



## Cu(Al) 3.8/6.6 kV – Three Core Heavy Duty Screened Unarmoured MV CABLE

### APPLICATION:

Distribution network cables serve as primary power supply for commercial, industrial and urban residential networks, suitable for high fault level systems (up to 10kA/1sec); higher fault current rated versions are available on request.

### CABLE STRUCTURE:

#### Conductor:

Stranded compacted conductor(copper or aluminum)

#### Semi-conductive conductor screen:

Extruded cross-linked compound

#### Insulation: XLPE

#### Semi-conductive insulation screen:

Extruded hand strippable semi-conductive cross-linked compound

#### Metallic screen:

Copper wire screen

(nominal 10kA for 1 second)

#### Outer sheath:

PVC. Optional: HDPE, halogen-free, flame-retardant, plus termite protection (nylon, double brass tape or chemical additive).

### STANDARDS:

#### Product:

AS/NZS 1429.1

Electric cables - Polymeric insulated

For working voltages 1.9/3.3 (3.6) kV up to and including 19/33 (36) kV

#### Conductor:

AS/NZS 1125

Conductors in insulated electric cables and flexible cords

#### Insulation & Sheath:

AS/NZS 3808

Insulating and sheathing materials for electric cables

### TECHNICAL DATA:

#### Rated volatge:

3.8/6.6 kV

#### Temperature range:

Minimum installation temperature: 0°C

Maximum operating temperature: +90°C

Minimum operating temperature: -25°C

#### Fault level:

Up to 10kA for 1 sec

#### Bending radius:

Installed cables:

12D (PVC) 15D (HDPE)

During installation:

18D (PVC) 25D (HDPE)

### CERTIFICATES:

We hold SAA certifications for our product categories. Additionally, we possess authoritative certifications recognized in other countries and regions.







**Cu(Al) 3.8/6.6 kV – Three Core Heavy Duty Screened Unarmoured MV CABLE**

**Physical Character Sheet (AL Conductor)**

| Nominal conductor area | Nominal insulation thickness | Diameter over insulation | Number of screen wires and diameter of screen wires | Overall Diameter | Approx. weight | Maximum pulling tension | Minimum Bending Radius During installation | Minimum Bending Radius Installed |
|------------------------|------------------------------|--------------------------|-----------------------------------------------------|------------------|----------------|-------------------------|--------------------------------------------|----------------------------------|
| mm <sup>2</sup>        | mm                           | mm                       | nb x mm ∅                                           | mm               | kg/km          | kN                      | mm                                         | mm                               |
| 3 × 50                 | 2.5                          | 14.5                     | 19/0.85                                             | 45.0             | 1750           | 7.5                     | 770                                        | 520                              |
| 3 × 70                 | 2.5                          | 16.0                     | 27/0.85                                             | 48.4             | 2150           | 11                      | 850                                        | 570                              |
| 3 × 95                 | 2.5                          | 17.6                     | 36/0.85                                             | 52.1             | 2750           | 14                      | 920                                        | 610                              |
| 3 × 120                | 2.5                          | 19.2                     | 40/0.85                                             | 55.8             | 3050           | 18                      | 980                                        | 650                              |
| 3 × 150                | 2.5                          | 20.5                     | 40/0.85                                             | 58.8             | 3550           | 23                      | 1040                                       | 700                              |
| 3 × 185                | 2.5                          | 22.3                     | 40/0.85                                             | 62.9             | 4050           | 25                      | 1120                                       | 750                              |
| 3 × 240                | 2.6                          | 24.7                     | 40/0.85                                             | 68.7             | 4700           | 25                      | 1220                                       | 810                              |
| 3 × 300                | 2.8                          | 27.3                     | 40/0.85                                             | 74.7             | 5700           | 25                      | 1320                                       | 880                              |
| 3 × 400                | 3.0                          | 30.8                     | 40/0.85                                             | 82.5             | 6800           | 25                      | 1460                                       | 970                              |

**Electrical Data Sheet (AL Conductor)**

| Nominal conductor area | Max. conductor DC resistance at 20°C | Conductor AC resistance at 50Hz and 90°C | Inductive reactance at 50Hz and 90°C | Min insulation resistance at 20°C | Current rating at core temp. 90°C in ground | Current rating at core temp. 90°C in air |
|------------------------|--------------------------------------|------------------------------------------|--------------------------------------|-----------------------------------|---------------------------------------------|------------------------------------------|
| mm <sup>2</sup>        | Ohm/km                               | Ohm/km                                   | Ohm/km                               | MOhm/km                           | A                                           | A                                        |
| 3 × 50                 | 0.641                                | 0.822                                    | 0.116                                | 7600                              | 140                                         | 145                                      |
| 3 × 70                 | 0.443                                | 0.569                                    | 0.111                                | 6700                              | 184                                         | 186                                      |
| 3 × 95                 | 0.320                                | 0.410                                    | 0.0996                               | 5900                              | 231                                         | 224                                      |
| 3 × 120                | 0.253                                | 0.325                                    | 0.0964                               | 5300                              | 263                                         | 261                                      |
| 3 × 150                | 0.206                                | 0.265                                    | 0.0928                               | 4900                              | 292                                         | 296                                      |
| 3 × 185                | 0.164                                | 0.211                                    | 0.0898                               | 4500                              | 334                                         | 342                                      |
| 3 × 240                | 0.125                                | 0.162                                    | 0.0882                               | 4200                              | 387                                         | 400                                      |
| 3 × 300                | 0.100                                | 0.130                                    | 0.0868                               | 4200                              | 436                                         | 450                                      |
| 3 × 400                | 0.0778                               | 0.102                                    | 0.0831                               | 3900                              | 490                                         | 520                                      |





