

## E-A2XHCJ2Y Cable



Eland Product Group: A9L

### APPLICATION

Medium voltage power cables with additional waterblocking properties for distribution networks and generation units, suitable for external installation including in direct in ground and in buried cable ducts. UV Resistant.

### CHARACTERISTICS

#### Voltage Rating $U_0/U$ (Um)

6/10 (12)kV  
12/20 (24)kV  
18/30 (36)kV

#### Test Voltage

21kV AC 50Hz (5 mins)  
42kV AC 50Hz (5 mins)  
63kV AC 50Hz (5 mins)

#### Temperature Rating

-20°C to +60°C  
Permissible Conductor Operating Temperature: +90°C  
Permissible Short Circuit Temperature up to 5 sec: 250°C

#### Minimum Bending Radius

15 x overall diameter

### CONSTRUCTION

#### Conductor

Class 2 Stranded Aluminium

#### Conductor Screen

Semi-conductive material

#### Insulation

XLPE (Cross-Linked Polyethylene)

#### Insulation Screen

Semi-conductive material (bonded)

#### Longitudinal Waterblocking

Semi-conductive swellable tape

#### Screen

Copper wires and copper tape

#### Longitudinal Waterblocking

Swellable Tapes

#### Outer Sheath

MDPE (Medium Density Polyethylene)

#### Sheath Colour

● Red ● Black

### STANDARDS

IEC 60502-2, IEC 60228,

Generally to HD620 10A

UV Resistant: ISO 4892-3

Abrasion and Tear Resistant: EN 60229-4.1

Impact rated to: AG2 EN 60364-5.51

### THE CABLE LAB<sup>®</sup>

AN ISO/IEC 17025 AND IECIE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.



### SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: [www.elandcables.com/company/about-us/esg-sustainability](http://www.elandcables.com/company/about-us/esg-sustainability)



SCIENCE  
BASED  
TARGETS

BUSINESS  
AMBIITION FOR 1.5°C



### REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab<sup>®</sup>.





## DIMENSIONS 6/10 (12)KV

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> |        | NOMINAL CONDUCTOR DIAMETER<br>mm | NUMBER WIRES CONDUCTOR<br>mm | NOM. THICKNESS SEMI-CON. LAYER |             | NOMINAL INSULATION THICKNESS<br>mm | MINIMUM INSULATION THICKNESS<br>mm | NOMINAL DIAMETER OVER INSULATION<br>mm |
|----------------|--------------|-------------------------------------------------|--------|----------------------------------|------------------------------|--------------------------------|-------------|------------------------------------|------------------------------------|----------------------------------------|
|                |              | Conductor                                       | Screen |                                  |                              | INNER<br>mm                    | OUTER<br>mm |                                    |                                    |                                        |
| A9L10KV01050   | 1            | 50                                              | 16     | 8.20                             | 7 x 2.90                     | 0.50                           | 0.40        | 3.40                               | 2.96                               | 16.4                                   |
| A9L10KV01070   | 1            | 70                                              | 16     | 9.70                             | 19 x 2.18                    | 0.50                           | 0.40        | 3.40                               | 2.96                               | 17.9                                   |
| A9L10KV01095   | 1            | 95                                              | 16     | 11.4                             | 19 x 2.55                    | 0.50                           | 0.40        | 3.40                               | 2.96                               | 19.6                                   |
| A9L10KV01120   | 1            | 120                                             | 16     | 12.65                            | 19 x 2.90                    | 0.50                           | 0.40        | 3.40                               | 2.96                               | 20.9                                   |
| A9L10KV01150   | 1            | 150                                             | 25     | 14.4                             | 19 x 3.16                    | 0.50                           | 0.40        | 3.40                               | 2.96                               | 22.6                                   |
| A9L10KV01185   | 1            | 185                                             | 25     | 15.75                            | 37 x 2.55                    | 0.50                           | 0.40        | 3.40                               | 2.96                               | 24.4                                   |
| A9L10KV01240   | 1            | 240                                             | 25     | 18.2                             | 37 x 2.90                    | 0.50                           | 0.40        | 3.40                               | 2.96                               | 26.9                                   |
| A9L10KV01300   | 1            | 300                                             | 25     | 20.5                             | 61 x 2.55                    | 0.50                           | 0.40        | 3.40                               | 2.96                               | 29.2                                   |
| A9L10KV01400   | 1            | 400                                             | 35     | 23.0                             | 61 x 2.90                    | 0.50                           | 0.40        | 3.40                               | 2.96                               | 31.7                                   |
| A9L10KV01500   | 1            | 500                                             | 35     | 26.0                             | 61 x 3.20                    | 0.50                           | 0.40        | 3.40                               | 2.96                               | 34.7                                   |
| A9L10KV01630   | 1            | 630                                             | 35     | 30.2                             | 61 x 3.65                    | 0.50                           | 0.40        | 3.40                               | 2.96                               | 38.9                                   |

| NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NUMBER WIRES SCREEN<br>mm | DIAMETER TAPE SCREEN<br>mm | NOMINAL SHEATH THICKNESS<br>mm | MINIMUM SHEATH THICKNESS<br>mm | NOMINAL OVERALL DIAMETER<br>mm | NOMINAL WEIGHT<br>kg/km | MAXIMUM SIDEWALL PRESSURE<br>N/cm <sup>2</sup> | MAXIMUM PULLING TENSION<br>N |
|-------------------------------------------------|---------------------------|----------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------|------------------------------------------------|------------------------------|
| 50                                              | 44 x 0.66                 | 1x0.1x10                   | 1.80                           | 1.24                           | 23                             | 550                     | 331                                            | 1500                         |
| 70                                              | 44 x 0.66                 | 1x0.1x10                   | 1.80                           | 1.24                           | 24                             | 650                     | 415                                            | 2100                         |
| 95                                              | 44 x 0.66                 | 1x0.1x10                   | 1.80                           | 1.24                           | 26                             | 750                     | 522                                            | 2850                         |
| 120                                             | 44 x 0.66                 | 1x0.1x10                   | 1.80                           | 1.24                           | 27                             | 850                     | 621                                            | 4500                         |
| 150                                             | 71 x 0.66                 | 1x0.1x10                   | 1.90                           | 1.32                           | 29                             | 1100                    | 708                                            | 7500                         |
| 185                                             | 71 x 0.66                 | 1x0.1x10                   | 1.90                           | 1.32                           | 31                             | 1200                    | 809                                            | 5550                         |
| 240                                             | 71 x 0.66                 | 1x0.1x10                   | 2.00                           | 1.40                           | 33                             | 1400                    | 938                                            | 7200                         |
| 300                                             | 71 x 0.66                 | 1x0.1x10                   | 2.10                           | 1.48                           | 36                             | 1600                    | 1081                                           | 9000                         |
| 400                                             | 60 x 0.85                 | 1x0.1x15                   | 2.20                           | 1.56                           | 39                             | 2000                    | 1311                                           | 12000                        |
| 500                                             | 60 x 0.85                 | 1x0.1x15                   | 2.30                           | 1.64                           | 42                             | 2500                    | 1471                                           | 15000                        |
| 630                                             | 60 x 0.85                 | 1x0.1x15                   | 2.40                           | 1.72                           | 46                             | 3000                    | 1654                                           | 18900                        |



