



# AXLJ-F TT 18/30 (36)kV Single Core Cable



Eland Product Group: C9M

## APPLICATION

AXLJ-F TT Single core medium voltage cable for fixed installations outdoors, including direct burial. The cable is longitudinally (conductor) and radially watertight so is suitable for wet soil. The cable is halogen-free, but without fire protection. Variations on metallic screen cross-sectional area sizes offered.

## CHARACTERISTICS

### Nominal Voltage

18/30 (36)kV

### Temperature Rating

Maximum conductor temperature: +90 °C  
Max. conductor temperature. short circuit max. 5 s : +250 °C  
Minimum temperature during operation: -50 °C  
Minimum temperature during handling: -20 °C  
Minimum temperature during transport: -40 °C

## CONSTRUCTION

### Conductor

Class 2 Watertight, circular, stranded aluminium

### Conductor screen

Semiconducting XLPE (Cross-linked Polyethylene)

### Insulation

XLPE (Cross-linked Polyethylene)

### Insulation Screen

Semiconducting XLPE (Cross-linked Polyethylene)

### Screen

Copper wires and aluminium foil (CAS). Polyethylene laminated aluminium foil acts as a part of the metallic screen and needs to be connected in cable joints and terminations

### Outer Sheath

PE (Polyethylene)

### Sheath Colour

● Black

## STANDARDS

HD 620 10-M, SS 424 14 16, EN/IEC 60228

## THE CABLE LAB<sup>®</sup>

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](http://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<sup>®</sup>.





## DIMENSIONS

| ELAND PART NO   | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL SCREEN AREA<br>mm <sup>2</sup> | NOMINAL CONDUCTOR DIAMETER<br>mm | NOMINAL INSULATION THICKNESS<br>mm | NOMINAL THICKNESS OF AL FOIL<br>mm | NOMINAL SHEATH THICKNESS<br>mm | NOMINAL DIAMETER OVER INSULATION WITHOUT SCREEN<br>mm | NOMINAL OVERALL DIAMETER<br>mm | NOMINAL WEIGHT<br>kg/km |
|-----------------|--------------|-------------------------------------------------|----------------------------------------|----------------------------------|------------------------------------|------------------------------------|--------------------------------|-------------------------------------------------------|--------------------------------|-------------------------|
| C9M30KV101070BK | 1            | 70                                              | 16                                     | 9,6                              | 8,0                                | 0,2                                | 2,1                            | 25,1                                                  | 34                             | 964                     |
| C9M30KV101095BK | 1            | 95                                              | 16                                     | 11,1                             | 8,0                                | 0,2                                | 2,1                            | 26,7                                                  | 35                             | 1094                    |
| C9M30KV201095BK | 1            | 95                                              | 25                                     | 11,1                             | 8,0                                | 0,2                                | 2,1                            | 26,7                                                  | 36                             | 1128                    |
| C9M30KV101120BK | 1            | 120                                             | 16                                     | 12,6                             | 8,0                                | 0,2                                | 2,1                            | 28,2                                                  | 37                             | 1231                    |
| C9M30KV101150BK | 1            | 150                                             | 25                                     | 13,9                             | 8,0                                | 0,2                                | 2,2                            | 29,5                                                  | 38                             | 1360                    |
| C9M30KV101185BK | 1            | 185                                             | 25                                     | 15,6                             | 8,0                                | 0,2                                | 2,2                            | 31,6                                                  | 40                             | 1584                    |
| C9M30KV201185BK | 1            | 185                                             | 35                                     | 15,6                             | 8,0                                | 0,2                                | 2,2                            | 31,6                                                  | 41                             | 1597                    |
| C9M30KV101240BK | 1            | 240                                             | 25                                     | 18,0                             | 8,0                                | 0,2                                | 2,2                            | 33,6                                                  | 43                             | 1751                    |
| C9M30KV201240BK | 1            | 240                                             | 35                                     | 18,0                             | 8,0                                | 0,2                                | 2,3                            | 33,6                                                  | 43                             | 1829                    |
| C9M30KV101300BK | 1            | 300                                             | 25                                     | 19,8                             | 8,0                                | 0,2                                | 2,3                            | 35,9                                                  | 45                             | 2039                    |
| C9M30KV201300BK | 1            | 300                                             | 35                                     | 19,8                             | 8,0                                | 0,2                                | 2,3                            | 35,9                                                  | 45                             | 2074                    |
| C9M30KV101400BK | 1            | 400                                             | 25                                     | 22,4                             | 8,0                                | 0,2                                | 2,3                            | 38,0                                                  | 48                             | 2273                    |
| C9M30KV201400BK | 1            | 400                                             | 35                                     | 22,4                             | 8,0                                | 0,2                                | 2,5                            | 38,0                                                  | 48                             | 2319                    |
| C9M30KV101500BK | 1            | 500                                             | 25                                     | 25,7                             | 8,0                                | 0,2                                | 2,5                            | 41,3                                                  | 51                             | 2766                    |
| C9M30KV201500BK | 1            | 500                                             | 35                                     | 25,7                             | 8,0                                | 0,2                                | 2,6                            | 41,3                                                  | 51                             | 2797                    |
| C9M30KV101630BK | 1            | 630                                             | 35                                     | 29,3                             | 8,0                                | 0,2                                | 2,7                            | 45,1                                                  | 55                             | 3360                    |
| C9M30KV201630BK | 1            | 630                                             | 50                                     | 29,3                             | 8,0                                | 0,2                                | 2,8                            | 45,1                                                  | 56                             | 3550                    |
| C9M30KV101800BK | 1            | 800                                             | 35                                     | 33,2                             | 8,0                                | 0,2                                | 2,9                            | 49,1                                                  | 59                             | 4111                    |
| C9M30KV201800BK | 1            | 800                                             | 50                                     | 33,2                             | 8,0                                | 0,2                                | 2,9                            | 49,1                                                  | 60                             | 4219                    |
| C9M30KV1011000B | 1            | 1000                                            | 35                                     | 39,2                             | 8,0                                | 0,2                                | 3,0                            | 55,0                                                  | 66                             | 4866                    |

