

RZ1-K BS EN 50267 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.

CONSTRUCTION

Conductor

Class 5 flexible copper conductor

Insulation

XLPE (Cross-Linked Polyethylene) Type DIX-3

Sheath

LSZH (Low Smoke Zero Halogen) Polyolefin

CABLE STANDARDS

BS EN 50267, BS EN/IEC 60332-1, BS EN 61034, BS EN 60228, HD604



The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

CHARACTERISTICS

Voltage Rating (U_o/U)

600/1000V

Temperature Rating

-15°C to +90°C

Minimum Bending Radius

5 x overall diameter

Core Identification

1 core: ● Black

2 core: ● Blue ● Brown

3 core including earth: ● Blue ● Brown ● Green/Yellow

3 core: ● Brown ● Black ● Grey

4 core including earth: ● Brown ● Black ● Grey

● Green/Yellow

4 core: ● Brown ● Black ● Grey ● Blue

5 core including earth: ● Brown ● Black ● Grey

● Green/Yellow ● Blue

Sheath Colour

● Green

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
RZ1-K LSZH Cable - 1 Core					
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
RZ1-K LSZH Cable - 2 Core					
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
RZ1-K LSZH Cable - 3 Core Including Earth					
A9R03015LS	3	1.5	0.7	8.6	108
A9R03025LS	3	2.5	0.7	9.5	144
A9R03040LS	3	4	0.7	10.7	198
A9R03060LS	3	6	0.7	12	263
A9R0310LS	3	10	0.7	13.8	405
RZ1-K LSZH Cable - 3 Core					
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
RZ1-K LSZH Cable - 4 Core Including Earth					
A9R04015LS	4	1.5	0.7	9.3	129
A9R04025LS	4	2.5	0.7	10.3	175
A9R04040LS	4	4	0.7	11.7	243
A9R04060LS	4	6	0.7	13	328
A9R0410LS	4	10	0.7	15.2	498

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
RZ1-K LSZH Cable - 4 Core					
A9R0416LS	4	16	0.7	18.9	783
A9R0425LS	4	25	0.9	22.9	1168
A9R0435LS	4	35	0.9	25.8	1573
A9R0450LS	4	50	1	29.6	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
RZ1-K LSZH Cable - 5 Core Including Earth					
A9R05015LS	5	1.5	0.7	10.4	150
A9R05025LS	5	2.5	0.7	11.2	204
A9R05040LS	5	4	0.7	12.7	286
A9R05060LS	5	6	0.7	14.2	387
A9R0510LS	5	10	0.7	16.6	598
A9R0516LS	5	16	0.7	20.7	931
A9R0525LS	5	25	0.9	25.6	1407
A9R0535LS	5	35	0.9	28.4	1091
A9R0550LS	5	50	1	32.9	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
		Plain Wires ohms/km
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 BS EN 60228 (previously BS 6360)

ELECTRICAL CHARACTERISTICS

Current Carrying Capacity and Voltage Drop

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	CURRENT CARRYING CAPACITY		VOLTAGE DROP V/A/km
		In Air at 40°C Amps	In Earth at 35°C Amps	
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

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	CURRENT CARRYING CAPACITY		VOLTAGE DROP V/A/km
		In Air Amps	In Earth Amps	
RZ1-K LSZH Cable - 4 Core				
4	16	87	82	2.672
4	25	110	106	1.723
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