

# Three Core Al 3.8/6.6kV XLPE Insulated HD Cu Screened PVC Sheathed

STANDARD: AS/NZS 1429.1

RATED VOLTAGE: 3.8/6.6 (7.2) kV

FAULT LEVEL: Up to 10kA for 1 sec or to customer requirements

IMPULSE VOLTAGE: 95kV

TEMPERATURE RANGE:

In continuous operations Max. conductor temp 90°C

Lowest cable temperature during installation: -10°C and below 0°C special precautions must be taken.

BENDING RADIUS:

During installation: 18 x D. When installed: 12 x D (PVC sheathed cables)

D = Overall diameter of cable

## DESIGN

CONDUCTOR:

Stranded, round and compacted aluminium complying with AS/NZS 1125

SEMI-CONDUCTIVE CONDUCTOR SCREEN:

Extruded cross-linked compound

INSULATION:

XLPE complying with AS/NZS 3808

SEMI-CONDUCTIVE INSULATION SCREEN:

Extruded hand strippable semi-conductive cross-linked compound

METALLIC SCREEN:

Circular copper wires

OUTER SHEATH:

Black PVC as standard. HDPE, halogen free, flame retardant, termite protection in the form of nylon, double brass tape or chemical additive also available.





| Product Code | Conductor size<br>mm <sup>2</sup> | Nominal insulation thickness<br>mm | Diameter over insulation<br>mm | Number & diameter of screen wires<br>no./mm | Overall Diameter<br>mm | Mass (approx.)<br>kg/km | Maximum pulling tension<br>kN | Minimum Bending Radius    |                 |
|--------------|-----------------------------------|------------------------------------|--------------------------------|---|------------------------|-------------------------|-------------------------------|---------------------------|-----------------|
|              |                                   |                                    |                                |   |                        |                         |                               | During installation<br>mm | Installed<br>mm |
| 3MV050A06HP  | 50                                | 2.5                                | 14.3                           | 19/0.85                                     | 43.2                   | 1750                    | 7.5                           | 780                       | 520             |
| 3MV070A06HP  | 70                                | 2.5                                | 16.1                           | 27/0.85                                     | 47.4                   | 2250                    | 11                            | 850                       | 570             |
| 3MV095A06HP  | 95                                | 2.5                                | 17.7                           | 36/0.85                                     | 51.0                   | 2750                    | 14                            | 920                       | 610             |
| 3MV120A06HP  | 120                               | 2.5                                | 19.2                           | 40/0.85                                     | 54.5                   | 3200                    | 18                            | 980                       | 650             |
| 3MV150A06HP  | 150                               | 2.5                                | 20.7                           | 40/0.85                                     | 58.0                   | 3550                    | 23                            | 1040                      | 700             |
| 3MV185A06HP  | 185                               | 2.5                                | 22.5                           | 40/0.85                                     | 62.1                   | 4050                    | 25                            | 1120                      | 750             |
| 3MV240A06HP  | 240                               | 2.6                                | 24.9                           | 40/0.85                                     | 67.6                   | 4800                    | 25                            | 1220                      | 810             |
| 3MV300A06HP  | 300                               | 2.8                                | 27.4                           | 40/0.85                                     | 73.4                   | 5700                    | 25                            | 1320                      | 880             |
| 3MV400A06HP  | 400                               | 3.0                                | 30.7                           | 40/0.85                                     | 81.0                   | 6800                    | 25                            | 1460                      | 970             |

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## Electrical Data

| Product Code | Conductor size<br>mm <sup>2</sup> | Max. conductor DC resistance at 20°C<br>Ω/km | Conductor AC resistance at 50Hz and 90°C<br>Ω/km | Inductive reactance at 50Hz and 90°C<br>Ω/km | Insulation resistance at 20°C<br>MΩ.km | Charging current per phase<br>A/km | Dielectric loss per phase<br>W/km | Zero sequence resistance at 20°C<br>Ω/km | Zero sequence reactance at 50Hz<br>Ω/km |
|--------------|-----------------------------------|--|--|--|--|------------------------------------|-----------------------------------|--|---|
| 3MV050A06HP  | 50                                | 0.641  | 0.822  | 0.112  | 7500                                   | 0.385                              | 5.86                              | 2.32                                     | 0.0658                                  |
| 3MV070A06HP  | 70                                | 0.443  | 0.568  | 0.103  | 6500                                   | 0.446                              | 6.78                              | 1.62                                     | 0.0569                                  |
| 3MV095A06HP  | 95                                | 0.320  | 0.411  | 0.0987                                       | 5800                                   | 0.499                              | 7.59                              | 1.20                                     | 0.0527                                  |
| 3MV120A06HP  | 120                               | 0.253  | 0.325  | 0.0954                                       | 5200                                   | 0.550                              | 8.35                              | 1.05                                     | 0.0495                                  |
| 3MV150A06HP  | 150                               | 0.206  | 0.265  | 0.0926                                       | 4800                                   | 0.600                              | 9.12                              | 1.00                                     | 0.0468                                  |
| 3MV185A06HP  | 185                               | 0.164  | 0.211  | 0.0898                                       | 4400                                   | 0.660                              | 10.0                              | 0.961                                    | 0.0442                                  |
| 3MV240A06HP  | 240                               | 0.125  | 0.162  | 0.0874                                       | 4100                                   | 0.708                              | 10.8                              | 0.922                                    | 0.0420                                  |
| 3MV300A06HP  | 300                               | 0.100  | 0.130  | 0.0860                                       | 4000                                   | 0.725                              | 11.0                              | 0.897                                    | 0.0407                                  |
| 3MV400A06HP  | 400                               | 0.0778                                       | 0.102  | 0.0833                                       | 3800                                   | 0.762                              | 11.6                              | 0.875                                    | 0.0382                                  |

## Current Ratings

| Conductor Size<br>mm <sup>2</sup> | Current rating at core temp. 90°C in ground<br>A<br> | Current rating at core temp. 90°C in air<br>A<br> | Max. short-circuit current on the conductor during 1sec at initial temp. 90°C<br>kA | Short circuit current rating of the screen 1 sec.<br>kA |
|-----------------------------------|---|--|---|---|
| 50                                | 158   | 149  | 4.7   | 4.8   |
| 70                                | 194   | 186  | 6.6   | 6.8   |
| 95                                | 231   | 226  | 9.0   | 9.1   |
| 120                               | 263   | 261  | 11.3  | 10.1  |
| 150                               | 294   | 297  | 14.2  | 10.1  |
| 185                               | 334   | 342  | 17.5  | 10.1  |
| 240                               | 386   | 403  | 22.7  | 10.1  |
| 300                               | 436   | 463  | 28.4  | 10.1  |
| 400                               | 499   | 540  | 37.8  | 10.1  |