## ELECTRICAL CHARACTERISTICS 6/10 (12)KV

| NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | CONDUCTOR DC RESISTANCE AT 20°C<br>ohms/km | CONDUCTOR DC RESISTANCE AT 75°C<br>ohms/km | CONDUCTOR AC RESISTANCE BY MAX TEMP<br>ohms/km | CURRENT CARRYING CAPACITY (A) |                | REACTANCE<br>ohms/km | CHARGING ADMITTANCE<br>A/km | CAPACITANCE<br>uF/km | S.C.C CONDUCTOR 1SEC<br>kA | S.C.C SCREEN 1SEC<br>kA | CONDUCTOR LOSSES IN THE GROUND<br>kW/km |
|-------------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------------|-------------------------------|----------------|----------------------|-----------------------------|----------------------|----------------------------|-------------------------|-----------------------------------------|
|                                                 |                                            |                                            |                                                | In Ground<br>20°C             | In Air<br>30°C |                      |                             |                      |                            |                         |                                         |
| 50                                              | 0.641                                      | 1.32                                       | 0.825                                          | 194                           | 215            | 0.18                 | 0.35                        | 0.22                 | 4.70                       | 3.2                     | 31.0                                    |
| 70                                              | 0.443                                      | 0.917                                      | 0.570                                          | 236                           | 269            | 0.17                 | 0.33                        | 0.24                 | 6.58                       | 3.2                     | 31.7                                    |
| 95                                              | 0.32                                       | 0.662                                      | 0.412                                          | 281                           | 327            | 0.17                 | 0.32                        | 0.28                 | 8.93                       | 3.2                     | 32.5                                    |
| 120                                             | 0.258                                      | 0.524                                      | 0.328                                          | 318                           | 377            | 0.16                 | 0.31                        | 0.30                 | 11.28                      | 3.2                     | 33.2                                    |
| 150                                             | 0.203                                      | 0.426                                      | 0.268                                          | 350                           | 424            | 0.16                 | 0.30                        | 0.33                 | 14.10                      | 5.0                     | 32.8                                    |
| 185                                             | 0.165                                      | 0.339                                      | 0.213                                          | 393                           | 485            | 0.16                 | 0.29                        | 0.36                 | 17.39                      | 5.0                     | 32.9                                    |
| 240                                             | 0.125                                      | 0.258                                      | 0.160                                          | 453                           | 573            | 0.15                 | 0.28                        | 0.40                 | 22.56                      | 5.0                     | 33.4                                    |
| 300                                             | 0.100                                      | 0.207                                      | 0.132                                          | 507                           | 652            | 0.15                 | 0.28                        | 0.45                 | 28.20                      | 5.0                     | 33.9                                    |
| 400                                             | 0.0778                                     | 0.161                                      | 0.103                                          | 559                           | 741            | 0.15                 | 0.27                        | 0.49                 | 37.60                      | 7.1                     | 32.2                                    |
| 500                                             | 0.0605                                     | 0.125                                      | 0.0810                                         | 622                           | 838            | 0.15                 | 0.26                        | 0.54                 | 47.00                      | 7.1                     | 31.3                                    |
| 630                                             | 0.0469                                     | 0.0972                                     | 0.0640                                         | 701                           | 882            | 0.14                 | 0.25                        | 0.62                 | 59.22                      | 7.1                     | 47.3                                    |

Derating factor (ground): 1 (Soil thermal resistivity: 1km/W, Depth 0.8m, Flat formation - touching)

Derating factor (air): 1 (Flat formation - touching)

