



RZ1-K XLPE LSZH Flexible Cable



Eland Product Group: A9R

APPLICATION

For installation where fire, smoke emission and toxic fumes create a potential threat to life and equipment. A flexible power and control cable designed for fixed applications. Manufactured with flexible conductors in order to facilitate installations with sinuous courses.

CHARACTERISTICS

Voltage Rating Uo/U
0.6/1kV

Temperature Rating
-15°C to +90°C

Minimum Bending Radius
5 x overall diameter

CONSTRUCTION

Conductor
Class 5 flexible copper conductor

Insulation
XLPE (Cross-Linked Polyethylene)

Sheath
LSZH (Low Smoke Zero Halogen)

Core Identification
3 core: ● Green/Yellow ● Blue ● Brown
4 core: ● Green/Yellow ● Brown ● Black ● Grey
5 core: ● Green/Yellow ● Blue ● Brown ● Black ● Grey
7 core: ● Black with ○ White numbers

Sheath Colour
● Green
● Black available on request

STANDARDS

IEC 60502-1, EN 60228

Flame Retardant according to IEC/EN 60332-1-2,
IEC/EN 60332-3-24
Low Smoke Zero Halogen according to IEC/EN
60754-1/2, IEC/EN 61034-1/2

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.



REGULATORY COMPLIANCE

This cable is compliant with European Regulation EN 50575, the Construction Products Regulation.



This cable meets the requirements of the Low Voltage Directive 2014/35/EU and 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™.





DIMENSIONS

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA mm ² | NOMINAL THICKNESS OF INSULATION mm | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km |
|----------------|--------------|---|---------------------------------------|--------------------------------|-------------------------|
| A9R01025LS | 1 | 2.5 | 0.7 | 5.2 | 45 |
| A9R01040LS | 1 | 4 | 0.7 | 5.8 | 61 |
| A9R01060LS | 1 | 6 | 0.7 | 6.35 | 80 |
| A9R0110LS | 1 | 10 | 0.7 | 7.25 | 120 |
| A9R0116LS | 1 | 16 | 0.7 | 8.3 | 174 |
| A9R0125LS | 1 | 25 | 0.9 | 9.95 | 258 |
| A9R0135LS | 1 | 35 | 0.9 | 11.15 | 349 |
| A9R0150LS | 1 | 50 | 1 | 12.75 | 484 |
| A9R0170LS | 1 | 70 | 1.1 | 14.8 | 676 |
| A9R0195LS | 1 | 95 | 1.1 | 16.9 | 885 |
| A9R01120LS | 1 | 120 | 1.2 | 18.9 | 1124 |
| A9R01150LS | 1 | 150 | 1.4 | 20.95 | 1393 |
| A9R01185LS | 1 | 185 | 1.6 | 23.9 | 1655 |
| A9R01240LS | 1 | 240 | 1.7 | 26.2 | 2214 |
| A9R01300LS | 1 | 300 | 1.8 | 28.3 | 2697 |
| A9R01400LS | 1 | 400 | 2 | 31.4 | 3389 |
| A9R01500LS | 1 | 500 | 2.2 | 37.4 | 4776 |
| A9R01630LS | 1 | 630 | 2.4 | 42.7 | 6276 |
| A9R02015LS | 2 | 1.5 | 0.7 | 8.2 | 94 |
| A9R02025LS | 2 | 2.5 | 0.7 | 9.2 | 122 |
| A9R02040LS | 2 | 4 | 0.7 | 10.3 | 165 |
| A9R02060LS | 2 | 6 | 0.7 | 11.3 | 216 |
| A9R0210LS | 2 | 10 | 0.7 | 13.2 | 319 |
| A9R0216LS | 2 | 16 | 0.7 | 16.4 | 503 |
| A9R03015LS | 3+E | 1.5 | 0.7 | 8.6 | 108 |
| A9R03025LS | 3+E | 2.5 | 0.7 | 9.5 | 144 |
| A9R03040LS | 3+E | 4 | 0.7 | 10.7 | 198 |
| A9R03060LS | 3+E | 6 | 0.7 | 12 | 263 |
| A9R0310LS | 3+E | 10 | 0.7 | 13.8 | 405 |
| A9R0316LS | 3 | 16 | 0.7 | 17.3 | 638 |
| A9R0325LS | 3 | 25 | 0.9 | 20.9 | 938 |
| A9R0335LS | 3 | 35 | 0.9 | 23.5 | 1255 |
| A9R0350LS | 3 | 50 | 1 | 31.5 | 1730 |
| A9R0370LS | 3 | 70 | 1.1 | 35.7 | 2422 |
| A9R04015LS | 4+E | 1.5 | 0.7 | 9.3 | 129 |
| A9R04025LS | 4+E | 2.5 | 0.7 | 10.3 | 175 |
| A9R04040LS | 4+E | 4 | 0.7 | 11.7 | 243 |
| A9R04060LS | 4+E | 6 | 0.7 | 13 | 328 |
| A9R0410LS | 4+E | 10 | 0.7 | 15.2 | 498 |
| A9R0416LS | 4 | 16 | 0.7 | 19.7 | 783 |
| A9R0425LS | 4 | 25 | 0.9 | 23.2 | 1168 |



