

## XHIO1AV Cable



Eland Product Group: MP19

### APPLICATION

Portuguese Medium Voltage Cable for power distribution and power supply stations used in Utility and Industrial applications, with a rated voltage of 3.6/6kV to 18/30kV. Suitable for fixed installations, including directly buried. Good mechanical protection.

### CHARACTERISTICS

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

3.6/6 (7.2)kV,  
6/10 (12)kV,  
8.7/15 (17.5)kV,  
12/20 (24)kV,  
18/30 (36)kV

#### Temperature Rating

Conductor maximum operating temperature: 90°C  
Maximum short-circuit temperature: 250°C

#### Minimum Bending Radius

During installation: 20 x overall diameter  
After installation: 15 x overall diameter

### CONSTRUCTION

#### Conductor

Class 2 stranded Copper

#### Conductor Screen

Semi-conductive XLPE (Cross-Linked Polyethylene)

#### Insulation

XLPE (Cross-Linked Polyethylene)

#### Insulation Screen

Semi-conductive XLPE (Cross-Linked Polyethylene)

#### Metallic Screen

Copper wire screen

#### Inner Sheath

PVC (Polyvinyl Chloride)

#### Armour

Two aluminium tapes helically applied

#### Sheath

PVC (Polyvinyl Chloride)

#### Sheath Colour

● Black

### STANDARDS

IEC 60228, IEC 60502-2  
Flame Retardant to IEC 60332-1-2

### THE CABLE LAB®

AN ISO/IEC 17025 AND IECCE 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](https://www.elandcables.com/company/about-us/esg-sustainability)



### 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®.





## DIMENSIONS 3.6/6kV

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL DIAMETER<br>mm |         | NOMINAL WEIGHT<br>kg/km |
|----------------|--------------|-------------------------------------------------|------------------------|---------|-------------------------|
|                |              |                                                 | Over Insulation        | Overall |                         |
| MP1906KV01025  | 1            | 25                                              | 13.0                   | 25.5    | 960                     |
| MP1906KV01035  | 1            | 35                                              | 14.0                   | 26.5    | 1080                    |
| MP1906KV01050  | 1            | 50                                              | 15.0                   | 27.5    | 1230                    |
| MP1906KV01070  | 1            | 70                                              | 16.5                   | 29.5    | 1470                    |
| MP1906KV01095  | 1            | 95                                              | 18.5                   | 31.0    | 1760                    |
| MP1906KV01120  | 1            | 120                                             | 20.0                   | 32.5    | 2035                    |
| MP1906KV01150  | 1            | 150                                             | 21.0                   | 34.0    | 2325                    |
| MP1906KV01185  | 1            | 185                                             | 22.5                   | 35.5    | 2700                    |
| MP1906KV01240  | 1            | 240                                             | 25.5                   | 38.5    | 3340                    |
| MP1906KV01300  | 1            | 300                                             | 28.5                   | 42.0    | 4050                    |
| MP1906KV01400  | 1            | 400                                             | 32.0                   | 45.5    | 5045                    |
| MP1906KV01500  | 1            | 500                                             | 35.5                   | 49.0    | 6070                    |
| MP1906KV01630  | 1            | 630                                             | 41.0                   | 53.0    | 7775                    |

