

# HELUPOWER® 1000 RV-K

direct burial, XLPE core insulation / 90°C



HELUKABEL® HELUPOWER® 1000 RV-K 0,6/1 kV CE

## TECHNICAL DATA

PVC connection cable acc. to UNE 21123-2; articles with 3+1/2 conductors: in alignment with UNE 21123-2

|   |  |
|---|--|
| <b>Temperature range</b>                                  | fixed -15°C to +90°C   |
| <b>Permissible operating temperature of the conductor</b> | +90°C  |
| <b>Short circuit temperature at the conductor</b>         | +250°C (Short circuit temperature max. 5 s)  |
| <b>Nominal voltage</b>                                    | AC U <sub>0</sub> /U 600/1000 V  |
| <b>Max. permissible operating voltage</b>                 | alternating current (AC) conductor/earth 700 V<br>three-phase alternating current (AC) conductor/conductor 1200 V<br>direct current (DC) conductor/earth 900 V<br>direct current (DC) conductor/conductor 1800 V |
| <b>Test voltage core/core</b>                             | 3500 V   |
| <b>Minimum bending radius</b>                             | <25 mm: 4x Outer-ø<br>25-50 mm: 5x Outer-ø<br>>50 mm: 6x Outer-ø   |

## CABLE STRUCTURE

- Copper wire bare, finely stranded acc. to DIN VDE 0295 Class 5 / IEC 60228 Class 5
- Core insulation: XLPE acc. to UNE-HD 603-1 (compound type DIX 3)
- Core identification: see table
- G = with protective conductor GN-YE, in the outer layer, x = without protective conductor
- Cores stranded in layers with optimal lay lengths
- Outer sheath: PVC acc. to UNE HD 603-1 (compound type DMV 18)

- Sheath colour: black
- Length marking: in metres

## PROPERTIES

- resistant to: UV radiation
- for outdoor use
- direct burial
- the materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers

## TESTS

- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2
- UV-resistant acc. to DIN VDE 0276-605 / HD 605 S2

## APPLICATION

Suitable for use in dry, moist and wet rooms as well as outdoors. Also suitable for direct burial, laying in tubes and underground installation areas. Typical application areas range from general production machinery, to machine tool applications, conveyor belt systems, air-conditioning units, steel plants installations and factory automation. Ideal as power or control cable especially if increased temperature and/or voltage is required. UV resistant due to its special PVC outer sheath compound and therefore also ideal as power connection cable for outdoor devices and machinery. Alternatively also for use as power connection cable in the stage and lighting industry or renewable energy sector.

## NOTES

- the conductor is metrically (mm<sup>2</sup>) constructed, AWG numbers are approximated, and are for reference only

### Core identification acc. to DIN VDE 0293-308, black

| Part no. | No. cores x cross-sec. mm <sup>2</sup> | AWG, approx. | Outer-ø min - max mm | Cu-weight kg/km | Weight kg/km, approx. |
|----------|--|--------------|----------------------|-----------------|-----------------------|
| 11003798 | 1 x 1.5                                | 16           | 4.6 - 5.5            | 14.4            | 50.0                  |
| 11003822 | 1 x 2.5                                | 14           | 5.1 - 6.0            | 24.0            | 65.0                  |
| 11003846 | 1 x 4                                  | 12           | 5.7 - 6.5            | 38.4            | 80.0                  |
| 11003854 | 1 x 6                                  | 10           | 6.2 - 7.1            | 57.6            | 105.0                 |
| 11003862 | 1 x 10                                 | 8            | 7.2 - 8.0            | 96.0            | 155.0                 |
| 11003870 | 1 x 16                                 | 6            | 8.1 - 8.9            | 153.6           | 220.0                 |
| 11003878 | 1 x 25                                 | 4            | 10.0 - 10.6          | 240.0           | 320.0                 |
| 11003886 | 1 x 35                                 | 2            | 11.1 - 11.8          | 336.0           | 420.0                 |
| 11003894 | 1 x 50                                 | 1            | 12.9 - 13.7          | 480.0           | 560.0                 |
| 11003902 | 1 x 70                                 | 2/0          | 14.3 - 15.7          | 672.0           | 785.0                 |

