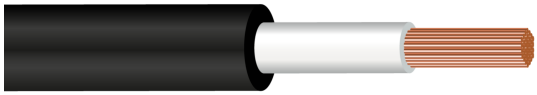
RV-K Single Core Copper XLPE PVC Cable 1.8/3kV 50mm² to 630mm²



Description

Single core RV-K 1.8/3kV cable is a low voltage class 5, flexible power distribution cable with a rating of 1.8/3kV. It is made in accordance with IEC 60502-1 with UV resistance to AENOR Spanish standard UNE 211605

The high flexibility of the RV-K Cable with its Class 5 Copper conductors makes cable it suitable for complex routes as are found in Datacentres and renewables installations. It can be buried or installed in conduit as well as outdoors without requiring additional protection as allowable by various local regulations.

The outer sheath of the RV-K cable is flame retardant PVC in accordance with UNE/EN/IEC 60332-1 and the XLPE insulation provides an operating temperature range of -40C to +90C. RV-K is compliant to CPR. The RV-K cable is rated AD8 for water resistance. The chemical additive to the PVC outer sheath offers protection against rodents.

Key Features

Voltage Rating
1.8/3 (3.6)kV

Minimum Bending Radius
Fixed: 8 x overall diameter

Flame Retardancy
BS EN/IEC 60332-1

Temperature Limits
Fixed: -40°C to +90°C
Flexing: -15°C up to +90°C
Minimum Installation: -10

Standards

- UNE 211605
- IEC 60332-1
- BS EN/IEC 60502-1
- BS EN/IEC 60228
- AD8 water resistance
- HD 603

Construction

- **Conductor**: Class 5 Flexible Copper Conductor
- **Insulation**: Cross Linked polyethylene (XLPE)
- **Outer Sheath**: Polyvinyl Chloride (PVC) Type ST2
- **Sheath Colour**: Black

Training & Testing Lab

AN ISO/IEC 17025 ACCREDITED FACILITY

Cleveland Cable Test & Training Lab
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing.

ISO/IEC 17025 Accredited Testing Laboratory
UKAS TESTING 31196

CPR
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

CLEVELAND CABLE COMPANY

ecovadis
Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

ecovadis

UKAS 31196 LPCB FORS CENELEC RoHS REACH

RV-K Single Core Copper XLPE PVC Cable 1.8/3kV 50mm² to 630mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Insulation Thickness (mm)	Sheath Thickness (mm)	Minimum Bending Radius	Overall Diameter(mm)	Weight(Kg/Km)
RVK3KVCL51X50	50	1	2.0	1.4	124	15.5	580
RVK3KVCL51X70	70	1	2.0	1.5	140	17.5	750
RVK3KVCL51X95	95	1	2.0	1.6	152	19.0	995
RVK3KVCL51X120	120	1	2.0	1.7	172	21.5	1220
RVK3KVCL51X150	150	1	2.0	1.7	180	22.5	1460
RVK3KVCL51X185	185	1	2.0	1.8	196	24.5	1770
RVK3KVCL51X240	240	1	2.0	1.9	216	27.0	2285
RVK3KVCL51X300	300	1	2.0	2.0	240	30.0	2815
RVK3KVCL51X400	400	1	2.1	2.1	280	35.0	3650
RVK3KVCL51X400	500	1	2.2	2.2	304	38.0	5100
RVK3KVCL51X630	630	1	2.4	2.4	348	43.5	6750

Multi core non-armoured 90 °C and 180°C thermosetting insulated flexible cables with sheath Reproduced from BS7671:2018 Wiring Regulations

TABLE 4F2A

CURRENT-CARRYING CAPACITY (Amps)

Ambient temperature: 30 °C
Conductor operating temperature: 90 °C

Conductor cross sectional area	Single-phase AC or DC	Three-phase AC	Single-phase AC or DC
	1 x 2 core cable, with or without protective conductor	1 x 3 core, 4 core or 5 core cable	2 single-core cables, touching
(mm^2)	(A)	(A)	(A)
4	42	37	-
6	55	49	-
10	76	66	-
16	103	89	-
25	136	119	-
35	-	146	200
50	-	177	250
70	-	225	310
95	-	273	369
120	-	316	432
150	-	363	497
185	-	414	564
240	-	487	673
300	-	560	773
400	-	-	924
500	-	-	1062
630	-	-	1242

