15 | 1.47 | 0.0861 | 2.55 |
| 25 | 91 | 76 | 94 | 0.73 | 0.927 | 0.0853 | 1.61 |
| 35 | 112 | 94 | 114 | 0.524 | 0.669 | 0.0826 | 1.17 |
| 50 | 137 | 112 | 136 | 0.387 | 0.494 | 0.0797 | 0.87 |
| 70 | 172 | 142 | 170 | 0.268 | 0.343 | 0.0770 | 0.61 |
| 95 | 213 | 177 | 208 | 0.193 | 0.248 | 0.0766 | 0.45 |
| 120 | 247 | 202 | 237 | 0.153 | 0.197 | 0.0743 | 0.37 |
| 150 | 282 | 228 | 266 | 0.124 | 0.160 | 0.0745 | 0.31 |
| 185 | 324 | 263 | 304 | 0.0991 | 0.129 | 0.0744 | 0.259 |
| 240 | 383 | 316 | 359 | 0.0754 | 0.0998 | 0.0735 | 0.216 |

a) Based on 40**°**C ambient air temperature and where applicable, burial depth of 0.5m, soil temperature of 25**°**C and soil resistivity of 1.2**°**C.m/W.

(b) For single phase voltage drop, multiply by 1.155.

The above information is from the following sources: AS/NZS 3008.1.1:2009 (tables 13, 30, 35, 42)

AS 1125:2001 (table 2.3)

For installation with thermal insulation refer to AS/NZS 3008 for de-rating factors.

Do not put in direct contact with polystyrene, polyurethane or similar thermal insulation materials.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ACTIVE / CONDUCTOR** | | | **EARTH CONDUCTOR** | | |
| **Nominal Area**  **mm2** | **Nominal Diameter**  **mm** | **Minimum Insulation Thickness**  **mm** | Nominal Area  **mm2** | **Number & Diameter of Wires No/mm** | Minimum Insulation Thickness  **mm** |
| 1.5 | 1.5 | 0.6 | 1.5 | 7/0.50 | 0.6 |
| 2.5 | 2.0 | 0.7 | 2.5 | 7/0.67 | 0.7 |
| 4 | 2.55 | 0.8 | 2.5 | 7/0.67 | 0.7 |
| 6 | 3.12 | 0.8 | 2.5 | 7/0.67 | 0.7 |
| 10 | 4.05 | 1.0 | 4.0 | 7/0.85 | 1.0 |
| 16 | 5.1 | 1.0 | 6.0 | 7/1.04 | 1.0 |
| 25 | 6.75 | 1.2 | 6.0 | 7/1.04 | 1.0 |
| 35 | 7.65 | 1.2 | 10 | 7/1.35 | 1.0 |
| 50 | 8.90 | 1.4 | 16 | 7/1.70 | 1.0 |
| 70 | 10.70 | 1.4 | 25 | 19/1.35 | 1.2 |
| 95 | 12.46 | 1.6 | 25 | 19/1.35 | 1.2 |
| 120 | 14.21 | 1.6 | 35 | 19/1.53 | 1.2 |
| 150 | 15.75 | 1.8 | 50 | 19/1.78 | 1.4 |
| 185 | 17.64 | 2.0 | 70 | 19/2.14 | 1.4 |
| 240 | 20.25 | 2.2 | 95 | 37/1.78 | 1.6 |

***DOMINION WIRE & CABLES LTD.***

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**LOT 3, KINGS ROAD, YALALEVU, BA. P.O. BOX 1562, BA, FIJI.**

## PHONE: (679)6675244 FAX: (679)6670023, E-Mail: sales@dominioncables.com

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