| Part no. | No. cores x cross-sec. mm <sup>2</sup> | AWG, approx. | Outer-ø min - max mm | Cu-weight kg/km | Weight kg/km, approx. |
|----------|--|--------------|----------------------|-----------------|-----------------------|
| 11003910 | 1 x 95                                 | 3/0          | 16.2 - 17.3          | 912.0           | 1050.0                |
| 11003918 | 1 x 120                                | 4/0          | 18.1 - 19.2          | 1152.0          | 1305.0                |
| 11003924 | 1 x 150                                | 300 kcmil    | 19.9 - 21.4          | 1440.0          | 1610.0                |
| 11003930 | 1 x 185                                | 350 kcmil    | 22.3 - 23.4          | 1776.0          | 1985.0                |
| 11003936 | 1 x 240                                | 500 kcmil    | 25.2 - 26.8          | 2304.0          | 2610.0                |
| 11003942 | 1 x 300                                | 600 kcmil    | 27.6 - 30.4          | 2880.0          | 3225.0                |
| 11003948 | 1 x 400                                | 750 kcmil    | 32.0 - 34.0          | 3840.0          | 3500.0                |
| 11003949 | 1 x 500                                | 1000 kcmil   | 38.4 - 40.0          | 4800.0          | 5060.0                |
| 11003950 | 1 x 630                                | 1250 kcmil   | 43.6 - 45.2          | 6048.0          | 6760.0                |

20.09.2021 / We reserve the right to make technical changes; the imprint in the image is purely exemplary

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## Core identification acc. to DIN VDE 0293-308, colour coded