## DIMENSIONS 12/20 (24)KV

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> |        | NOMINAL CONDUCTOR DIAMETER<br>mm | NUMBER WIRES CONDUCTOR<br>mm | NOM. THICKNESS SEMI-CON. LAYER |             | NOMINAL INSULATION THICKNESS<br>mm | MINIMUM INSULATION THICKNESS<br>mm | NOMINAL DIAMETER OVER INSULATION<br>mm |
|----------------|--------------|-------------------------------------------------|--------|----------------------------------|------------------------------|--------------------------------|-------------|------------------------------------|------------------------------------|----------------------------------------|
|                |              | Conductor                                       | Screen |                                  |                              | INNER<br>mm                    | OUTER<br>mm |                                    |                                    |                                        |
| A9L20KV01050   | 1            | 50                                              | 16     | 8.20                             | 7 x 2.90                     | 0.50                           | 0.40        | 5.50                               | 4.85                               | 20.4                                   |
| A9L20KV01070   | 1            | 70                                              | 16     | 9.70                             | 19 x 2.18                    | 0.50                           | 0.40        | 5.50                               | 4.85                               | 21.9                                   |
| A9L20KV01095   | 1            | 95                                              | 16     | 11.4                             | 19 x 2.55                    | 0.50                           | 0.40        | 5.50                               | 4.85                               | 23.6                                   |
| A9L20KV01120   | 1            | 120                                             | 16     | 12.65                            | 19 x 2.90                    | 0.50                           | 0.40        | 5.50                               | 4.85                               | 24.9                                   |
| A9L20KV01150   | 1            | 150                                             | 25     | 14.4                             | 19 x 3.16                    | 0.50                           | 0.40        | 5.50                               | 4.85                               | 26.6                                   |
| A9L20KV01185   | 1            | 185                                             | 25     | 15.75                            | 37 x 2.55                    | 0.50                           | 0.40        | 5.50                               | 4.85                               | 28.4                                   |
| A9L20KV01240   | 1            | 240                                             | 25     | 18.2                             | 37 x 2.90                    | 0.50                           | 0.40        | 5.50                               | 4.85                               | 30.9                                   |
| A9L20KV01300   | 1            | 300                                             | 25     | 20.5                             | 61 x 2.55                    | 0.50                           | 0.40        | 5.50                               | 4.85                               | 33.2                                   |
| A9L20KV01400   | 1            | 400                                             | 35     | 23.0                             | 61 x 2.90                    | 0.50                           | 0.40        | 5.50                               | 4.85                               | 35.7                                   |
| A9L20KV01500   | 1            | 500                                             | 35     | 26.0                             | 61 x 3.20                    | 0.50                           | 0.40        | 5.50                               | 4.85                               | 38.7                                   |
| A9L20KV01630   | 1            | 630                                             | 35     | 30.2                             | 61 x 3.65                    | 0.50                           | 0.40        | 5.50                               | 4.85                               | 42.9                                   |

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.



| NOMINAL CROSS SECTIONAL AREA | NUMBER WIRES SCREEN | DIAMETER TAPE SCREEN | NOMINAL SHEATH THICKNESS | MINIMUM SHEATH THICKNESS | NOMINAL OVERALL DIAMETER | NOMINAL WEIGHT | MAXIMUM SIDEWALL PRESSURE | MAXIMUM PULLING TENSION |
|------------------------------|---------------------|----------------------|--------------------------|--------------------------|--------------------------|----------------|---------------------------|-------------------------|
| mm <sup>2</sup>              | mm                  | mm                   | mm                       | mm                       | mm                       | kg/km          | N/cm <sup>2</sup>         | N                       |
| 50                           | 44 x 0.66           | 1x0.1x10             | 1.80                     | 1.24                     | 27                       | 700            | 292                       | 1500                    |
| 70                           | 44 x 0.66           | 1x0.1x10             | 1.90                     | 1.32                     | 28                       | 800            | 371                       | 2100                    |
| 95                           | 44 x 0.66           | 1x0.1x10             | 1.90                     | 1.32                     | 30                       | 900            | 479                       | 2850                    |
| 120                          | 44 x 0.66           | 1x0.1x10             | 2.00                     | 1.40                     | 31                       | 1000           | 550                       | 3600                    |
| 150                          | 71 x 0.66           | 1x0.1x10             | 2.00                     | 1.40                     | 33                       | 1300           | 633                       | 4500                    |
| 185                          | 71 x 0.66           | 1x0.1x10             | 2.10                     | 1.48                     | 35                       | 1400           | 729                       | 5550                    |
| 240                          | 71 x 0.66           | 1x0.1x10             | 2.10                     | 1.48                     | 38                       | 1600           | 870                       | 7200                    |
| 300                          | 71 x 0.66           | 1x0.1x10             | 2.20                     | 1.56                     | 40                       | 1900           | 992                       | 9000                    |
| 400                          | 60 x 0.85           | 1x0.1x15             | 2.30                     | 1.64                     | 43                       | 2250           | 1212                      | 12000                   |
| 500                          | 60 x 0.85           | 1x0.1x15             | 2.40                     | 1.72                     | 46                       | 2750           | 1389                      | 15000                   |
| 630                          | 60 x 0.85           | 1x0.1x15             | 2.50                     | 1.80                     | 51                       | 3250           | 1571                      | 18900                   |

