

Armoured cable with double steel or aluminium tape armour.

ACCORDING TO: IEC 60502-1 / UNE 21123-2



E<sub>ca</sub>

## APPLICATION

Powerhard® F RVFV-K cable is especially suitable for fixed installations that may be subject to mechanical aggression. It is highly recommended for use in installations where the presence of rodents could imply a threat to the cable (such as warehouses, production plants and agricultural facilities). At the same time, its use is recommended for street lighting installations.

## CONSTRUCTION

### Conductor

Electrolytic copper class 5 (flexible), according to EN 60228 and IEC 60228.

### Insulation

Cross-linked polyethylene insulation type DIX-3 according to UNE-HD 603 and type XLPE according to IEC 60502-1. The standard identification according to HD 308 is:

1 x	Natural
2 x	Blue + Brown
3 G	Blue + Brown + Green/Yellow
3 x	Brown + Black + Grey
3 x + 1 x	Brown + Black + Grey + Blue (reduced cross-section)
4 G	Brown + Black + Grey + Green/Yellow
4 x	Brown + Black + Grey + Blue
5 G	Brown + Black + Grey + Blue + Green/Yellow
6 or more	Black numbered + Green/Yellow

### Separation sheath

Extruded PVC separation sheath.

### Armour

Double steel or aluminium tape armour. Aluminium armour is used in single-core cables to avoid parasite currents that may overheat the cable. Steel tape armour is used in multicore cables.

### Outer sheath

Flexible PVC outer sheath type DMV-18 according to UNE-HD 603 and type ST2 according to IEC 60502-1. Black colour.

## CHARACTERISTICS

### ⚡ Electrical performance

Low voltage: 0,6/1 kV.

### 🌡 Thermal performance

Maximum service temperature: 90°C.

Maximum short-circuit temperature: 250°C (max. 5 s).

Minimum service temperature: -40°C (fixed and protected installations).

Minimum installation and handling temperature: 0°C.

### 🔥 Fire performance

Flame non-propagation according to EN 60332-1 and IEC 60332-1.

Reaction to fire CPR: Eca, according to EN 50575.

Reduced halogen emission. Chlorine <15%.

### 📏 Mechanical performance

Minimum bending radius: 10 x cable diameter.

Impact resistance: AG4 High severity.

Rodent proof.

### 🌐 Environmental performance

Chemical & Oil resistance: Good.

UV Resistant according to UNE 211605.

Water resistance: AD7 immersion.

### 🌞 Installation conditions

Open Air.

Buried.

In conduit.

## STANDARDS / COMPLIANCE



### According to

IEC 60502-1 / UNE 21123-2.



### Standards and approvals

BUREAU VERITAS / RoHS / CE.

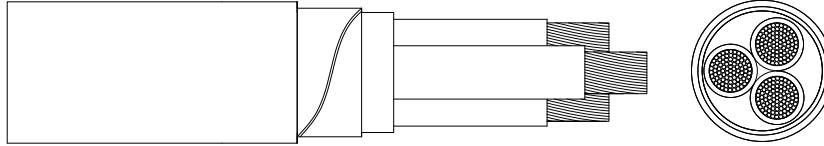


### CPR (Construction Products Regulation)

E<sub>ca</sub>.



## DIMENSIONS & ADMISSIBLE INTENSITIES



Cross-section (mm²)	Diameter (mm)	Weight (kg/km)	Open air (A) <sup>1</sup>	Buried (A) <sup>2</sup>	Voltage drop (V/A · km) <sup>3</sup>
1 x 16	14,4	370	124	100	3,08
1 x 25	16	485	161	129	1,98
1 x 35	17,1	595	200	155	1,41
1 x 50	18,6	730	242	183	0,984
1 x 70	20,3	960	310	225	0,639
1 x 95	22,4	1.255	377	270	0,525
1 x 120	24,4	1.510	437	306	0,410
1 x 150	26,3	1.810	504	343	0,328
1 x 185	28,3	2.215	575	387	0,270
1 x 240	31,3	2.805	679	448	0,204
1 x 300	34	3.420	783	502	0,163
1 x 400	38,6	4.225	930	592	0,123
1 x 500	42,3	5.330	1.070	670	0,097
2 x 1,5	12,3	225	26	27	33,9
2 x 2,5	13,2	270	36	35	20,3
2 x 4	14,1	320	49	46	12,6
2 x 6	15,7	420	63	58	8,41
2 x 10	17,1	530	86	77	4,87
2 x 16	18,6	690	115	100	3,08
2 x 25	21,8	960	149	129	1,98
3 G 1,5	12,8	255	26	27	33,9
3 G 2,5	13,8	300	36	35	20,3
3 x 4	15,1	380	49	46	12,6
3 x 6	16,4	485	63	58	8,41
3 x 10	17,8	630	86	77	4,87
3 x 16	19,6	845	115	100	3,08
3 x 25	23,9	1.270	149	129	1,98
3 x 35	26,2	1.630	185	155	1,41
3 x 50	29,8	2.105	225	183	0,984
3 x 70	33,3	2.755	289	225	0,639
3 x 95	40,1	3.960	352	270	0,525
3 x 16 + 1 x 10	20,5	960	115	100	3,08
3 x 25 + 1 x 16	25	1.355	149	129	1,98
3 x 35 + 1 x 16	27,3	1.695	185	155	1,41
3 x 50 + 1 x 25	31,5	2.315	225	183	0,984
3 x 70 + 1 x 35	36	3.120	289	225	0,639
3 x 95 + 1 x 50	41,6	4.425	352	270	0,525
3 x 120 + 1 x 70	46,8	5.895	410	306	0,410
3 x 150 + 1 x 70	51,5	7.005	473	343	0,328
3 x 185 + 1 x 95	56,5	8.730	542	387	0,270
3 x 240 + 1 x 120	63,4	11.040	641	448	0,204
4 G 1,5	13,7	285	26	27	33,9
4 G 2,5	14,6	345	36	35	20,3
4 x 4	16,1	440	49	46	12,6
4 x 6	17,2	560	63	58	8,41
4 x 10	18,9	750	86	77	4,87