| Part no. | No. cores x cross-sec. mm <sup>2</sup> | AWG, approx. | Outer-ø min - max mm | Cu-weight kg/km | Weight kg/km, approx. | Part no. | No. cores x cross-sec. mm <sup>2</sup> | AWG, approx. | Outer-ø min - max mm | Cu-weight kg/km | Weight kg/km, approx. |
|----------|--|--------------|----------------------|-----------------|-----------------------|----------|--|--------------|----------------------|-----------------|-----------------------|
| 11003799 | 2 x 1.5                                | 16           | 8.3 - 8.9            | 28.8            | 145.0                 | 11003866 | 4 G 10                                 | 8            | 15.9 - 17.1          | 384.0           | 685.0                 |
| 11003823 | 2 x 2.5                                | 14           | 9.3 - 9.9            | 48.0            | 195.0                 | 11003874 | 4 G 16                                 | 6            | 18.5 - 20.0          | 614.4           | 970.0                 |
| 11003847 | 2 x 4                                  | 12           | 10.4 - 11.0          | 76.8            | 235.0                 | 11003882 | 4 G 25                                 | 4            | 22.2 - 24.3          | 960.0           | 1450.0                |
| 11003855 | 2 x 6                                  | 10           | 11.4 - 12.2          | 115.2           | 300.0                 | 11003890 | 4 G 35                                 | 2            | 25.5 - 27.2          | 1344.0          | 1960.0                |
| 11003863 | 2 x 10                                 | 8            | 13.7 - 14.8          | 192.0           | 460.0                 | 11003898 | 4 G 50                                 | 1            | 29.3 - 32.7          | 1920.0          | 2640.0                |
| 11003871 | 2 x 16                                 | 6            | 15.9 - 17.1          | 307.2           | 635.0                 | 11003906 | 4 G 70                                 | 2/0          | 34.5 - 36.5          | 2688.0          | 3790.0                |
| 11003879 | 2 x 25                                 | 4            | 19.1 - 20.9          | 480.0           | 930.0                 | 11003914 | 4 G 95                                 | 3/0          | 38.6 - 40.7          | 3648.0          | 4985.0                |
| 11003887 | 2 x 35                                 | 2            | 21.4 - 23.1          | 672.0           | 1220.0                | 11003922 | 4 G 120                                | 4/0          | 43.4 - 46.3          | 4608.0          | 6255.0                |
| 11003895 | 2 x 50                                 | 1            | 25.2 - 27.4          | 960.0           | 1665.0                | 11003928 | 4 G 150                                | 300 kcmil    | 48.1 - 51.0          | 5760.0          | 7775.0                |
| 11003903 | 2 x 70                                 | 2/0          | 29.0 - 30.4          | 1344.0          | 2320.0                | 11003934 | 4 G 185                                | 350 kcmil    | 53.0 - 57.8          | 7104.0          | 9640.0                |
| 11003911 | 2 x 95                                 | 3/0          | 32.0 - 34.3          | 1824.0          | 3025.0                | 11003940 | 4 G 240                                | 500 kcmil    | 59.7 - 66.3          | 9216.0          | 12585.0               |
| 11003919 | 2 x 120                                | 4/0          | 36.5 - 38.6          | 2304.0          | 3845.0                | 11003946 | 4 G 300                                | 600 kcmil    | 65.4 - 69.4          | 11520.0         | 15475.0               |
| 11003925 | 2 x 150                                | 300 kcmil    | 40.5 - 42.5          | 2880.0          | 4720.0                | 11003803 | 4 x 1.5                                | 16           | 9.5 - 10.2           | 57.6            | 190.0                 |
| 11003931 | 2 x 185                                | 350 kcmil    | 45.2 - 47.8          | 3552.0          | 5910.0                | 11003827 | 4 x 2.5                                | 14           | 10.7 - 11.3          | 96.0            | 250.0                 |
| 11003937 | 2 x 240                                | 500 kcmil    | 49.9 - 55.4          | 4608.0          | 7665.0                | 11003851 | 4 x 4                                  | 12           | 12.0 - 12.7          | 153.6           | 325.0                 |
| 11003800 | 3 G 1.5                                | 16           | 8.8 - 9.3            | 43.2            | 165.0                 | 11003859 | 4 x 6                                  | 10           | 13.2 - 14.0          | 230.4           | 445.0                 |
| 11003824 | 3 G 2.5                                | 14           | 9.8 - 10.5           | 72.0            | 210.0                 | 11003867 | 4 x 10                                 | 8            | 15.9 - 17.1          | 384.0           | 685.0                 |
| 11003848 | 3 G 4                                  | 12           | 11.0 - 11.6          | 115.2           | 275.0                 | 11003875 | 4 x 16                                 | 6            | 18.5 - 20.0          | 614.4           | 970.0                 |
| 11003856 | 3 G 6                                  | 10           | 12.1 - 12.9          | 172.8           | 355.0                 | 11003883 | 4 x 25                                 | 4            | 22.2 - 24.3          | 960.0           | 1450.0                |
| 11003864 | 3 G 10                                 | 8            | 14.5 - 15.7          | 288.0           | 560.0                 | 11003891 | 4 x 35                                 | 2            | 25.5 - 27.2          | 1344.0          | 1960.0                |
| 11003872 | 3 G 16                                 | 6            | 16.8 - 18.1          | 460.8           | 780.0                 | 11003899 | 4 x 50                                 | 1            | 29.3 - 32.7          | 1920.0          | 2640.0                |
| 11003880 | 3 G 25                                 | 4            | 20.2 - 22.2          | 720.0           | 1160.0                | 11003907 | 4 x 70                                 | 2/0          | 34.5 - 36.5          | 2688.0          | 3790.0                |
| 11003888 | 3 G 35                                 | 2            | 22.8 - 24.8          | 1008.0          | 1535.0                | 11003915 | 4 x 95                                 | 3/0          | 38.6 - 40.7          | 3648.0          | 4985.0                |
| 11003896 | 3 G 50                                 | 1            | 26.8 - 29.2          | 1440.0          | 2090.0                | 11003923 | 4 x 120                                | 4/0          | 43.4 - 46.3          | 4608.0          | 6255.0                |
| 11003904 | 3 G 70                                 | 2/0          | 31.0 - 33.0          | 2016.0          | 2945.0                | 11003929 | 4 x 150                                | 300 kcmil    | 48.1 - 51.0          | 5760.0          | 7775.0                |
