



E_{ca}

APPLICATION

Flexitel® 200 VV-K cable is suitable for fixed installations with complex layouts where flexible cables are required. It is also ideal for connecting motors or frequency converters. The characteristics of the outer sheath material make this cable extremely versatile as it provides a high level of protection in all types of environments.

- Industrial use

CONSTRUCTION

Conductor

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

Insulation

Flexible insulation type PVC/A according to IEC 60502-1.

The standard identification of insulated conductors, according to HD 308 and HD 186 is the following:

| | |
|-----------|--|
| 1 x | Natural |
| 2 x | Brown + Blue |
| 3 G | Blue + Brown + Green/Yellow |
| 3 x | Brown + Black + Blue |
| 4 G | Brown + Black + Blue + Green/Yellow |
| 4 x | Brown + Black + Grey + Blue |
| 5 G | Brown + Black + Grey + Blue + Green/Yellow |
| 6 or more | Black numbered + Green/Yellow |

* Other identifications are possible on request.

Outer sheath

Flexible PVC outer sheath, type ST1 according to IEC 60502-1. Black colour. Other colours available on request.

STANDARDS / COMPLIANCE



According to:
IEC 60502-1



Standards and approvals
RoHS / CE



CPR (Construction Products Regulation)
E_{ca}

CHARACTERISTICS



Electrical performance

Low voltage: 0,6/1 kV.



Thermal performance

Maximum service temperature: 70°C.

Maximum short-circuit temperature: 160°C (max. 5 s).

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



Fire performance

Flame non-propagation based on EN 60332-1 / IEC 60332-1.

Low halogen emission. Chlorine <15%.

Reaction to fire CPR: E_{ca} according to EN 50575.



Mechanical performance

Minimum bending radius: 5x cable diameter.

Impact resistance: AG2 Medium severity.



Environmental performance

Chemical & Oil resistance: Good.

UV Resistant according to UNE 211605, Annex A.2

Water resistance: AD5 Jets.



Installation conditions

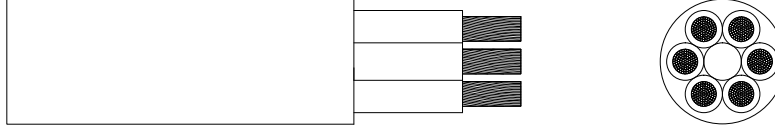
Open Air.

Buried.

In conduit.