## MECHANICAL CHARACTERISTICS

| NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | MAX. PULLING FORCE BY PULLING-EYE<br>kN | MAX. PULLING FORCE BY PULLING-STOCKING<br>kN | MINIMUM BENDING RADIUS IN FINAL INSTALLATION,<br>mm |
|-------------------------------------------------|-----------------------------------------|----------------------------------------------|-----------------------------------------------------|
| 70                                              | 3,5                                     | 1,1                                          | 0,38                                                |
| 95                                              | 4,8                                     | 1,4                                          | 0,41                                                |
| 120                                             | 6,0                                     | 1,8                                          | 0,43                                                |
| 150                                             | 7,5                                     | 2,3                                          | 0,43                                                |
| 185                                             | 9,3                                     | 2,8                                          | 0,44                                                |
| 240                                             | 12,0                                    | 3,6                                          | 0,48                                                |
| 300                                             | 15,0                                    | 4,5                                          | 0,49                                                |
| 400                                             | 20                                      | 6                                            | 0,51                                                |
| 500                                             | 20                                      | 7,5                                          | 0,57                                                |
| 630                                             | 20                                      | 8,5                                          | 0,62                                                |
| 800                                             | 20                                      | 8,5                                          | 0,66                                                |
| 1000                                            | 20                                      | 8,5                                          | 0,74                                                |

## ELECTRICAL CHARACTERISTICS

| NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | MAX. DC RESISTANCE OF CONDUCTOR AT 20°C<br>Ω/km | INDUCTANCE PER PHASE. IN TREFOIL FORMATION,<br>CABLES TOUCHING EACH OTHER<br>mH/km |
|-------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------|
| 70                                              | 0,443                                           | 0,44                                                                               |
| 95                                              | 0,320                                           | 0,42                                                                               |
| 120                                             | 0,253                                           | 0,40                                                                               |
| 150                                             | 0,206                                           | 0,39                                                                               |
| 185                                             | 0,164                                           | 0,38                                                                               |
| 240                                             | 0,125                                           | 0,38                                                                               |
| 300                                             | 0,100                                           | 0,35                                                                               |
| 400                                             | 0,0778                                          | 0,34                                                                               |
| 500                                             | 0,0605                                          | 0,33                                                                               |
| 630                                             | 0,0469                                          | 0,31                                                                               |
| 800                                             | 0,0367                                          | 0,30                                                                               |
| 1000                                            | 0,0291                                          | 0,29                                                                               |