| 11003912 | 3 G 95                                 | 3/0          | 34.6 - 36.8          | 2736.0          | 3925.0                | 11003935 | 4 x 185                                | 350 kcmil    | 53.0 - 57.8          | 7104.0          | 9640.0                |
| 11003920 | 3 G 120                                | 4/0          | 39.0 - 41.3          | 3456.0          | 4905.0                | 11003941 | 4 x 240                                | 500 kcmil    | 59.7 - 66.3          | 9216.0          | 12585.0               |
| 11003926 | 3 G 150                                | 300 kcmil    | 43.3 - 45.8          | 4320.0          | 6055.0                | 11003947 | 4 x 300                                | 600 kcmil    | 65.4 - 69.4          | 11520.0         | 15475.0               |
| 11003932 | 3 G 185                                | 350 kcmil    | 47.3 - 51.4          | 5328.0          | 7570.0                | 11003804 | 5 G 1.5                                | 16           | 10.3 - 11.0          | 72.0            | 215.0                 |
| 11003938 | 3 G 240                                | 500 kcmil    | 53.5 - 59.3          | 6912.0          | 9865.0                | 11003828 | 5 G 2.5                                | 14           | 11.6 - 12.3          | 120.0           | 285.0                 |
| 11003944 | 3 G 300                                | 600 kcmil    | 58.5 - 67.5          | 8640.0          | 12120.0               | 11003852 | 5 G 4                                  | 12           | 13.1 - 13.8          | 192.0           | 390.0                 |
| 11003801 | 3 x 1.5                                | 16           | 8.8 - 9.3            | 43.2            | 165.0                 | 11003860 | 5 G 6                                  | 10           | 14.6 - 15.4          | 288.0           | 515.0                 |
| 11003825 | 3 x 2.5                                | 14           | 9.8 - 10.5           | 72.0            | 210.0                 | 11003868 | 5 G 10                                 | 8            | 17.4 - 18.7          | 480.0           | 810.0                 |
| 11003849 | 3 x 4                                  | 12           | 11.0 - 11.6          | 115.2           | 275.0                 | 11003876 | 5 G 16                                 | 6            | 20.2 - 22.0          | 768.0           | 1150.0                |
| 11003857 | 3 x 6                                  | 10           | 12.1 - 12.9          | 172.8           | 355.0                 | 11003884 | 5 G 25                                 | 4            | 19.9 - 26.9          | 1200.0          | 1760.0                |
| 11003865 | 3 x 10                                 | 8            | 14.5 - 15.7          | 288.0           | 560.0                 | 11003892 | 5 G 35                                 | 2            | 28.2 - 30.1          | 1680.0          | 2345.0                |
| 11003873 | 3 x 16                                 | 6            | 16.8 - 18.1          | 460.8           | 780.0                 | 11003900 | 5 G 50                                 | 1            | 32.6 - 36.2          | 2400.0          | 3175.0                |
| 11003881 | 3 x 25                                 | 4            | 20.2 - 22.2          | 720.0           | 1160.0                | 11003908 | 5 G 70                                 | 2/0          | 39.0 - 41.0          | 3360.0          | 4560.0                |
| 11003889 | 3 x 35                                 | 2            | 22.8 - 24.8          | 1008.0          | 1535.0                | 11003916 | 5 G 95                                 | 3/0          | 43.1 - 45.1          | 4560.0          | 6035.0                |
| 11003897 | 3 x 50                                 | 1            | 26.8 - 29.2          | 1440.0          | 2090.0                | 11003805 | 5 x 1.5                                | 16           | 10.3 - 11.0          | 72.0            | 215.0                 |
| 11003905 | 3 x 70                                 | 2/0          | 31.0 - 33.0          | 2016.0          | 2945.0                | 11003829 | 5 x 2.5                                | 14           | 11.6 - 12.3          | 120.0           | 285.0                 |
| 11003913 | 3 x 95                                 | 3/0          | 34.6 - 36.8          | 2736.0          | 3925.0                | 11003853 | 5 x 4                                  | 12           | 13.1 - 13.8          | 192.0           | 390.0                 |
| 11003921 | 3 x 120                                | 4/0          | 39.0 - 41.3          | 3456.0          | 4905.0                | 11003861 | 5 x 6                                  | 10           | 14.6 - 15.4          | 288.0           | 515.0                 |
| 11003927 | 3 x 150                                | 300 kcmil    | 43.3 - 45.8          | 4320.0          | 6055.0                | 11003869 | 5 x 10                                 | 8            | 17.4 - 18.7          | 480.0           | 810.0                 |
| 11003933 | 3 x 185                                | 350 kcmil    | 47.3 - 51.4          | 5328.0          | 7570.0                | 11003877 | 5 x 16                                 | 6            | 20.2 - 22.0          | 768.0           | 1150.0                |
| 11003939 | 3 x 240                                | 500 kcmil    | 53.5 - 59.3          | 6912.0          | 9865.0                | 11003885 | 5 x 25                                 | 4            | 19.9 - 26.9          | 1200.0          | 1760.0                |
| 11003945 | 3 x 300                                | 600 kcmil    | 58.5 - 67.5          | 8640.0          | 12120.0               | 11003893 | 5 x 35                                 | 2            | 28.2 - 30.1          | 1680.0          | 2345.0                |
| 11003802 | 4 G 1.5                                | 16           | 9.5 - 10.2           | 57.6            | 190.0                 | 11003901 | 5 x 50                                 | 1            | 32.6 - 36.2          | 2400.0          | 3175.0                |
| 11003826 | 4 G 2.5                                | 14           | 10.7 - 11.3          | 96.0            | 250.0                 | 11003909 | 5 x 70                                 | 2/0          | 39.0 - 41.0          | 3360.0          | 4560.0                |
| 11003850 | 4 G 4                                  | 12           | 12.0 - 12.7          | 153.6           | 325.0                 | 11003917 | 5 x 95                                 | 3/0          | 43.1 - 45.1          | 4560.0          | 6035.0                |
| 11003858 | 4 G 6                                  | 10           | 13.2 - 14.0          | 230.4           | 445.0                 |          |  |              |                      |                 |                       |