## ELECTRICAL CHARACTERISTICS 3.6/6kV

| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | CURRENT CARRYING CAPACITY<br>Amps |        | CONDUCTOR MAXIMUM SHORT-CIRCUIT CURRENT, T=1S<br>kA | MAXIMUM CONDUCTOR DC RESISTANCE AT 20°C<br>ohm/km | INDUCTANCE<br>mH/km | CAPACITANCE<br>μF/km |
|--------------|-------------------------------------------------|-----------------------------------|--------|-----------------------------------------------------|---------------------------------------------------|---------------------|----------------------|
|              |                                                 | In air                            | Buried |                                                     |                                                   |                     |                      |
| 1            | 25                                              | 164                               | 164    | 3.6                                                 | 0.7270                                            | 0.44                | 0.27                 |
| 1            | 35                                              | 198                               | 196    | 5.0                                                 | 0.5240                                            | 0.42                | 0.30                 |
| 1            | 50                                              | 238                               | 231    | 7.2                                                 | 0.3870                                            | 0.40                | 0.33                 |
| 1            | 70                                              | 296                               | 282    | 10.0                                                | 0.2680                                            | 0.38                | 0.38                 |
| 1            | 95                                              | 360                               | 338    | 13.6                                                | 0.1930                                            | 0.36                | 0.43                 |
| 1            | 120                                             | 417                               | 384    | 17.2                                                | 0.1530                                            | 0.34                | 0.48                 |
| 1            | 150                                             | 470                               | 428    | 21.5                                                | 0.1240                                            | 0.33                | 0.51                 |
| 1            | 185                                             | 535                               | 481    | 26.5                                                | 0.0991                                            | 0.33                | 0.54                 |
| 1            | 240                                             | 635                               | 557    | 34.3                                                | 0.0754                                            | 0.31                | 0.60                 |
| 1            | 300                                             | 729                               | 625    | 42.9                                                | 0.0601                                            | 0.31                | 0.63                 |
| 1            | 400                                             | 844                               | 708    | 57.2                                                | 0.0470                                            | 0.30                | 0.66                 |
| 1            | 500                                             | 971                               | 797    | 71.5                                                | 0.0366                                            | 0.29                | 0.69                 |
| 1            | 630                                             | 1 109                             | 892    | 90.1                                                | 0.0283                                            | 0.28                | 0.76                 |



## DIMENSIONS 6/10kV

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL DIAMETER<br>mm |         | NOMINAL WEIGHT<br>kg/km |
|----------------|--------------|-------------------------------------------------|------------------------|---------|-------------------------|
|                |              |                                                 | Over Insulation        | Overall |                         |
| MP1910KV01025  | 1            | 25                                              | 15.0                   | 27.5    | 1050                    |
| MP1910KV01035  | 1            | 35                                              | 16.0                   | 28.5    | 1175                    |
| MP1910KV01050  | 1            | 50                                              | 17.0                   | 29.5    | 1325                    |
| MP1910KV01070  | 1            | 70                                              | 18.5                   | 31.5    | 1575                    |
| MP1910KV01095  | 1            | 95                                              | 20.5                   | 33.0    | 1865                    |
| MP1910KV01120  | 1            | 120                                             | 22.0                   | 35.0    | 2170                    |
| MP1910KV01150  | 1            | 150                                             | 23.0                   | 36.0    | 2445                    |
| MP1910KV01185  | 1            | 185                                             | 24.5                   | 37.5    | 2845                    |
| MP1910KV01240  | 1            | 240                                             | 27.0                   | 40.0    | 3445                    |
| MP1910KV01300  | 1            | 300                                             | 30.0                   | 43.0    | 4130                    |
| MP1910KV01400  | 1            | 400                                             | 33.0                   | 46.0    | 5105                    |
| MP1910KV01500  | 1            | 500                                             | 36.0                   | 49.5    | 6100                    |
| MP1910KV01630  | 1            | 630                                             | 41.5                   | 53.0    | 7815                    |