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|----------------|--------------|---|---------------------------------------|--------------------------------|-------------------------|
| A9R0435LS | 4 | 35 | 0.9 | 26.2 | 1573 |
| A9R0450LS | 4 | 50 | 1 | 31.2 | 2178 |
| A9R0470LS | 4 | 70 | 1.1 | 34.8 | 3055 |
| A9R0495LS | 4 | 95 | 1.1 | 39.7 | 3985 |
| A9R04120LS | 4 | 120 | 1.2 | 44.6 | 5086 |
| A9R04150LS | 4 | 150 | 1.4 | 49.8 | 6294 |
| A9R04185LS | 4 | 185 | 1.6 | 54.9 | 7534 |
| A9R04240LS | 4 | 240 | 1.7 | 62.3 | 10034 |
| A9R05015LS | 5 | 1.5 | 0.7 | 12.0 | 150 |
| A9R05025LS | 5 | 2.5 | 0.7 | 13.15 | 204 |
| A9R05040LS | 5 | 4 | 0.7 | 14.5 | 286 |
| A9R05060LS | 5 | 6 | 0.7 | 16.1 | 387 |
| A9R0510LS | 5 | 10 | 0.7 | 18.1 | 598 |
| A9R0516LS | 5 | 16 | 0.7 | 21.3 | 931 |
| A9R0525LS | 5 | 25 | 0.9 | 25.4 | 1407 |
| A9R0535LS | 5 | 35 | 0.9 | 28.4 | 1091 |
| A9R0550LS | 5 | 50 | 1 | 34.3 | 2654 |

CONDUCTORS

Class 5 Flexible Copper Conductors for Single Core and Multi-Core Cables

| NOMINAL CROSS SECTIONAL AREA mm ² | MAXIMUM DIAMETER OF WIRES IN CONDUCTOR mm | MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km |
|---|--|--|
| | | Plain Wires |
| 2.5 | 0.26 | 7.98 |
| 4 | 0.31 | 4.95 |
| 6 | 0.31 | 3.3 |
| 10 | 0.41 | 1.91 |
| 16 | 0.41 | 1.21 |
| 25 | 0.41 | 0.78 |
| 35 | 0.41 | 0.554 |
| 50 | 0.41 | 0.386 |
| 70 | 0.51 | 0.272 |
| 95 | 0.51 | 0.206 |
| 120 | 0.51 | 0.161 |
| 150 | 0.51 | 0.129 |
| 185 | 0.51 | 0.1 |
| 240 | 0.51 | 0.0801 |
| 300 | 0.51 | 0.0641 |
| 400 | 0.51 | 0.0486 |
| 500 | 0.61 | 0.0384 |
| 630 | 0.61 | 0.0287 |

