



AHXAMK-W Cable



Eland Product Group: C9Q

APPLICATION

Medium-voltage cable for fixed installations outdoors. May be buried directly in soil, also by ploughing. Cable is longitudinally and radially watertight and therefore it is suitable where wet soil and / or fresh water permanently occurs. Installations must be in accordance with national regulations and rules of installations.

CHARACTERISTICS

Voltage $U_0/U(U_m)$

12/20 (24)kV
19/33 (36)kV

Temperature Rating

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

CONSTRUCTION

Conductor

Class 2 watertight, circular, stranded aluminium

Conductor Screen

Semi conducting XLPE (Cross-Linked Polyethylene)

Insulation

XLPE (Cross-Linked Polyethylene)

Insulation Screen

Semi conducting XLPE (Cross-Linked Polyethylene)

Metallic Screen

Aluminium/plastic laminate (Acts as a radial water barrier)

Outer Sheath

PE (Polyethylene)

Cable Lay Up

Three sheathed cores laid up around a bare earth conductor

Outer Sheath Colour

● Black

STANDARDS

HD 620 10-F, SFS 5636, EN/IEC 60228

ISO/IEC 17025 LABORATORY TESTED

This product is subject to the Quality Assurance protocols of The Cable Lab®, an ISO/IEC 17025 accredited cable testing laboratory. Testing includes vertical flame, conductor resistance, tensile & elongation, and dimensional consistency, verified to published standards and approved product drawings.



8578



FS 672069



EMS 672067

OHS 672066

REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2011/65/EU. RoHS compliance has been tested and confirmed by The Cable Lab® as meeting the requirements of the BSI RoHS Trusted Kitemark™.



KM E34267





DIMENSIONS 12/20 (24)KV

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA mm ² | NOMINAL CONDUCTOR DIAMETER mm | NOMINAL EARTH CONDUCTOR AREA SIZE mm ² | NOMINAL EARTH CONDUCTOR DIAMETER mm | NOMINAL DIAMETER OVER INSULATION WITHOUT SCREEN mm | NOMINAL INSULATION THICKNESS mm | NOMINAL THICKNESS OF ALUMINIUM LAMINATED FOIL mm | NOMINAL OUTER SHEATH THICKNESS mm | NOMINAL OUTER DIAMETER OF COMPLETE CABLE mm | NOMINAL WEIGHT kg/km |
|-----------------|--------------|---|----------------------------------|--|--|---|------------------------------------|---|--------------------------------------|--|-------------------------|
| C9Q20KV103050BK | 3 | 50 | 8.0 | 35 | 6.9 | 19.3 | 5.5 | 0.2 | 2.8 | 59 | 2243 |
| C9Q20KV103070BK | 3 | 70 | 9.6 | 35 | 6.9 | 20.7 | 5.5 | 0.2 | 2.8 | 62 | 2531 |
| C9Q20KV103095BK | 3 | 95 | 11.1 | 25 | - | 22.4 | 5.5 | 0.2 | 2.9 | 66 | 2817 |
| C9Q20KV103095BK | 3 | 95 | 11.1 | 35 | 6.9 | 22.4 | 5.5 | 0.2 | 2.9 | 66 | 2905 |
| C9Q20KV103120BK | 3 | 120 | 12.6 | 35 | 6.9 | 23.4 | 5.5 | 0.2 | 2.9 | 68 | 3200 |
| C9Q20KV103150BK | 3 | 150 | 13.9 | 35 | 6.9 | 25.1 | 5.5 | 0.2 | 2.9 | 71 | 3570 |
| C9Q20KV103185BK | 3 | 185 | 15.6 | 35 | 6.9 | 27.0 | 5.5 | 0.2 | 3.0 | 76 | 4091 |
| C9Q20KV103185BK | 3 | 185 | 15.6 | 50 | 8.2 | 27.0 | 5.5 | 0.2 | 3.0 | 76 | 4191 |
| C9Q20KV103185BK | 3 | 185 | 15.6 | 70 | 9.9 | 27.0 | 5.5 | 0.2 | 3.0 | 76 | 4373 |
| C9Q20KV103240BK | 3 | 240 | 18.0 | 35 | 6.9 | 29.2 | 5.5 | 0.3 | 3.1 | 82 | 4868 |
| C9Q20KV103240BK | 3 | 240 | 18.0 | 70 | 9.9 | 29.2 | 5.5 | 0.3 | 3.1 | 82 | 5173 |
| C9Q20KV103300BK | 3 | 300 | 19.8 | 35 | 6.9 | 31.0 | 5.5 | 0.3 | 3.2 | 86 | 5603 |
| C9Q20KV103300BK | 3 | 300 | 19.8 | 70 | 9.9 | 31.0 | 5.5 | 0.3 | 3.2 | 86 | 5893 |