## ELECTRICAL CHARACTERISTICS 6/10kV

| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | CURRENT CARRYING CAPACITY<br>Amps |        | CONDUCTOR MAXIMUM SHORT-CIRCUIT CURRENT. T=1S<br>kA | MAXIMUM CONDUCTOR DC RESISTANCE AT 20°C<br>ohm/km | INDUCTANCE<br>mH/km | CAPACITANCE<br>µF/km |
|--------------|-------------------------------------------------|-----------------------------------|--------|-----------------------------------------------------|---------------------------------------------------|---------------------|----------------------|
|              |                                                 | In air                            | Buried |                                                     |                                                   |                     |                      |
| 1            | 25                                              | 166                               | 163    | 3.6                                                 | 0.7270                                            | 0.46                | 0.22                 |
| 1            | 35                                              | 201                               | 196    | 5.0                                                 | 0.5240                                            | 0.44                | 0.24                 |
| 1            | 50                                              | 240                               | 231    | 7.2                                                 | 0.3870                                            | 0.41                | 0.27                 |
| 1            | 70                                              | 299                               | 282    | 10.0                                                | 0.2680                                            | 0.39                | 0.30                 |
| 1            | 95                                              | 364                               | 338    | 13.6                                                | 0.1930                                            | 0.37                | 0.34                 |
| 1            | 120                                             | 420                               | 383    | 17.2                                                | 0.1530                                            | 0.36                | 0.37                 |
| 1            | 150                                             | 474                               | 428    | 21.5                                                | 0.1240                                            | 0.35                | 0.39                 |
| 1            | 185                                             | 539                               | 471    | 26.5                                                | 0.0991                                            | 0.34                | 0.42                 |
| 1            | 240                                             | 636                               | 555    | 34.3                                                | 0.0754                                            | 0.32                | 0.48                 |
| 1            | 300                                             | 731                               | 625    | 42.9                                                | 0.0601                                            | 0.31                | 0.53                 |
| 1            | 400                                             | 846                               | 708    | 57.2                                                | 0.0470                                            | 0.30                | 0.59                 |
| 1            | 500                                             | 972                               | 797    | 71.5                                                | 0.0366                                            | 0.29                | 0.65                 |
| 1            | 630                                             | 1 110                             | 892    | 90.1                                                | 0.0283                                            | 0.28                | 0.72                 |



## DIMENSIONS 8.7/15kV

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL DIAMETER<br>mm |         | NOMINAL WEIGHT<br>kg/km |
|----------------|--------------|-------------------------------------------------|------------------------|---------|-------------------------|
|                |              |                                                 | Over Insulation        | Overall |                         |
| MP1915KV01025  | 1            | 25                                              | 17.0                   | 29.5    | 1155                    |
| MP1915KV01035  | 1            | 35                                              | 18.0                   | 30.5    | 1285                    |
| MP1915KV01050  | 1            | 50                                              | 19.0                   | 32.0    | 1440                    |
| MP1915KV01070  | 1            | 70                                              | 21.0                   | 33.5    | 1690                    |
| MP1915KV01095  | 1            | 95                                              | 22.5                   | 35.5    | 2010                    |
| MP1915KV01120  | 1            | 120                                             | 24.5                   | 37.0    | 2300                    |
| MP1915KV01150  | 1            | 150                                             | 25.5                   | 38.5    | 2600                    |
| MP1915KV01185  | 1            | 185                                             | 26.5                   | 39.5    | 2985                    |
| MP1915KV01240  | 1            | 240                                             | 29.5                   | 42.5    | 3615                    |
| MP1915KV01300  | 1            | 300                                             | 32.0                   | 45.5    | 4315                    |
| MP1915KV01400  | 1            | 400                                             | 35.0                   | 48.5    | 5300                    |
| MP1915KV01500  | 1            | 500                                             | 38.0                   | 52.0    | 6335                    |
| MP1915KV01630  | 1            | 630                                             | 44.0                   | 55.5    | 8045                    |

## ELECTRICAL CHARACTERISTICS 8.7/15kV

| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | CURRENT CARRYING CAPACITY<br>Amps |        | CONDUCTOR<br>MAXIMUM<br>SHORT-CIRCUIT<br>CURRENT. T=1S<br>kA | MAXIMUM<br>CONDUCTOR<br>DC RESISTANCE<br>AT 20°C<br>ohm/km | INDUCTANCE<br>mH/km | CAPACITANCE<br>µF/km |
|--------------|-------------------------------------------------|-----------------------------------|--------|--------------------------------------------------------------|------------------------------------------------------------|---------------------|----------------------|
|              |                                                 | In air                            | Buried |                                                              |                                                            |                     |                      |
| 1            | 25                                              | 168                               | 163    | 3.6                                                          | 0.7270                                                     | 0.48                | 0.18                 |
| 1            | 35                                              | 203                               | 195    | 5.0                                                          | 0.5240                                                     | 0.45                | 0.20                 |
| 1            | 50                                              | 243                               | 231    | 7.2                                                          | 0.3870                                                     | 0.43                | 0.21                 |
| 1            | 70                                              | 302                               | 282    | 10.0                                                         | 0.2680                                                     | 0.41                | 0.24                 |
| 1            | 95                                              | 366                               | 337    | 13.6                                                         | 0.1930                                                     | 0.39                | 0.27                 |
| 1            | 120                                             | 423                               | 383    | 17.2                                                         | 0.1530                                                     | 0.37                | 0.29                 |
| 1            | 150                                             | 477                               | 428    | 21.5                                                         | 0.1240                                                     | 0.36                | 0.31                 |
| 1            | 185                                             | 541                               | 480    | 26.5                                                         | 0.0991                                                     | 0.35                | 0.33                 |
| 1            | 240                                             | 640                               | 555    | 34.3                                                         | 0.0754                                                     | 0.34                | 0.38                 |
| 1            | 300                                             | 736                               | 626    | 42.9                                                         | 0.0601                                                     | 0.32                | 0.42                 |
| 1            | 400                                             | 850                               | 709    | 57.2                                                         | 0.0470                                                     | 0.31                | 0.46                 |
| 1            | 500                                             | 976                               | 798    | 71.5                                                         | 0.0366                                                     | 0.30                | 0.51                 |
| 1            | 630                                             | 1 115                             | 894    | 90.1                                                         | 0.0283                                                     | 0.29                | 0.56                 |



