

RV-K Powerflex Cable

Eland Product Group **A9R**



Application

A flexible power and control cable designed for fixed applications. Manufactured with flexible conductors in order to facilitate installations with sinuous courses.

Standards

UNE 21123-2, UNE 60502-1, EN 50265, IEC 60332-1

Technical Data

Conductor

Class 5 flexible plain copper conductors to BS EN 60228:2005 (previously BS6360)

Insulation

XLPE (Cross-Linked Polyethylene) Type DIX-3 to HD603

Sheath

PVC (Polyvinyl Chloride) Type DMV-18 to HD603

Sheath Colour

Black

Voltage Rating

600/1000V

Temperature Rating

-15°C to +90°C

Minimum Bending Radius

5 x overall diameter

Core Identification

- 1 Core: Black
- 2 Cores: Blue, Brown
- 3 Cores including Earth Core: Blue, Brown, Green/Yellow
- 3 Cores: Brown, Black, Grey
- 4 Cores including Earth Core: Brown, Black, Grey, Green/Yellow
- 4 Cores: Brown, Black, Grey, Blue
- 5 Cores including Earth Core: Brown, Black, Grey, Green/Yellow, Blue

Dimensions

Eland Part Number	No. of Cores x Nominal Cross Sectional Area # x mm ²	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight kg/Km
RV-K Powerflex Cable - 1 Core				
A9R01025	1 x 2.5	0.7	6.2	54
A9R01040	1 x 4.0	0.7	6.7	70
A9R01060	1 x 6.0	0.7	7.3	90
A9R0110	1 x 10.0	0.7	8.2	133
A9R0116	1 x 16.0	0.7	9.2	189
A9R0125	1 x 25.0	0.9	11.0	284
A9R0135	1 x 35.0	0.9	12.1	381
A9R0150	1 x 50.0	1.0	13.8	517
A9R0170	1 x 70.0	1.1	15.7	712
A9R0195	1 x 95.0	1.1	17.6	923
A9R01120	1 x 120.0	1.2	19.2	1165
A9R01150	1 x 150.0	1.4	21.5	1446
A9R01185	1 x 185.0	1.6	23.9	1748
A9R01240	1 x 240.0	1.7	26.9	2280
A9R01300	1 x 300.0	1.8	29.6	2829
A9R01400	1 x 400.0	2.0	33.8	3731
A9R01500	1 x 500.0	2.2	37.4	4776
A9R01630	1 x 630.0	2.4	42.7	6276

Eland Part Number	No. of Cores x Nominal Cross Sectional Area # x mm ²	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight kg/Km
RV-K Powerflex Cable - 2 Cores				
A9R02015	2 x 1.5	0.7	8.2	90
A9R02025	2 x 2.5	0.7	9.2	120
A9R02040	2 x 4.0	0.7	10.3	161
A9R02060	2 x 6.0	0.7	11.3	211
A9R0210	2 x 10.0	0.7	13.2	316
A9R0216	2 x 16.0	0.7	14.9	450
RV-K Powerflex Cable - 3 Cores including Earth Core				
A9R03015	3 x 1.5	0.7	8.9	108
A9R03025	3 x 2.5	0.7	9.8	144
A9R03040	3 x 4.0	0.7	11.0	198
A9R03060	3 x 6.0	0.7	12.1	263
A9R0310	3 x 10.0	0.7	14.3	405
RV-K Powerflex Cable - 3 Cores				
A9R0316	3 x 16.0	0.7	16.4	593
A9R0325	3 x 25.0	0.9	21.3	975
A9R0335	3 x 35.0	0.9	24.1	1319
A9R0350	3 x 50.0	1.0	27.8	1812
A9R0370	3 x 70.0	1.1	30.8	2463
RV-K Powerflex Cable - 4 Cores including Earth Core				
A9R04015	4 x 1.5	0.7	9.7	129
A9R04025	4 x 2.5	0.7	10.7	175
A9R04040	4 x 4.0	0.7	12.0	243
A9R04060	4 x 6.0	0.7	13.4	328
A9R0410	4 x 10.0	0.7	15.7	505
RV-K Powerflex Cable - 4 Cores				
A9R0416	4 x 16.0	0.7	18.2	749
A9R0425	4 x 25.0	0.9	24.1	1245
A9R0435	4 x 35.0	0.9	26.3	1671
A9R0450	4 x 50.0	1.0	31.3	2313
A9R0470	4 x 70.0	1.1	36.1	3204
A9R0495	4 x 95.0	1.1	40.2	4126
A9R04120	4 x 120.0	1.2	44.6	5245
A9R04150	4 x 150.0	1.4	49.8	6573
A9R04185	4 x 185.0	1.6	56.1	8050
A9R04240	4 x 240.0	1.7	64.5	10695
RV-K Powerflex Cable - 5 Cores including Earth Core				
A9R05015	5 x 1.5	0.7	10.4	153
A9R05025	5 x 2.5	0.7	11.6	213
A9R05040	5 x 4.0	0.7	13.2	298
A9R05060	5 x 6.0	0.7	14.7	403
A9R0510	5 x 10.0	0.7	17.2	624
A9R0516	5 x 16.0	0.7	20.2	931
A9R0525	5 x 25.0	0.9	25.6	1555
A9R0535	5 x 35.0	0.9	29.3	2076
A9R0550	5 x 50.0	1.0	34.5	2878