MECHANICAL CHARACTERISTICS 12/20 (24)KV

| NOMINAL CROSS SECTIONAL AREA mm ² | MAX. PULLING FORCE BY PULLING-EYE kN | MAX. PULLING FORCE BY PULLING-STOCKING kN | MINIMUM BENDING RADIUS m | |
|---|---|--|--|--|
| | | | During handling and installation. phase conductor | In final installation. phase conductor |
| 50+35 | 7.5 | 2.3 | 0.44 | 0.3 |
| 70+35 | 10.5 | 3.2 | 0.45 | 0.32 |
| 95+25 | 14.3 | 4.3 | 0.48 | 0.34 |
| 95+35 | 14.3 | 4.3 | 0.48 | 0.34 |
| 120+35 | 18.0 | 5.4 | 0.5 | 0.35 |
| 150+35 | 20.0 | 6.8 | 0.53 | 0.37 |
| 185+35 | 20.0 | 8.3 | 0.56 | 0.39 |
| 185+50 | 20.0 | 8.3 | 0.56 | 0.39 |
| 185+70 | 20.0 | 8.3 | 0.56 | 0.39 |
| 240+35 | 20.0 | 8.5 | 0.59 | 0.41 |
| 240+70 | 20.0 | 8.5 | 0.59 | 0.41 |
| 300+35 | 20.0 | 8.5 | 0.62 | 0.43 |
| 300+70 | 20.0 | 8.5 | 0.62 | 0.43 |



ELECTRICAL CHARACTERISTICS 12/20 (24)KV

| NOMINAL CROSS SECTIONAL AREA mm ² | MAX. DC RESISTANCE OF CONDUCTOR AT 20°C Ω/km | NOMINAL DC RESISTANCE OF ALUMINIUM LAMINATED FOIL AT 20°C Ω/km | INDUCTANCE PER PHASE. IN TREFOIL FORMATION. CABLES TOUCHING EACH OTHER mH/km |
|---|--|--|---|
| 50+35 | 0.641 | 2.0 | 0.44 |
| 70+35 | 0.443 | 1.9 | 0.41 |
| 95+25 | 0.320 | 1.8 | 0.39 |
| 95+35 | 0.320 | 1.8 | 0.39 |
| 120+35 | 0.253 | 1.7 | 0.37 |
| 150+35 | 0.206 | 1.6 | 0.36 |
| 185+35 | 0.164 | 1.5 | 0.35 |
| 185+50 | 0.164 | 1.5 | 0.35 |
| 185+70 | 0.164 | 1.5 | 0.35 |
| 240+35 | 0.125 | 0.9 | 0.34 |
| 240+70 | 0.125 | 0.9 | 0.34 |
| 300+35 | 0.100 | 0.9 | 0.33 |
| 300+70 | 0.100 | 0.9 | 0.33 |