DIMENSIONS & ADMISSIBLE INTENSITIES



| Cross-section (mm ²) | Diameter (mm) | Weight (kg/km) | Open Air (A) ¹ | Buried (A) ² | Voltage drop (V/A · km) ³ |
|----------------------------------|---------------|----------------|---------------------------|-------------------------|--------------------------------------|
| 1 x 10 | 8,8 | 155 | 60 | 50 | 3,97 |
| 1 x 16 | 9,8 | 215 | 82 | 64 | 2,51 |
| 1 x 25 | 11,6 | 315 | 110 | 82 | 1,62 |
| 1 x 35 | 12,7 | 415 | 137 | 98 | 1,15 |
| 1 x 50 | 14,6 | 570 | 167 | 116 | 0,802 |
| 1 x 70 | 16,0 | 755 | 216 | 143 | 0,565 |
| 1 x 95 | 18,2 | 990 | 264 | 169 | 0,428 |
| 1 x 120 | 20,1 | 1.245 | 308 | 192 | 0,335 |
| 1 x 150 | 22,4 | 1.545 | 356 | 217 | 0,268 |
| 1 x 185 | 24,7 | 1.870 | 409 | 243 | 0,220 |
| 1 x 240 | 27,5 | 2.425 | 485 | 280 | 0,166 |
| 2 x 1,5 | 8,4 | 100 | 22 | 22 | 31,9 |
| 2 x 2,5 | 9,7 | 140 | 30 | 29 | 19,2 |
| 2 x 4 | 11,6 | 210 | 40 | 37 | 11,9 |
| 2 x 6 | 12,7 | 265 | 51 | 46 | 7,92 |
| 2 x 10 | 14,6 | 380 | 70 | 60 | 4,58 |
| 2 x 16 | 16,5 | 530 | 94 | 64 | 2,9 |
| 3 x 1,5 | 8,9 | 120 | 22 | 22 | 31,9 |
| 3 x 2,5 | 10,3 | 170 | 30 | 29 | 19,2 |
| 3 x 4 | 12,4 | 255 | 40 | 37 | 11,9 |
| 3 x 6 | 13,6 | 325 | 51 | 46 | 7,92 |
| 3 x 10 | 15,8 | 485 | 70 | 60 | 4,58 |
| 3 x 16 | 18,0 | 680 | 80 | 64 | 2,51 |
| 3 x 25 | 21,5 | 1.050 | 101 | 82 | 1,62 |
| 3 x 35 | 24,7 | 1.415 | 126 | 98 | 1,15 |
| 4 x 1,5 | 9,7 | 145 | 18,5 | 18 | 27,6 |
| 4 x 2,5 | 11,3 | 210 | 25 | 24 | 16,6 |
| 4 x 4 | 13,5 | 310 | 34 | 30 | 10,3 |
| 4 x 6 | 14,9 | 405 | 43 | 38 | 6,86 |
| 4 x 10 | 17,4 | 605 | 60 | 50 | 3,97 |
| 4 x 16 | 20,2 | 895 | 80 | 64 | 2,51 |
| 5 x 1,5 | 10,5 | 175 | 18,5 | 18 | 27,6 |
| 5 x 2,5 | 12,3 | 250 | 25 | 24 | 16,6 |
| 5 x 4 | 14,9 | 370 | 34 | 30 | 10,3 |
| 5 x 6 | 16,5 | 490 | 43 | 38 | 6,86 |
| 5 x 10 | 19,3 | 745 | 60 | 50 | 3,97 |
| 5 x 16 | 22,3 | 1.080 | 80 | 64 | 2,51 |
| 6 x 1,5 | 9,5 | 155 | 22 | 22 | 31,9 |
| 6 x 2,5 | 11,4 | 235 | 30 | 29 | 19,2 |
| 7 x 1,5 | 9,5 | 170 | 22 | 22 | 31,9 |
| 7 x 2,5 | 11,4 | 260 | 30 | 29 | 19,2 |
| 7 x 4 | 14,9 | 430 | 40 | 37 | 11,9 |
| 7 x 6 | 16,6 | 585 | 51 | 46 | 7,92 |
| 7 x 10 | 20,7 | 960 | 70 | 60 | 4,88 |
| 8 x 1,5 | 10,3 | 195 | 22 | 22 | 31,9 |
| 8 x 2,5 | 12,5 | 300 | 30 | 29 | 19,2 |
| 10 x 1,5 | 11,5 | 235 | 22 | 22 | 31,9 |
| 10 x 2,5 | 14,1 | 365 | 30 | 29 | 19,2 |
| 12 x 1,5 | 11,9 | 270 | 22 | 22 | 31,9 |
| 12 x 2,5 | 14,3 | 415 | 30 | 29 | 19,2 |
| 12 x 6 | 21,3 | 940 | 51 | 46 | 7,92 |
| 12 x 10 | 27,3 | 1.585 | 70 | 60 | 4,88 |

| Cross-section (mm ²) | Diameter (mm) | Weight (kg/km) | Open Air (A) ¹ | Buried (A) ² | Voltage drop (V/A · km) ³ |
|----------------------------------|---------------|----------------|---------------------------|-------------------------|--------------------------------------|
| 14 x 1,5 | 13,0 | 315 | 22 | 22 | 31,9 |
| 14 x 2,5 | 16,0 | 490 | 30 | 29 | 19,2 |
| 16 x 1,5 | 13,8 | 355 | 22 | 22 | 31,9 |
| 16 x 2,5 | 17,2 | 555 | 30 | 29 | 19,2 |
| 19 x 1,5 | 14,5 | 405 | 22 | 22 | 31,9 |
| 19 x 2,5 | 17,9 | 635 | 30 | 29 | 19,2 |
| 24 x 1,5 | 16,7 | 505 | 22 | 22 | 31,9 |
| 24 x 2,5 | 20,6 | 790 | 30 | 29 | 19,2 |
| 27 x 1,5 | 17,4 | 550 | 22 | 22 | 31,9 |
| 30 x 1,5 | 18,2 | 605 | 22 | 22 | 31,9 |
| 37 x 1,5 | 19,8 | 740 | 22 | 22 | 31,9 |
| 44 x 1,5 | 21,9 | 870 | 22 | 22 | 31,9 |
| 52 x 1,5 | 23,4 | 1.020 | 22 | 22 | 31,9 |
| 61 x 1,5 | 25,4 | 1.210 | 22 | 22 | 31,9 |

¹Reference 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.

²Reference method D1 according to IEC 60364-5-52. In a duct buried at 0,7 m depth with soil thermal resistivity of 2,5 K·m/W and 20°C of ground temperature.

³At maximum service temperature and $\cos\varphi=1$.

For cables having 2 conductors or 3 cores up to 10 mm², it is supposed a single-phase circuit. For the rest of the cables it is supposed a three-phase circuit.

For cables having 6 or more conductors, it is supposed a single-phase circuit that not all conductors are fully charged.