## DIMENSIONS 12/20kV

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL DIAMETER<br>mm |         | NOMINAL WEIGHT<br>kg/km |
|----------------|--------------|-------------------------------------------------|------------------------|---------|-------------------------|
|                |              |                                                 | Over Insulation        | Overall |                         |
| MP1920KV01035  | 1            | 35                                              | 20.0                   | 32.5    | 1390                    |
| MP1920KV01050  | 1            | 50                                              | 21.0                   | 34.0    | 1565                    |
| MP1920KV01070  | 1            | 70                                              | 23.0                   | 35.5    | 1825                    |
| MP1920KV01095  | 1            | 95                                              | 24.5                   | 37.5    | 2150                    |
| MP1920KV01120  | 1            | 120                                             | 26.5                   | 39.5    | 2445                    |
| MP1920KV01150  | 1            | 150                                             | 27.5                   | 40.5    | 2750                    |
| MP1920KV01185  | 1            | 185                                             | 28.5                   | 42.0    | 3140                    |
| MP1920KV01240  | 1            | 240                                             | 31.5                   | 45.0    | 3780                    |
| MP1920KV01300  | 1            | 300                                             | 34.0                   | 47.5    | 4490                    |
| MP1920KV01400  | 1            | 400                                             | 37.0                   | 51.0    | 5515                    |
| MP1920KV01500  | 1            | 500                                             | 40.0                   | 54.5    | 6535                    |
| MP1920KV01630  | 1            | 630                                             | 46.0                   | 58.0    | 8300                    |

## ELECTRICAL CHARACTERISTICS 12/20kV

| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | CURRENT CARRYING CAPACITY<br>Amps |        | CONDUCTOR MAXIMUM SHORT-CIRCUIT CURRENT. T=1S<br>kA | MAXIMUM CONDUCTOR DC RESISTANCE AT 20°C<br>ohm/km | INDUCTANCE<br>mH/km | CAPACITANCE<br>μF/km |
|--------------|-------------------------------------------------|-----------------------------------|--------|-----------------------------------------------------|---------------------------------------------------|---------------------|----------------------|
|              |                                                 | In air                            | Buried |                                                     |                                                   |                     |                      |
| 1            | 35                                              | 204                               | 195    | 5.0                                                 | 0.5240                                            | 0.47                | 0.17                 |
| 1            | 50                                              | 244                               | 231    | 7.2                                                 | 0.3870                                            | 0.44                | 0.19                 |
| 1            | 70                                              | 304                               | 282    | 10.0                                                | 0.2680                                            | 0.42                | 0.21                 |
| 1            | 95                                              | 368                               | 337    | 13.6                                                | 0.1930                                            | 0.40                | 0.23                 |
| 1            | 120                                             | 425                               | 383    | 17.2                                                | 0.1530                                            | 0.38                | 0.25                 |
| 1            | 150                                             | 479                               | 427    | 21.5                                                | 0.1240                                            | 0.37                | 0.27                 |
| 1            | 185                                             | 544                               | 479    | 26.5                                                | 0.0991                                            | 0.36                | 0.28                 |
| 1            | 240                                             | 643                               | 555    | 34.3                                                | 0.0754                                            | 0.35                | 0.32                 |
| 1            | 300                                             | 739                               | 626    | 42.9                                                | 0.0601                                            | 0.33                | 0.35                 |
| 1            | 400                                             | 853                               | 709    | 57.2                                                | 0.0470                                            | 0.32                | 0.39                 |
| 1            | 500                                             | 979                               | 799    | 71.5                                                | 0.0366                                            | 0.31                | 0.43                 |
| 1            | 630                                             | 1 119                             | 896    | 90.1                                                | 0.0283                                            | 0.30                | 0.47                 |