Cross-section (mm <sup>2</sup> )	Diameter (mm)	Weight (kg/km)	Open air (A) <sup>1</sup>	Buried (A) <sup>2</sup>	Voltage drop (V/A · km) <sup>3</sup>
4 x 16	21	1.025	115	100	3,08
4 x 25	26	1.550	149	129	1,98
4 x 35	28,8	2.050	185	155	1,41
4 x 50	32,8	2.645	225	183	0,984
4 x 70	39,9	3.900	289	225	0,639
4 x 95	43,8	4.895	352	270	0,525
4 x 120	49,2	6.330	410	306	0,410
4 x 150	54,8	7.800	473	343	0,328
4 x 185	60,3	9.360	542	387	0,270
4 x 240	67,4	12.100	641	448	0,204
5 G 1,5	14,3	315	26	27	33,9
5 G 2,5	15,6	395	36	35	20,3
5 G 4	17	500	49	46	12,6
5 G 6	18,6	625	63	58	8,41
5 G 10	20,7	900	86	77	4,87
5 G 16	23,1	1.245	115	100	3,08
5 G 25	28,5	1.785	149	129	1,98
5 G 35	31,5	2.355	185	155	1,41
5 G 50	37,1	3.255	225	183	0,984
5 G 70	42,5	4.725	289	225	0,639
5 G 95	47,9	6.065	352	270	0,525
5 G 120	53,5	7.580	410	306	0,410
6 G 1,5	14,3	325	26	27	29,5
6 G 2,5	15,9	420	36	35	17,7
6 G 4	17,5	540	49	46	11,0
7 G 1,5	14,1	335	26	27	33,9
7 G 2,5	15,6	430	36	35	20,3
7 G 4	17,3	565	49	46	12,6
10 G 1,5	16,4	435	26	27	33,9
10 G 2,5	17,7	555	36	35	20,3
12 G 1,5	17,1	480	26	27	33,9
12 G 2,5	18,8	620	36	35	20,3
12 G 4	22,4	880	49	46	12,6
14 G 1,5	18,6	545	26	27	29,5
14 G 2,5	20,8	725	36	35	17,7
16 G 1,5	19,3	600	26	27	29,5
16 G 2,5	21,3	785	36	35	17,7
19 G 1,5	20	660	26	27	33,9
19 G 2,5	22,5	890	36	35	20,3
19 G 4	25,9	1.230	49	46	12,6
24 G 1,5	22	775	26	27	33,9
24 G 2,5	24,5	1.045	36	35	20,3
24 G 4	30	1.510	49	46	12,6
27 G 1,5	23,4	850	26	27	33,9
27 G 2,5	27,0	1.170	36	35	20,3
37 G 1,5	25,9	1.065	26	27	33,9
37 G 2,5	29,4	1.465	36	35	20,3
61 G 1,5	36,9	2.285	26	27	33,9

<sup>1</sup> Reference method F for single-core and method E for multicore cables according to IEC 60364-5-52 in open air at 30°C ambient temperature.

<sup>2</sup> Reference method D2 according to IEC 60364-5-52. Directly buried at 0,7 m depth with soil thermal resistivity of 2,5 K·m/W and 20°C of ground temperature.

<sup>3</sup> At maximum service temperature and  $\cos\phi=1$ .

For all cables is supposed a single-phase circuit.