CURRENT RATING 12/20 (24)KV

| NOMINAL CROSS SECTIONAL AREA mm ² | CABLES IN AIR (25 °C) A | | | | CABLES IN THE GROUND (15°C AND 1.0 K.M/W). INSTALLATION DEPTH 0.7M A | | | | MAXIMUM THERMAL SHORT CIRCUIT CURRENT DURING 1S kA | | | |
|--|--|--------------------|---|--------------------|--|--------------------|---|--------------------|--|------------------------------|------------------------------|------------------------------|
| | In flat formation. conductor temperature 90°C | | In trefoil 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 | | Initial 35°C. final 250°C | Initial 60°C. final 250°C | Initial 85°C. final 250°C |
| 50+35 | 210 | 205 | 195 | 195 | 155 | 155 | 185 | 185 | 4.7 | 2.9 | 2.7 | 2.4 |
| 70+35 | 265 | 255 | 235 | 235 | 205 | 200 | 240 | 235 | 6.6 | 3.0 | 2.8 | 2.5 |
| 95+25 | 320 | 310 | 285 | 280 | 240 | 235 | 280 | 275 | 8.9 | 3.2 | 2.9 | 2.7 |
| 95+35 | 320 | 310 | 285 | 280 | 240 | 235 | 280 | 275 | 8.9 | 3.2 | 2.9 | 2.7 |
| 120+35 | 370 | 350 | 330 | 325 | 270 | 265 | 320 | 310 | 11.3 | 3.4 | 3.1 | 2.9 |
| 150+35 | 425 | 395 | 380 | 370 | 305 | 300 | 360 | 355 | 14.1 | 3.6 | 3.3 | 3.0 |
| 185+35 | 485 | 440 | 430 | 425 | 345 | 330 | 405 | 390 | 17.4 | 3.8 | 3.5 | 3.2 |
| 185+50 | 485 | 440 | 430 | 425 | 345 | 330 | 405 | 390 | 17.4 | 3.8 | 3.5 | 3.2 |
| 185+70 | 485 | 440 | 430 | 425 | 345 | 330 | 405 | 390 | 17.4 | 3.8 | 3.5 | 3.2 |
| 240+35 | 570 | 515 | 505 | 490 | 395 | 385 | 465 | 455 | 22.6 | 5.3 | 4.9 | 4.4 |
| 240+70 | 570 | 515 | 505 | 490 | 395 | 385 | 465 | 455 | 22.6 | 5.3 | 4.9 | 4.4 |
| 300+35 | 650 | 580 | 580 | 565 | 445 | 435 | 525 | 510 | 28.3 | 5.7 | 5.3 | 4.8 |
| 300+70 | 650 | 580 | 580 | 565 | 445 | 435 | 525 | 510 | 28.3 | 5.7 | 5.3 | 4.8 |