## ELECTRICAL CHARACTERISTICS 12/20 (24)KV

| NOMINAL CROSS SECTIONAL AREA | CONDUCTOR DC RESISTANCE AT 20°C | CONDUCTOR DC RESISTANCE AT 75°C | CONDUCTOR AC RESISTANCE BY MAX TEMP | CURRENT CARRYING CAPACITY (A) |             | REACTANCE | CHARGING ADMITTANCE | CAPACITANCE | S.C.C CONDUCTOR 1SEC kA | S.C.C SCREEN 1SEC kA | CONDUCTOR LOSSES IN THE GROUND |
|------------------------------|---------------------------------|---------------------------------|-------------------------------------|-------------------------------|-------------|-----------|---------------------|-------------|-------------------------|----------------------|--------------------------------|
|                              |                                 |                                 |                                     | In Ground 20°C                | In Air 30°C |           |                     |             |                         |                      |                                |
| mm <sup>2</sup>              | ohms/km                         | ohms/km                         | ohms/km                             |                               |             | ohms/km   | A/km                | uF/km       |                         | kA                   | kW/km                          |
| 50                           | 0.641                           | 1.32                            | 0.825                               | 195                           | 217         | 0.19      | 0.39                | 0.15        | 4.70                    | 3.2                  | 31.4                           |
| 70                           | 0.443                           | 0.917                           | 0.570                               | 237                           | 270         | 0.18      | 0.37                | 0.17        | 6.58                    | 3.2                  | 32.0                           |
| 95                           | 0.32                            | 0.662                           | 0.412                               | 282                           | 328         | 0.18      | 0.35                | 0.19        | 8.93                    | 3.2                  | 32.8                           |
| 120                          | 0.258                           | 0.524                           | 0.328                               | 320                           | 378         | 0.17      | 0.34                | 0.20        | 11.28                   | 3.2                  | 33.6                           |
| 150                          | 0.203                           | 0.426                           | 0.268                               | 353                           | 425         | 0.17      | 0.33                | 0.22        | 14.10                   | 5.0                  | 33.4                           |
| 185                          | 0.164                           | 0.339                           | 0.213                               | 396                           | 485         | 0.17      | 0.32                | 0.24        | 17.39                   | 5.0                  | 33.4                           |
| 240                          | 0.125                           | 0.258                           | 0.160                               | 457                           | 573         | 0.16      | 0.31                | 0.27        | 22.56                   | 5.0                  | 34.0                           |
| 300                          | 0.100                           | 0.207                           | 0.132                               | 511                           | 652         | 0.16      | 0.30                | 0.29        | 28.20                   | 5.0                  | 34.5                           |
| 400                          | 0.0778                          | 0.161                           | 0.103                               | 566                           | 740         | 0.16      | 0.29                | 0.32        | 37.60                   | 7.1                  | 33.0                           |
| 500                          | 0.0605                          | 0.125                           | 0.0810                              | 630                           | 838         | 0.15      | 0.28                | 0.35        | 47.00                   | 7.1                  | 32.1                           |
| 630                          | 0.0469                          | 0.0972                          | 0.0640                              | 701                           | 882         | 0.15      | 0.27                | 0.40        | 59.22                   | 7.1                  | 47.3                           |

Derating factor (ground): 1 (Soil thermal resistivity: 1km/W, Depth 0.8m, Flat formation - touching)

Derating factor (air): 1 (Flat formation - touching)