## CURRENT RATING

| NOMINAL CROSS SECTIONAL AREA / AREA SCREEN<br>mm <sup>2</sup> | CABLES IN AIR (25 °C)<br>A                    |                 |                                                  |                 | CABLES IN THE GROUND (15°C AND 1,0 K.M/W), INSTALLATION DEPTH 0.7M<br>A |                 |                                               |                 |                                                  |                 |                                                  |                 | MAXIMUM THERMAL SHORT CIRCUIT CURRENT DURING 1S<br>kA |                           |
|---------------------------------------------------------------|-----------------------------------------------|-----------------|--------------------------------------------------|-----------------|-------------------------------------------------------------------------|-----------------|-----------------------------------------------|-----------------|--------------------------------------------------|-----------------|--------------------------------------------------|-----------------|-------------------------------------------------------|---------------------------|
|                                                               | In flat formation, conductor temperature 90°C |                 | In trefoil formation, conductor temperature 90°C |                 | In flat formation, conductor temperature 65°C                           |                 | In flat formation, conductor temperature 90°C |                 | In trefoil formation, conductor temperature 65°C |                 | In trefoil formation, conductor temperature 90°C |                 | Phase (initial 90°C, final 250°C)                     | Metal screen              |
|                                                               | Open screen A                                 | Closed screen A | Open screen A                                    | Closed screen A | Open screen A                                                           | Closed screen A | Open screen A                                 | Closed screen A | Open screen A                                    | Closed screen A | Open screen A                                    | Closed screen A |                                                       | Initial 80°C, final 250°C |
|                                                               |                                               |                 |                                                  |                 |                                                                         |                 |                                               |                 |                                                  |                 |                                                  |                 |                                                       |                           |
| 70/16                                                         | 265                                           | 255             | 235                                              | 235             | 220                                                                     | 215             | 260                                           | 250             | 205                                              | 200             | 240                                              | 235             | 6,6                                                   | 2,3                       |
| 95/16                                                         | 320                                           | 310             | 285                                              | 280             | 255                                                                     | 250             | 300                                           | 295             | 240                                              | 235             | 280                                              | 275             | 8,9                                                   | 2,3                       |
| 95/25                                                         | 320                                           | 310             | 285                                              | 280             | 255                                                                     | 250             | 300                                           | 295             | 240                                              | 235             | 280                                              | 275             | 8,9                                                   | 3,4                       |
| 120/16                                                        | 370                                           | 350             | 330                                              | 325             | 295                                                                     | 280             | 345                                           | 330             | 270                                              | 265             | 320                                              | 310             | 11,3                                                  | 2,3                       |
| 150/25                                                        | 425                                           | 395             | 380                                              | 370             | 330                                                                     | 315             | 390                                           | 370             | 305                                              | 300             | 360                                              | 355             | 14,1                                                  | 3,4                       |
| 185/25                                                        | 485                                           | 440             | 430                                              | 425             | 375                                                                     | 350             | 440                                           | 410             | 345                                              | 330             | 405                                              | 390             | 17,4                                                  | 3,4                       |
| 185/35                                                        | 485                                           | 440             | 430                                              | 425             | 375                                                                     | 350             | 440                                           | 410             | 345                                              | 330             | 405                                              | 390             | 17,4                                                  | 4,7                       |
| 240/25                                                        | 570                                           | 515             | 505                                              | 490             | 435                                                                     | 395             | 510                                           | 465             | 395                                              | 385             | 465                                              | 455             | 22,6                                                  | 3,4                       |
| 240/35                                                        | 570                                           | 515             | 505                                              | 490             | 435                                                                     | 395             | 510                                           | 465             | 395                                              | 385             | 465                                              | 455             | 22,6                                                  | 4,7                       |
| 300/25                                                        | 650                                           | 580             | 580                                              | 565             | 485                                                                     | 440             | 570                                           | 515             | 445                                              | 435             | 525                                              | 510             | 28,3                                                  | 3,4                       |
| 300/35                                                        | 650                                           | 580             | 580                                              | 565             | 485                                                                     | 440             | 570                                           | 515             | 445                                              | 435             | 525                                              | 510             | 28,3                                                  | 4,7                       |
| 400/25                                                        | 790                                           | 680             | 695                                              | 680             | 570                                                                     | 500             | 670                                           | 590             | 525                                              | 510             | 615                                              | 600             | 37,8                                                  | 3,4                       |
| 400/35                                                        | 790                                           | 680             | 695                                              | 680             | 570                                                                     | 500             | 670                                           | 590             | 525                                              | 510             | 615                                              | 600             | 37,8                                                  | 4,7                       |
| 500/25                                                        | 920                                           | 755             | 800                                              | 775             | 645                                                                     | 550             | 760                                           | 650             | 590                                              | 570             | 695                                              | 670             | 47,2                                                  | 3,4                       |
| 500/35                                                        | 920                                           | 755             | 800                                              | 775             | 645                                                                     | 550             | 760                                           | 650             | 590                                              | 570             | 695                                              | 670             | 47,2                                                  | 4,7                       |
| 630/35                                                        | 1040                                          | 840             | 915                                              | 880             | 720                                                                     | 610             | 850                                           | 715             | 665                                              | 635             | 780                                              | 745             | 59,5                                                  | 4,7                       |
| 630/50                                                        | 1040                                          | 840             | 915                                              | 880             | 720                                                                     | 610             | 850                                           | 715             | 665                                              | 635             | 780                                              | 745             | 59,5                                                  | 7,4                       |
| 800/35                                                        | 1220                                          | 950             | 1045                                             | 1010            | 805                                                                     | 650             | -                                             | -               | 725                                              | 695             | -                                                | -               | 75,6                                                  | 4,7                       |
| 800/50                                                        | 1220                                          | 950             | 1045                                             | 1010            | 805                                                                     | 650             | -                                             | -               | 725                                              | 695             | -                                                | -               | 75,6                                                  | 7,4                       |
| 1000/35                                                       | 1390                                          | 1060            | 1170                                             | 1130            | 900                                                                     | 700             | -                                             | -               | 800                                              | 760             | -                                                | -               | 94,5                                                  | 4,7                       |