DIMENSIONS 19/33 (36)KV

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA mm ² | NOMINAL CONDUCTOR DIAMETER mm | NOMINAL EARTH CONDUCTOR AREA SIZE mm ² | NOMINAL EARTH CONDUCTOR DIAMETER mm | NOMINAL DIAMETER OVER INSULATION WITHOUT SCREEN mm | NOMINAL INSULATION THICKNESS mm | NOMINAL THICKNESS OF ALUMINIUM LAMINATED FOIL mm | NOMINAL OUTER SHEATH THICKNESS mm | NOMINAL OUTER DIAMETER OF COMPLETE CABLE mm | NOMINAL WEIGHT kg/km |
|-----------------|--------------|--|-------------------------------|---|-------------------------------------|--|---------------------------------|--|-----------------------------------|---|----------------------|
| C9Q30KV103095BK | 3 | 95 | 11.0 | 35 | 7 | 26.7 | 8.0 | 0.3 | 3.0 | 76 | 3634 |
| C9Q30KV103120BK | 3 | 120 | 12.6 | 35 | 7 | 28.2 | 8.0 | 0.3 | 3.0 | 79 | 4034 |
| C9Q30KV103150BK | 3 | 150 | 13.9 | 35 | 7 | 29.5 | 8.0 | 0.3 | 3.1 | 82 | 4410 |
| C9Q30KV103150BK | 3 | 150 | 13.9 | 70 | 10 | 29.5 | 8.0 | 0.3 | 3.1 | 85 | 4883 |
| C9Q30KV103185BK | 3 | 185 | 15.6 | 35 | 7 | 31.2 | 8.0 | 0.3 | 3.1 | 86 | 4927 |
| C9Q30KV103185BK | 3 | 185 | 15.6 | 70 | 10 | 31.2 | 8.0 | 0.3 | 3.1 | 86 | 5217 |
| C9Q30KV103240BK | 3 | 240 | 18.0 | 35 | 7 | 33.6 | 8.0 | 0.3 | 3.2 | 92 | 5693 |
| C9Q30KV103240BK | 3 | 240 | 18.0 | 70 | 10 | 33.6 | 8.0 | 0.3 | 3.2 | 92 | 5983 |
| C9Q30KV103300BK | 3 | 300 | 19.8 | 35 | 7 | 35.4 | 8.0 | 0.3 | 3.3 | 96 | 6468 |
| C9Q30KV103300BK | 3 | 300 | 19.8 | 70 | 10 | 35.4 | 8.0 | 0.3 | 3.3 | 96 | 6758 |

MECHANICAL CHARACTERISTICS 19/33 (36)KV

| NOMINAL CROSS SECTIONAL AREA mm ² | MAX. PULLING FORCE BY PULLING-EYE kN | MAX. PULLING FORCE BY PULLING-STOCKING kN | MINIMUM BENDING RADIUS m | | | |
|--|--------------------------------------|---|---|---|--|------------------------------|
| | | | During handling and installation, phase conductor | During handling and installation, cable | In final installation, phase conductor | In final installation, cable |
| 95+35 | 14.3 | 4.3 | 0.53 | 0.91 | 0.37 | 0.64 |
| 120+35 | 18.0 | 5.4 | 0.55 | 0.95 | 0.39 | 0.66 |
| 150+35 | 20.0 | 6.8 | 0.57 | 0.98 | 0.40 | 0.69 |
| 150+70 | 20.0 | 6.8 | 0.57 | 1.02 | 0.40 | 0.71 |
| 185+35 | 20.0 | 8.3 | 0.60 | 1.03 | 0.42 | 0.72 |
| 185+70 | 20.0 | 8.3 | 0.60 | 1.03 | 0.42 | 0.72 |
| 240+35 | 20.0 | 8.5 | 0.64 | 1.10 | 0.45 | 0.77 |
| 240+70 | 20.0 | 8.5 | 0.64 | 1.10 | 0.45 | 0.77 |
| 300+35 | 20.0 | 8.5 | 0.67 | 1.15 | 0.47 | 0.81 |
| 300+70 | 20.0 | 8.5 | 0.67 | 1.15 | 0.47 | 0.81 |