The above table is in accordance with EN 60028



ELECTRICAL CHARACTERISTICS

| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA mm ² | CURRENT CARRYING CAPACITY Amps | | NOMINAL WEIGHT kg/km |
|---|---|-----------------------------------|------------------|-------------------------|
| | | In Air at 40°C | In Earth at 35°C | |
| RZ1-K LSZH Cable - 1 Core | | | | |
| 1 | 2.5 | 29 | 36 | 17.624 |
| 1 | 4 | 38 | 46 | 10.932 |
| 1 | 6 | 49 | 58 | 7.288 |
| 1 | 10 | 68 | 77 | 4.218 |
| 1 | 16 | 91 | 100 | 2.672 |
| 1 | 25 | 116 | 128 | 1.723 |
| 1 | 35 | 144 | 154 | 1.224 |
| 1 | 50 | 175 | 183 | 0.852 |
| 1 | 70 | 224 | 224 | 0.601 |
| 1 | 95 | 271 | 256 | 0.455 |
| 1 | 120 | 314 | 302 | 0.356 |
| 1 | 150 | 363 | 342 | 0.285 |
| 1 | 185 | 415 | 383 | 0.234 |
| 1 | 240 | 490 | 442 | 0.177 |
| 1 | 300 | 563 | 500 | 0.142 |
| 1 | 400 | 823 | 464 | 0.108 |
| 1 | 500 | 946 | 525 | 0.085 |
| 1 | 630 | 1088 | 596 | 0.064 |
| RZ1-K LSZH Cable - 2 Core | | | | |
| 2 | 1.5 | 24 | 27 | 29.374 |
| 2 | 2.5 | 33 | 36 | 17.624 |
| 2 | 4 | 45 | 46 | 10.932 |
| 2 | 6 | 57 | 58 | 7.288 |
| 2 | 10 | 79 | 77 | 4.218 |
| 2 | 16 | 105 | 100 | 2.672 |
| RZ1-K LSZH Cable - 3 Core Including Earth | | | | |
| 3 | 2.5 | 33 | 36 | 17.624 |
| 3 | 4 | 45 | 46 | 10.932 |
| 3 | 6 | 57 | 58 | 7.288 |
| 3 | 10 | 79 | 77 | 4.218 |
| 3 | 16 | 105 | 100 | 2.622 |
| RZ1-K LSZH Cable - 3 Core | | | | |
| 3 | 16 | 87 | 82 | 2.672 |
| 3 | 25 | 110 | 106 | 1.723 |
| 3 | 35 | 137 | 129 | 1.224 |
| 3 | 50 | 167 | 152 | 0.852 |
| 3 | 70 | 246 | 178 | 0.603 |
| RZ1-K LSZH Cable - 4 Core Including Earth | | | | |
| 4 | 1.5 | 20 | 23 | 29.374 |
| 4 | 2.5 | 26 | 30 | 17.624 |
| 4 | 4 | 36 | 38 | 10.932 |
| 4 | 6 | 46 | 48 | 7.288 |
| 4 | 10 | 65 | 64 | 4.218 |
| RZ1-K LSZH Cable - 4 Core | | | | |
| 4 | 16 | 87 | 82 | 2.672 |
| 4 | 25 | 110 | 106 | 1.723 |



| NO. OF CORES | NOMINAL CROSS SECTIONAL AREA mm ² | CURRENT CARRYING CAPACITY Amps | | NOMINAL WEIGHT kg/km |
|---|---|-----------------------------------|------------------|-------------------------|
| | | In Air at 40°C | In Earth at 35°C | |
| RZ1-K LSZH Cable - 4 Core | | | | |
| 4 | 35 | 137 | 129 | 1.224 |
| 4 | 50 | 167 | 152 | 0.852 |
| 4 | 70 | 246 | 178 | 0.603 |
| 4 | 95 | 298 | 211 | 0.457 |
| 4 | 120 | 346 | 240 | 0.357 |
| 4 | 150 | 399 | 271 | 0.286 |
| 4 | 185 | 456 | 304 | 0.235 |
| 4 | 240 | 538 | 351 | 0.178 |
| RZ1-K LSZH Cable - 5 Core Including Earth | | | | |
| 5 | 1.5 | 20 | 23 | 29.374 |
| 5 | 2.5 | 26 | 30 | 17.624 |
| 5 | 4 | 36 | 38 | 10.932 |
| 5 | 6 | 46 | 48 | 7.288 |
| 5 | 10 | 65 | 64 | 4.218 |
| 5 | 16 | 87 | 82 | 2.672 |
| 5 | 25 | 110 | 106 | 1.723 |
| 5 | 35 | 137 | 129 | 1.224 |
| 5 | 50 | 167 | 152 | 0.852 |

SHORT CIRCUIT CURRENT CARRYING CAPACITIES

The maximum short-circuit current that a cable can withstand depends on the time of reaction of the protection elements installed in the line. The maximum current-carrying capacity in a short-circuit accident, for a specific type of cable, is the result of multiplying the cross-section of the cable for the values shown in the table below.

| TIME s | 0.1 | 0.2 | 0.3 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 |
|----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Amps/mm ² | 452 | 320 | 261 | 202 | 143 | 117 | 101 | 90 | 83 |

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.