Conductors

Class 5 flexible Copper Conductors for Single Core and Multi-Core cables

1 Nominal Cross Sectional Area mm ²	2 Maximum Diameter of Wires in Conductor mm	3 Maximum Resistance of Conductor at 20°C
		Plain Wires ohms/Km
2.50	0.26	7.9800
4.00	0.31	4.9500
6.00	0.31	3.3000
10.00	0.41	1.9100
16.00	0.41	1.2100
25.00	0.41	0.7800
35.00	0.41	0.5540
50.00	0.41	0.3860
70.00	0.51	0.2720
95.00	0.51	0.2060
120.00	0.51	0.1610
150.00	0.51	0.1290
185.00	0.51	0.1060
240.00	0.51	0.0801
300.00	0.51	0.0641
400.00	0.51	0.0486
500.00	0.61	0.0384
630.00	0.61	0.0287

Table in accordance with BS EN 60228:2005 (previously BS6360)

Electrical Characteristics

Current Carrying Capacity (amperes) and Resistance Values (ohms per kilometre)

No. of Cores x Nominal Cross Section Area # x mm ²	Current Carrying Capacity		Voltage Drop V/A/Km
	In Air Amps	In Earth Amps	
RV-K Powerflex Cable - 1 Core			
1 x 2.5	29	29	17.700
1 x 4.0	40	37	11.000
1 x 6.0	53	46	7.320
1 x 10.0	74	61	4.230
1 x 16.0	101	79	2.680
1 x 25.0	135	101	1.730
1 x 35.0	169	122	1.230
1 x 50.0	207	144	0.860
1 x 70.0	268	178	0.603
1 x 95.0	328	211	0.457
1 x 120.0	383	240	0.357
1 x 150.0	444	271	0.286
1 x 185.0	510	304	0.235
1 x 240.0	607	351	0.178
1 x 300.0	703	396	0.142
1 x 400.0	823	464	0.108
1 x 500.0	946	525	0.085
1 x 630.0	1088	596	0.064
RV-K Powerflex Cable - 2 Cores			
2 x 1.5	26	26	34.000
2 x 2.5	36	34	20.400
2 x 4.0	49	44	12.700
2 x 6.0	63	56	8.450
2 x 10.0	86	73	4.890
2 x 16.0	115	95	3.100

RV-K Powerflex Cable - 3 Cores including Earth Core

3 x 1.5	26	26	34.000
3 x 2.5	36	34	20.400
3 x 4.0	49	44	12.700
3 x 6.0	63	56	8.450
3 x 10.0	86	73	4.890

RV-K Powerflex Cable - 3 Cores

3 x 16.0	100	79	2.680
3 x 25.0	127	101	1.730
3 x 35.0	158	122	1.230
3 x 50.0	192	144	0.860
3 x 70.0	246	178	0.603

RV-K Powerflex Cable - 4 Cores including Earth Core

4 x 1.5	23	22	29.500
4 x 2.5	32	29	17.700
4 x 4.0	42	37	11.000
4 x 6.0	54	46	7.320
4 x 10.0	75	61	4.230

RV-K Powerflex Cable - 4 Cores

4 x 16.0	100	79	2.680
4 x 25.0	127	101	1.730
4 x 35.0	158	122	1.230
4 x 50.0	192	144	0.860
4 x 70.0	246	178	0.603
4 x 95.0	298	211	0.457
4 x 120.0	346	240	0.357
4 x 150.0	399	271	0.286
4 x 185.0	456	304	0.235
4 x 240.0	538	351	0.178

RV-K Powerflex Cable - 5 Cores including Earth Core

5 x 1.5	23	22	29.500
5 x 2.5	32	29	17.700
5 x 4.0	42	37	11.000
5 x 6.0	54	46	7.320
5 x 10.0	75	61	4.230
5 x 16.0	100	79	2.680
5 x 25.0	127	101	1.730
5 x 35.0	158	122	1.230
5 x 50.0	192	144	0.860

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

These values are taken from IEC 949.

Correction Factors

For air temperature other than 30°C

Air Temperature	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
Factor	1.08	1.04	1.00	0.96	0.91	0.87	0.82	0.76	0.71

For ground temperature other than 20°C

Ground Temperature	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C
Factor	1.07	1.04	1.00	0.96	0.93	0.89	0.85	0.80	0.76

For soil thermal resistivity, which depends on damp other than 2.5°K • m/W

Moisture degree of soil	Very Damp	Slightly Damp	Slightly Dry	Dry	Very Dry
Thermal Resistivity (°K • m/W)	1.0	1.5	2.0	2.5	3.0
Factor	1.18	1.10	1.05	1.00	0.96

The information contained within this datasheet is for guidance only. When selecting accessories such as cleats, glands, etc please note that actual cable dimensions may vary due to manufacturing tolerances.