NOTES:

1 The current ratings tabulated are for cables in free air but may also be used for cables resting on a surface. If the cable is to be wound on a drum on load the ratings should be reduced in accordance with ***NOTE 2*** below and for cables which may be covered, ***NOTE 3 below.***

2 **Flexible cables wound on reeling drums**
The current ratings of cables used on reeling drums are to be reduced by the following factors:

a) Radial type drum
ventilated: 85 %
unventilated: 75 %

b) Ventilated cylindrical type drum
I layer of cable: 85 %
2 layers of cable: 65 %
3 layers of cable: 45 %
4 layers of cable: 35 %

A radial type drum is one where spiral layers of cable are accommodated between closely spaced flanges; if fitted with solid flanges the ratings given above should be reduced and the drum is described as non-ventilated. If the flanges have suitable apertures the drum is described as ventilated.

A ventilated cylindrical cable drum is one where layers of cable are accommodated between widely spaced flanges and the drum and end flanges have suitable ventilating apertures.

3 Where cable may be covered over or coiled up whilst on load, or the air movement over the cable restricted, the current rating should be reduced.

It is not possible to specify the amount of reduction but the table of rating factors for reeling drums can be used as a guide.

4 For 180 °C cables, the rating factors for ambient temperature allow a conductor operating temperature up to 150 °C.
Consult the cable manufacturer for further information.

5 Where it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5).

6 Where it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 512.1.5).

TABLE 4F2B

VOLTAGE DROP (per ampere per metre):

Conductor operating temperature: 90 °C

Conductor cross-sectional area	Two-core cable or 2 x Single core cables DC	2 core cable, single-phase AC			1 x 3 core, 4 core or 5 core cable, three-phase AC			2 single-core cables, touching Single-phase AC*		
(mm^2)	(mV/Nm)	(mV/Nm)			(mV/Nm)			(mV/Nm)		
4	13.20	13.20			11.10			-		
6	8.50	8.50			7.40			-		
10	5.10	5.10			4.40			-		
16	3.20	3.20			2.70			-		
		r	x	z	r	x	z	r	x	z
25	2.03	2.03	0.175	2.04	1.73	0.150	1.73	-	-	-
35	1.420	-	-	-	1.22	0.150	1.23	1.44	0.21	1.46
50	1.000	-	-	-	0.91	0.145	0.93	1.00	0.21	1.02
70	0.710	-	-	-	0.62	0.140	0.64	0.71	0.20	0.73
95	0.540	-	-	-	0.47	0.135	0.49	0.54	0.195	0.57
120	0.420	-	-	-	0.37	0.135	0.39	0.42	0.190	0.46
150	0.340	-	-	-	0.29	0.130	0.32	0.34	0.190	0.39
185	0.270	-	-	-	0.24	0.130	0.27	0.27	0.190	0.33
240	0.210	-	-	-	0.188	0.130	0.23	0.210	0.185	0.28
300	0.167	-	-	-	0.147	0.125	0.195	0.173	0.180	0.25
400	0.127	-	-	-	-	-	-	0.132	0.175	0.22
500	0.100	-	-	-	-	-	-	0.107	0.170	0.20
630	0.074	-	-	-	-	-	-	0.085	0.170	0.190

NOTES:

1 The voltage drop figures given above are based on a conductor operating temperature of 90 °C and are therefore not accurate when the operating temperature is in excess of 90 C. In the case of the 180 °C cables with a conductor temperature of 150 °C the above resistive values should be increased by a factor of 1.2.

2 *A larger voltage drop will result if the cables are spaced.

THE INFORMATION CONTAINED WITHIN THIS DATASHEET IS FOR GUIDANCE ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. WE BELIEVE THE INFORMATION IS CORRECT AT THE TIME OF PUBLICATION. PLEASE NOTE WHEN SELECTING CABLE ACCESSORIES THAT ACTUAL CABLE DIMENSIONS MAY VARY DUE TO MANUFACTURING TOLERANCES.