## DIMENSIONS 18/30kV

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL DIAMETER<br>mm |         | NOMINAL WEIGHT<br>kg/km |
|----------------|--------------|-------------------------------------------------|------------------------|---------|-------------------------|
|                |              |                                                 | Over Insulation        | Overall |                         |
| MP1930KV01050  | 1            | 50                                              | 26.0                   | 39.0    | 1890                    |
| MP1930KV01070  | 1            | 70                                              | 28.0                   | 41.0    | 2180                    |
| MP1930KV01095  | 1            | 95                                              | 29.5                   | 43.0    | 2500                    |
| MP1930KV01120  | 1            | 120                                             | 31.5                   | 44.5    | 2835                    |
| MP1930KV01150  | 1            | 150                                             | 32.5                   | 46.0    | 3125                    |
| MP1930KV01185  | 1            | 185                                             | 33.5                   | 47.5    | 3550                    |
| MP1930KV01240  | 1            | 240                                             | 36.5                   | 50.5    | 4245                    |
| MP1930KV01300  | 1            | 300                                             | 39.0                   | 53.5    | 4985                    |
| MP1930KV01400  | 1            | 400                                             | 42.0                   | 56.5    | 6040                    |
| MP1930KV01500  | 1            | 500                                             | 45.0                   | 59.5    | 7060                    |
| MP1930KV01630  | 1            | 630                                             | 51.0                   | 63.5    | 8875                    |

## ELECTRICAL CHARACTERISTICS 18/30kV

| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | CURRENT CARRYING CAPACITY<br>Amps |        | CONDUCTOR MAXIMUM SHORT-CIRCUIT CURRENT, T=1S<br>kA | MAXIMUM CONDUCTOR DC RESISTANCE<br>AT 20°C<br>ohm/km | INDUCTANCE<br>mH/km | CAPACITANCE<br>μF/km |
|--------------|-------------------------------------------------|-----------------------------------|--------|-----------------------------------------------------|------------------------------------------------------|---------------------|----------------------|
|              |                                                 | In air                            | Buried |                                                     |                                                      |                     |                      |
| 1            | 50                                              | 248                               | 230    | 7.2                                                 | 0.3870                                               | 0.48                | 0.14                 |
| 1            | 70                                              | 307                               | 281    | 10.0                                                | 0.2680                                               | 0.45                | 0.16                 |
| 1            | 95                                              | 372                               | 335    | 13.6                                                | 0.1930                                               | 0.43                | 0.18                 |
| 1            | 120                                             | 429                               | 382    | 17.2                                                | 0.1530                                               | 0.41                | 0.19                 |
| 1            | 150                                             | 484                               | 426    | 21.5                                                | 0.1240                                               | 0.40                | 0.20                 |
| 1            | 185                                             | 549                               | 479    | 26.5                                                | 0.0991                                               | 0.39                | 0.21                 |
| 1            | 240                                             | 648                               | 555    | 34.3                                                | 0.0754                                               | 0.37                | 0.24                 |
| 1            | 300                                             | 744                               | 627    | 42.9                                                | 0.0601                                               | 0.36                | 0.26                 |
| 1            | 400                                             | 858                               | 710    | 57.2                                                | 0.0470                                               | 0.34                | 0.29                 |
| 1            | 500                                             | 985                               | 801    | 71.5                                                | 0.0366                                               | 0.33                | 0.31                 |
| 1            | 630                                             | 1 126                             | 900    | 90.1                                                | 0.0283                                               | 0.32                | 0.34                 |

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.