



Eca

## APPLICATION

POWERHAR® M RVhMVh-K cable has been specially designed for installations in potentially explosion hazard locations (ATEX provided that local regulations allow it). It is highly recommended for petrol stations, petrochemical plants, flammable product warehouses, etc. It can also be used in production plants, agricultural facilities, street lighting and installations where the cable is subject to high mechanical aggression. This cable is also available in hydrocarbon resistant version.

## CONSTRUCTION

### Conductor

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

### Insulation

Cross-linked polyethylene insulation type DIX-3 according to HD 603 and XLPE according to IEC 60502-1.

The standard identification of insulated conductors according to HD 308, is the following:

- 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

### Inner covering

PVC.







### Armour

Galvanized steel wire armour. Aluminium armour is used in single-core cables to avoid parasite currents that may overheat the cable.




### Outer sheath

PVC outer sheath type ST2 according to IEC 60502-1. Black colour.

## CHARACTERISTICS

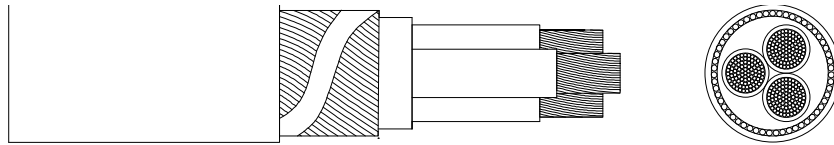
-  **Electrical performance**  
Low voltage 0,6/1 kV.
-  **Thermal performance**  
Maximum service temperature: 90°C.  
Maximum short-circuit temperature: 250°C (max. 5 s).  
Minimum service temperature: -40°C (fixed and protected installations).  
Minimum installation and handling temperature: 0°C (on cable surface).
-  **Fire performance**  
Flame non-propagation according to EN 60332-1 / IEC 60332-1.  
Reaction to fire CPR: Eca according to EN 50575.  
Reduced halogen emission. Chlorine <15%.
-  **Mechanical performance**  
Minimum bending radius: 10x cable diameter.  
Impact resistance: AG2 High severity.  
Rodent proof.
-  **Environmental performance**  
Chemical & Oil resistance: Good.  
UV Resistant: UNE 211605.  
Potentially explosion hazard locations (ATEX).  
Water resistance: AD7 immersion.
-  **Installation conditions**  
Open Air.  
Buried.  
In conduit.

## STANDARDS / COMPLIANCE

-  **According to**  
IEC 60502-1
-  **Standards and approvals**  
BUREAU VERITAS / RoHS / CE
-  **CPR (Construction Products Regulation)**  
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### DIMENSIONS & ADMISSIBLE INTENSITIES



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>
1 x 16	14,8	375	124	100	3,08
1 x 25	16,5	495	161	129	1,98
1 x 35	17,4	600	200	155	1,41
1 x 50	19,2	770	242	183	0,984
1 x 70	21,0	985	310	225	0,693
1 x 95	22,7	1.220	377	270	0,525
1 x 120	24,5	1.480	437	306	0,41
1 x 150	26,2	1.775	504	343	0,328
1 x 185	28,5	2.110	575	387	0,27
1 x 240	31,6	2.690	679	448	0,204
1 x 300	34,3	3.330	783	502	0,163
1 x 400	39,2	4.320	940	563	0,123
1 x 500	45,2	5.710	1.083	637	0,097
1 x 630	51,4	7.385	1.254	719	0,073
2 x 1,5	11,3	250	26	27	33,9
2 x 2,5	12,3	300	36	35	20,3
2 x 4	13,4	365	49	46	12,6
2 x 6	14,4	430	63	58	8,41
2 x 10	17,0	660	86	77	4,87
2 x 16	18,7	770	115	100	3,08
2 x 25	24,4	1.415	149	129	1,98
2 x 35	26,1	1.675	185	155	1,41
2 x 50	30,0	2.195	225	183	0,984
2 x 70	33,9	2.830	289	225	0,639
3 x 1,5	12,0	280	26	27	33,9
3 x 2,5	12,9	335	36	35	20,3
3 x 4	14,1	410	49	46	12,6
3 x 6	15,3	500	63	58	8,41
3 x 10	17,8	695	86	77	4,87
3 x 16	20,2	1.080	115	100	3,08
3 x 25	25,2	1.615	149	129	1,98
3 x 35	28,8	2.245	185	155	1,41
3 x 50	31,6	2.610	225	183	0,984
3 x 70	37,0	4.040	289	225	0,639
3 x 95	42,3	5.085	352	270	0,525
3 x 16 + 1 x 10	22,9	1.345	115	100	3,08
3 x 25 + 1 x 16	26,3	1.820	149	129	1,98
3 x 35 + 1 x 16	28,4	2.195	185	155	1,41
3 x 50 + 1 x 25	32,8	2.910	225	183	0,984
3 x 70 + 1 x 35	39,8	4.585	289	225	0,639
3 x 95 + 1 x 50	43,8	5.670	352	270	0,525
4 x 1,5	12,8	315	26	27	33,9
4 x 2,5	13,6	375	36	35	20,3
4 x 4	15,3	480	49	46	12,6
4 x 6	16,6	590	63	58	8,41
4 x 10	19,1	815	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	23,8	1.415	115	100	3,08
4 x 25	27,6	1.945	149	129	1,98
4 x 35	29,4	2.390	185	155	1,41
4 x 50	34,5	3.180	225	183	0,984
4 x 70	41,3	4.955	289	225	0,639
4 x 95	45,8	6.130	352	270	0,525
4 x 120	50,9	7.450	410	306	0,41
4 x 150	55,3	8.895	473	343	0,328
4 x 185	60,4	10.500	542	387	0,27
4 x 240	68,0	13.285	641	448	0,204
5 G 1,5	13,5	350	26	27	33,9
5 G 2,5	14,6	435	36	35	20,3
5 G 4	16,5	555	49	46	12,6
5 G 6	17,9	680	63	58	8,41
5 G 10	22,8	1.265	86	77	4,87
5 G 16	25,7	1.665	115	100	3,08
5 G 25	29,8	2.295	149	129	1,98
5 G 35	32,5	2.875	185	155	1,41
5 G 50	38,1	3.825	225	183	0,984
5 G 70	45,1	5.860	289	225	0,639
6 G 1,5	14,2	385	26	27	33,9
6 G 2,5	15,7	490	36	35	20,3
7 G 1,5	14,2	400	26	27	33,9
7 G 2,5	15,7	510	36	35	20,3
10 G 1,5	16,3	510	26	27	33,9
10 G 2,5	17,7	640	36	35	20,3
12 G 1,5	17,4	575	26	27	33,9
12 G 2,5	20,9	1.000	36	35	20,3
14 G 1,5	18,1	620	26	27	33,9
14 G 2,5	22,3	1.105	36	35	20,3
16 G 1,5	21,2	965	26	27	33,9
16 G 2,5	23,2	1.205	36	35	20,3
19 G 1,5	21,9	1.035	26	27	33,9
19 G 2,5	24,1	1.305	36	35	20,3
24 G 1,5	23,8	1.145	26	27	33,9
24 G 2,5	26,1	1.500	36	35	20,3
27 G 1,5	25,0	1.295	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  $\cos\phi=1$ .

In all cases it is supposed a single-phase circuit.