## DIMENSIONS 18/30 (36)KV

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> |        | NOMINAL CONDUCTOR DIAMETER<br>mm | NUMBER WIRES CONDUCTOR<br>mm | NOM. THICKNESS SEMI-CON. LAYER |             | NOMINAL INSULATION THICKNESS<br>mm | MINIMUM INSULATION THICKNESS<br>mm | NOMINAL DIAMETER OVER INSULATION<br>mm |
|----------------|--------------|-------------------------------------------------|--------|----------------------------------|------------------------------|--------------------------------|-------------|------------------------------------|------------------------------------|----------------------------------------|
|                |              | Conductor                                       | Screen |                                  |                              | INNER<br>mm                    | OUTER<br>mm |                                    |                                    |                                        |
| A9L30KV01050   | 1            | 50                                              | 16     | 8.20                             | 7 x 2.90                     | 0.50                           | 0.40        | 8.00                               | 7.10                               | 25.2                                   |
| A9L30KV01070   | 1            | 70                                              | 16     | 9.70                             | 19 x 2.18                    | 0.50                           | 0.40        | 8.00                               | 7.10                               | 26.7                                   |
| A9L30KV01095   | 1            | 95                                              | 16     | 11.4                             | 19 x 2.55                    | 0.50                           | 0.40        | 8.00                               | 7.10                               | 28.4                                   |
| A9L30KV01120   | 1            | 120                                             | 16     | 12.65                            | 19 x 2.90                    | 0.50                           | 0.40        | 8.00                               | 7.10                               | 29.7                                   |
| A9L30KV01150   | 1            | 150                                             | 25     | 14.4                             | 19 x 3.16                    | 0.50                           | 0.40        | 8.00                               | 7.10                               | 31.4                                   |
| A9L30KV01185   | 1            | 185                                             | 25     | 15.75                            | 37 x 2.55                    | 0.50                           | 0.40        | 8.00                               | 7.10                               | 33.2                                   |
| A9L30KV01240   | 1            | 240                                             | 25     | 18.2                             | 37 x 2.90                    | 0.50                           | 0.40        | 8.00                               | 7.10                               | 35.7                                   |
| A9L30KV01300   | 1            | 300                                             | 25     | 20.5                             | 61 x 2.55                    | 0.50                           | 0.40        | 8.00                               | 7.10                               | 38.0                                   |
| A9L30KV01400   | 1            | 400                                             | 35     | 23.0                             | 61 x 2.90                    | 0.50                           | 0.40        | 8.00                               | 7.10                               | 40.5                                   |
| A9L30KV01500   | 1            | 500                                             | 35     | 26.0                             | 61 x 3.20                    | 0.50                           | 0.40        | 8.00                               | 7.10                               | 43.5                                   |
| A9L30KV01630   | 1            | 630                                             | 35     | 30.2                             | 61 x 3.65                    | 0.50                           | 0.40        | 8.00                               | 7.10                               | 47.7                                   |

| NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NUMBER WIRES SCREEN<br>mm | DIAMETER TAPE SCREEN<br>mm | NOMINAL SHEATH THICKNESS<br>mm | MINIMUM SHEATH THICKNESS<br>mm | NOMINAL OVERALL DIAMETER<br>mm | NOMINAL WEIGHT<br>kg/km | MAXIMUM SIDEWALL PRESSURE<br>N/cm <sup>2</sup> | MAXIMUM PULLING TENSION<br>N |
|-------------------------------------------------|---------------------------|----------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------|------------------------------------------------|------------------------------|
| 50                                              | 44 x 0.66                 | 1x0.1x10                   | 2.00                           | 1.40                           | 32                             | 1000                    | 249                                            | 1500                         |
| 70                                              | 44 x 0.66                 | 1x0.1x10                   | 2.00                           | 1.40                           | 34                             | 1100                    | 320                                            | 2100                         |
| 95                                              | 44 x 0.66                 | 1x0.1x10                   | 2.10                           | 1.48                           | 36                             | 1300                    | 401                                            | 2850                         |
| 120                                             | 44 x 0.66                 | 1x0.1x10                   | 2.10                           | 1.48                           | 37                             | 1400                    | 483                                            | 3600                         |
| 150                                             | 71 x 0.66                 | 1x0.1x10                   | 2.20                           | 1.56                           | 39                             | 1600                    | 562                                            | 4500                         |
| 185                                             | 71 x 0.66                 | 1x0.1x10                   | 2.20                           | 1.56                           | 41                             | 1800                    | 652                                            | 5550                         |
| 240                                             | 71 x 0.66                 | 1x0.1x10                   | 2.30                           | 1.64                           | 43                             | 2000                    | 784                                            | 7200                         |
| 300                                             | 71 x 0.66                 | 1x0.1x10                   | 2.40                           | 1.72                           | 46                             | 2250                    | 902                                            | 9000                         |
| 400                                             | 60 x 0.85                 | 1x0.1x15                   | 2.50                           | 1.80                           | 49                             | 2750                    | 1111                                           | 12000                        |
| 500                                             | 60 x 0.85                 | 1x0.1x15                   | 2.60                           | 1.88                           | 52                             | 3250                    | 1282                                           | 15000                        |
| 630                                             | 60 x 0.85                 | 1x0.1x15                   | 2.70                           | 1.96                           | 56                             | 3750                    | 1462                                           | 18900                        |



