

**CIRCULAR PVC**

4C + E SWA

 COPPER



**STANDARD** AS/NZS 5000.1

**VOLTAGE** 600/1000V

**CONDUCTOR** Copper1.5 – 6.0mm2

**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 mechanical damage may occur and where out of balance currents may require a neutral equal in size to the active.

Suitable for glanding.

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| --- | --- | --- | --- | --- |
| **Item** **Number**  | **Conductor** | **Overall Diameter** | **Approx.****Mass****kg/km** | **Minimum** **Installed****Bending****Radius****mm** |
| **mm2** | **(No./mm)** | **Minimum****mm** | **Maximum****mm** |
| DC520A | 1.5 | 7/0.50 | 14.6 | 15.5 | 470 | 95 |
|  DC540A | 2.5 | 7/0.67 | 15.9 | 16.8 | 530 | 100 |
| DC550A | 4 | 7/0.85 | 18.5 | 19.4 | 920 | 120 |
| DC560A | 6 | 7/1.04 | 19.7 | 20.7 | 920 | 125 |

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| **CONDUCTOR** | **CURRENT RATING (a)** | **ELECTRICAL CHARACTERISTICS** |
| **Nominal Area** **mm2** | **Unenclosed In Air****A** | **Buried Direct****4+edirect_1****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 | 18 | 18 | 13.6 | 17.3 | 0.111 | 30.0 |
| 2.5 | 22 | 25 | 25 | 7.41 | 9.45 | 0.102 | 16.4 |
| 4 | 29 | 33 | 33 | 4.61 | 5.88 | 0.102 | 10.2 |
| 6 | 37 | 42 | 42 | 3.08 | 3.93 | 0.097 | 6.80 |

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 3008.1.1:2009 for de-rating factors.

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

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| ACTIVE / CONDUCTOR | **EARTH** | **DIAMETER UNDER ARMOUR** | **ARMOUR WIRE** |
| **Nominal Area.****mm2** | **Number & Diameter****of Wires****No/mm** | **Nominal Diameter****mm** | **Minimum Insulation****Thickness****mm** | **Nom. Area****mm2** | **Number & Diameter****of Wires****No/mm** | **Minimum Insulation****Thickness****mm** | **mm** | **Nominal Diameter****mm** |
| 1.5 | 7/0.50 | 1.5 | 0.6 | 1.5 | 7/0.50 | 0.7 | 10.7 | 0.9 |
| 2.5 | 7/0.67 | 2.0 | 0.7 | 2.5 | 7/0.67 | 0.8 | 12.0 | 0.9 |
| 4 | 7/0.85 | 2.55 | 0.8 | 2.5 | 7/0.67 | 0.8 | 14.0 | 1.25 |
| 6 | 7/1.04 | 3.12 | 0.8 | 2.5 | 7/0.67 | 0.8 | 15.3 | 1.25 |

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