ELECTRICAL CHARACTERISTICS 19/33 (36)KV

| NOMINAL CROSS SECTIONAL AREA mm ² | MAX. DC RESISTANCE OF CONDUCTOR AT 20°C Ω/km | NOMINAL DC RESISTANCE OF ALUMINIUM LAMINATED FOIL AT 20°C Ω/km | AC RESISTANCE OF PHASE CONDUCTOR, SCREEN CIRCUIT CLOSED | | | INDUCTANCE PER PHASE, IN TREFOIL FORMATION. CABLES TOUCHING EACH OTHER mH/km | CALCULATED OPERATION CAPACITANCE μF/km | CALCULATED CHARGING CURRENT WITH MAIN VOLTAGE A/km | CALCULATED EARTH FAULT CURRENT WITH MAIN VOLTAGE A/km |
|--|--|--|---|----------------------------|----------------------------|--|--|--|---|
| | | | Conductor temperature 40°C | Conductor temperature 65°C | Conductor temperature 90°C | | | | |
| 95+35 | 0.320 | 1.02 | 0.35 | 0.38 | 0.41 | 0.42 | 0.16 | 0.9 | 2.8 |
| 120+35 | 0.253 | 0.97 | 0.27 | 0.30 | 0.32 | 0.40 | 0.17 | 1.0 | 3.1 |
| 150+35 | 0.206 | 0.93 | 0.22 | 0.24 | 0.26 | 0.39 | 0.18 | 1.1 | 3.3 |
| 150+70 | 0.206 | 0.93 | 0.22 | 0.24 | 0.26 | 0.39 | 0.18 | 1.1 | 3.3 |
| 185+35 | 0.164 | 0.89 | 0.18 | 0.19 | 0.21 | 0.37 | 0.20 | 1.2 | 3.6 |
| 185+70 | 0.164 | 0.89 | 0.18 | 0.19 | 0.21 | 0.37 | 0.20 | 1.2 | 3.6 |
| 240+35 | 0.125 | 0.81 | 0.14 | 0.15 | 0.16 | 0.36 | 0.22 | 1.3 | 4.0 |
| 240+70 | 0.125 | 0.81 | 0.14 | 0.15 | 0.16 | 0.36 | 0.22 | 1.3 | 4.0 |
| 300+35 | 0.100 | 0.78 | 0.11 | 0.12 | 0.13 | 0.35 | 0.24 | 1.4 | 4.2 |
| 300+70 | 0.100 | 0.78 | 0.11 | 0.12 | 0.13 | 0.35 | 0.24 | 1.4 | 4.2 |



CURRENT RATING 19/33 (36)kV

| NOMINAL CROSS SECTIONAL AREA mm ² | CABLES IN AIR (25 °C) A | | | | CABLES IN THE GROUND (15°C AND 1.0 K.M/W). INSTALLATION DEPTH 0.7M A | | | | MAXIMUM THERMAL SHORT CIRCUIT CURRENT DURING 1S kA | | | |
|---|--|--------------------|---|--------------------|--|--------------------|---|--------------------|--|------------------------------|------------------------------|------------------------------|
| | In flat formation. conductor temperature 90°C | | In trefoil 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 | | Initial 35°C. final 250°C | Initial 60°C. final 250°C | Initial 85°C. final 250°C |
| 95+35 | 320 | 310 | 285 | 280 | 240 | 235 | 280 | 275 | 8.9 | 4.8 | 4.4 | 4.0 |
| 120+35 | 370 | 350 | 330 | 325 | 270 | 265 | 320 | 310 | 11.3 | 5.0 | 4.6 | 4.2 |
| 150+35 | 425 | 395 | 380 | 370 | 305 | 300 | 360 | 355 | 14.1 | 5.2 | 4.8 | 4.4 |
| 150+70 | 425 | 395 | 380 | 370 | 305 | 300 | 360 | 355 | 14.1 | 5.2 | 4.8 | 4.4 |
| 185+35 | 485 | 440 | 430 | 425 | 345 | 330 | 405 | 390 | 17.4 | 5.5 | 5.0 | 4.6 |
| 185+70 | 485 | 440 | 430 | 425 | 345 | 330 | 405 | 390 | 17.4 | 5.5 | 5.0 | 4.6 |
| 240+35 | 570 | 515 | 505 | 490 | 395 | 385 | 465 | 455 | 22.6 | 6.0 | 5.5 | 5.0 |
| 240+70 | 570 | 515 | 505 | 490 | 395 | 385 | 465 | 455 | 22.6 | 6.0 | 5.5 | 5.0 |
| 300+35 | 650 | 580 | 580 | 565 | 445 | 435 | 525 | 510 | 28.3 | 6.2 | 5.7 | 5.2 |
| 300+70 | 650 | 580 | 580 | 565 | 445 | 435 | 525 | 510 | 28.3 | 6.2 | 5.7 | 5.2 |

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.