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### Physical Character Sheet (Cu Conductor)

| Nominal conductor area | Nominal insulation thickness | Diameter over insulation | Number of screen wires and diameter of screen wires | Overall Diameter | Approx. weight | Maximum pulling tension | Minimum Bending Radius During installation | Minimum Bending Radius Installed |
|------------------------|------------------------------|--------------------------|-----------------------------------------------------|------------------|----------------|-------------------------|--------------------------------------------|----------------------------------|
| mm <sup>2</sup>        | mm                           | mm                       | nb x mm ∅                                           | mm               | kg/km          | kN                      | mm                                         | mm                               |
| 3 × 35                 | 2.5                          | 13.2                     | 20/0.85                                             | 42               | 2200           | 7.4                     | 730                                        | 480                              |
| 3 × 50                 | 2.5                          | 14.5                     | 29/0.85                                             | 45               | 2750           | 11                      | 780                                        | 520                              |
| 3 × 70                 | 2.5                          | 16                       | 40/0.85                                             | 48.4             | 3650           | 15                      | 840                                        | 570                              |
| 3 × 95                 | 2.5                          | 17.6                     | 40/0.85                                             | 52.1             | 4600           | 20                      | 920                                        | 610                              |
| 3 × 120                | 2.5                          | 19.2                     | 40/0.85                                             | 55.8             | 5400           | 25                      | 980                                        | 650                              |
| 3 × 150                | 2.5                          | 20.5                     | 40/0.85                                             | 58.8             | 6300           | 25                      | 1040                                       | 700                              |
| 3 × 185                | 2.5                          | 22.3                     | 40/0.85                                             | 62.9             | 7400           | 25                      | 1120                                       | 750                              |
| 3 × 240                | 2.6                          | 24.7                     | 40/0.85                                             | 68.7             | 9300           | 25                      | 1220                                       | 800                              |
| 3 × 300                | 2.8                          | 27.3                     | 40/0.85                                             | 74.7             | 11300          | 25                      | 1320                                       | 880                              |
| 3 × 400                | 3                            | 30.8                     | 40/0.85                                             | 82.8             | 14000          | 25                      | 1460                                       | 970                              |

### Electrical Data Sheet (Cu Conductor)

| Nominal conductor area | Max. conductor DC resistance at 20°C | Conductor AC resistance at 50Hz and 90°C | Inductive reactance at 50Hz and 90°C | Min insulation resistance at 20°C | Current rating at core temp. 90°C in ground | Current rating at core temp. 90°C in air |
|------------------------|--------------------------------------|------------------------------------------|--------------------------------------|-----------------------------------|---------------------------------------------|------------------------------------------|
| mm <sup>2</sup>        | Ohm/km                               | Ohm/km                                   | Ohm/km                               | MOhm/km                           | A                                           | A                                        |
| 3 × 35                 | 0.524                                | 0.668                                    | 0.118                                | 8600                              | 172                                         | 157                                      |
| 3 × 50                 | 0.387                                | 0.494                                    | 0.112                                | 7700                              | 204                                         | 190                                      |
| 3 × 70                 | 0.268                                | 0.342                                    | 0.104                                | 6600                              | 247                                         | 240                                      |
| 3 × 95                 | 0.193                                | 0.247                                    | 0.0992                               | 5950                              | 298                                         | 292                                      |
| 3 × 120                | 0.153                                | 0.196                                    | 0.0954                               | 5340                              | 338                                         | 336                                      |
| 3 × 150                | 0.124                                | 0.160                                    | 0.0926                               | 4900                              | 379                                         | 382                                      |
| 3 × 185                | 0.0991                               | 0.128                                    | 0.0899                               | 4500                              | 421                                         | 439                                      |
| 3 × 240                | 0.0754                               | 0.0983                                   | 0.0874                               | 4120                              | 485                                         | 517                                      |
| 3 × 300                | 0.0601                               | 0.0797                                   | 0.0858                               | 4050                              | 547                                         | 590                                      |
| 3 × 400                | 0.047                                | 0.064                                    | 0.0833                               | 3800                              | 631                                         | 683                                      |