## ELECTRICAL CHARACTERISTICS 18/30 (36)KV

| NOMINAL<br>CROSS<br>SECTIONAL<br>AREA<br><br>mm <sup>2</sup> | CONDUCTOR<br>DC RESISTANCE<br>AT 20°C<br><br>ohms/km | CONDUCTOR<br>DC RESISTANCE<br>AT 75°C<br><br>ohms/km | CONDUCTOR<br>AC RESISTANCE<br>BY MAX TEMP<br><br>ohms/km | CURRENT CARRYING<br>CAPACITY ( A ) |                | REACTANCE<br><br>ohms/km | CHARGING<br>ADMITTANCE<br><br>A/km | CAPACITANCE<br><br>uF/km | S.C.C<br>CONDUCTOR<br>1SEC<br>kA | S.C.C<br>SCREEN<br>1SEC<br>kA | CONDUCTOR<br>LOSSES IN THE<br>GROUND<br><br>kW/km |
|--------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------|------------------------------------|----------------|--------------------------|------------------------------------|--------------------------|----------------------------------|-------------------------------|---------------------------------------------------|
|                                                              |                                                      |                                                      |                                                          | In Ground<br>20°C                  | In Air<br>30°C |                          |                                    |                          |                                  |                               |                                                   |
| 50                                                           | 0.641                                                | 1.32                                                 | 0.825                                                    | 196                                | 217            | 0.20                     | 0.44                               | 0.12                     | 4.70                             | 3.2                           | 31.7                                              |
| 70                                                           | 0.443                                                | 0.917                                                | 0.570                                                    | 238                                | 270            | 0.20                     | 0.41                               | 0.13                     | 6.58                             | 3.2                           | 32.3                                              |
| 95                                                           | 0.32                                                 | 0.662                                                | 0.412                                                    | 284                                | 328            | 0.19                     | 0.39                               | 0.14                     | 8.93                             | 3.2                           | 33.2                                              |
| 120                                                          | 0.258                                                | 0.524                                                | 0.328                                                    | 322                                | 378            | 0.18                     | 0.38                               | 0.15                     | 11.28                            | 3.2                           | 34.0                                              |
| 150                                                          | 0.203                                                | 0.426                                                | 0.268                                                    | 355                                | 425            | 0.18                     | 0.36                               | 0.17                     | 14.10                            | 5.0                           | 33.8                                              |
| 185                                                          | 0.164                                                | 0.339                                                | 0.213                                                    | 400                                | 485            | 0.18                     | 0.36                               | 0.18                     | 17.39                            | 5.0                           | 34.1                                              |
| 240                                                          | 0.125                                                | 0.258                                                | 0.160                                                    | 461                                | 572            | 0.17                     | 0.34                               | 0.20                     | 22.56                            | 5.0                           | 34.6                                              |
| 300                                                          | 0.100                                                | 0.207                                                | 0.132                                                    | 516                                | 649            | 0.17                     | 0.33                               | 0.22                     | 28.20                            | 5.0                           | 35.1                                              |
| 400                                                          | 0.0778                                               | 0.161                                                | 0.103                                                    | 572                                | 737            | 0.16                     | 0.32                               | 0.24                     | 37.60                            | 7.1                           | 33.7                                              |
| 500                                                          | 0.0605                                               | 0.125                                                | 0.0810                                                   | 638                                | 835            | 0.16                     | 0.31                               | 0.26                     | 47.00                            | 7.1                           | 33.0                                              |
| 630                                                          | 0.0469                                               | 0.0972                                               | 0.0640                                                   | 701                                | 882            | 0.16                     | 0.29                               | 0.29                     | 59.22                            | 7.1                           | 47.3                                              |

Derating factor (ground): 1 (Soil thermal resistivity: 1km/W, Depth 0.8m, Flat formation - touching)

Derating factor (air): 1 (Flat formation - touching)