## CURRENT RATING

| NOMINAL<br>CROSS<br>SECTIONAL<br>AREA<br>mm <sup>2</sup> | CABLES IN AIR (25 °C)<br>A                          |                    |                                                        |                    | CABLES IN THE GROUND (15°C AND 1,0 K.M/W), INSTALLATION DEPTH 0.7M<br>A |                    |                                                     |                    |                                                        |                    |                                                        |                    | MAXIMUM THERMAL<br>SHORT CIRCUIT<br>CURRENT DURING 1S<br>kA |                                                     |
|----------------------------------------------------------|-----------------------------------------------------|--------------------|--------------------------------------------------------|--------------------|-------------------------------------------------------------------------|--------------------|-----------------------------------------------------|--------------------|--------------------------------------------------------|--------------------|--------------------------------------------------------|--------------------|-------------------------------------------------------------|-----------------------------------------------------|
|                                                          | In flat formation,<br>conductor temperature<br>90°C |                    | In trefoil formation,<br>conductor temperature<br>90°C |                    | In flat formation,<br>conductor temperature<br>65°C                     |                    | In flat formation,<br>conductor temperature<br>90°C |                    | In trefoil formation,<br>conductor temperature<br>65°C |                    | In trefoil formation,<br>conductor temperature<br>90°C |                    | Phase<br>(initial<br>90°C, final<br>250°C)                  | Metal<br>screen<br><br>Initial 80°C,<br>final 250°C |
|                                                          | Open<br>screen A                                    | Closed<br>screen A | Open<br>screen A                                       | Closed<br>screen A | Open<br>screen A                                                        | Closed<br>screen A | Open<br>screen A                                    | Closed<br>screen A | Open<br>screen A                                       | Closed<br>screen A | Open<br>screen A                                       | Closed<br>screen A |                                                             |                                                     |
| 300                                                      | 650                                                 | 580                | 580                                                    | 565                | 485                                                                     | 440                | 570                                                 | 515                | 445                                                    | 435                | 525                                                    | 510                | 28,3                                                        | 4,7                                                 |
| 400                                                      | 790                                                 | 680                | 695                                                    | 680                | 570                                                                     | 500                | 670                                                 | 590                | 525                                                    | 510                | 615                                                    | 600                | 37,8                                                        | 3,4                                                 |
| 400                                                      | 790                                                 | 680                | 695                                                    | 680                | 570                                                                     | 500                | 670                                                 | 590                | 525                                                    | 510                | 615                                                    | 600                | 37,8                                                        | 4,7                                                 |
| 500                                                      | 920                                                 | 755                | 800                                                    | 775                | 645                                                                     | 550                | 760                                                 | 650                | 590                                                    | 570                | 695                                                    | 670                | 47,2                                                        | 3,4                                                 |
| 500                                                      | 920                                                 | 755                | 800                                                    | 775                | 645                                                                     | 550                | 760                                                 | 650                | 590                                                    | 570                | 695                                                    | 670                | 47,2                                                        | 4,7                                                 |
| 630                                                      | 1040                                                | 840                | 915                                                    | 880                | 720                                                                     | 610                | 850                                                 | 715                | 665                                                    | 635                | 780                                                    | 745                | 59,5                                                        | 4,7                                                 |
| 630                                                      | 1040                                                | 840                | 915                                                    | 880                | 720                                                                     | 610                | 850                                                 | 715                | 665                                                    | 635                | 780                                                    | 745                | 59,5                                                        | 7,4                                                 |
| 800                                                      | 1220                                                | 950                | 1045                                                   | 1010               | 805                                                                     | 650                | -                                                   | -                  | 725                                                    | 695                | -                                                      | -                  | 75,6                                                        | 4,7                                                 |
| 800                                                      | 1220                                                | 950                | 1045                                                   | 1010               | 805                                                                     | 650                | -                                                   | -                  | 725                                                    | 695                | -                                                      | -                  | 75,6                                                        | 7,4                                                 |
| 1000                                                     | 1390                                                | 1060               | 1170                                                   | 1130               | 900                                                                     | 700                | -                                                   | -                  | 800                                                    | 760                | -                                                      | -                  | 94,5                                                        | 4,7                                                 |