## Core identification acc. to DIN VDE 0293-334, black cores with consecutive labeling in white digits

| Part no. | No. cores x cross-sec. mm <sup>2</sup> | AWG, approx. | Outer-ø min - max mm | Cu-weight kg/km | Weight kg/km, approx. | Part no. | No. cores x cross-sec. mm <sup>2</sup> | AWG, approx. | Outer-ø min - max mm | Cu-weight kg/km | Weight kg/km, approx. |
|----------|--|--------------|----------------------|-----------------|-----------------------|----------|--|--------------|----------------------|-----------------|-----------------------|
| 11003806 | 7 G 1.5                                | 16           | 11.9 - 12.5          | 100.8           | 300.0                 | 11003833 | 10 x 2.5                               | 14           | 15.2 - 16.0          | 240.0           | 520.0                 |
| 11003830 | 7 G 2.5                                | 14           | 13.2 - 13.8          | 168.0           | 390.0                 | 11003810 | 12 G 1.5                               | 16           | 14.6 - 15.4          | 172.8           | 440.0                 |
| 11003807 | 7 x 1.5                                | 16           | 11.9 - 12.5          | 100.8           | 300.0                 | 11003834 | 12 G 2.5                               | 14           | 16.3 - 17.1          | 288.0           | 290.0                 |
| 11003831 | 7 x 2.5                                | 14           | 13.2 - 13.8          | 168.0           | 390.0                 | 11003811 | 12 x 1.5                               | 16           | 14.6 - 15.4          | 172.8           | 440.0                 |
| 11003808 | 10 G 1.5                               | 16           | 13.7 - 14.3          | 144.0           | 390.0                 | 11003835 | 12 x 2.5                               | 14           | 16.3 - 17.1          | 288.0           | 290.0                 |
| 11003832 | 10 G 2.5                               | 14           | 15.2 - 16.0          | 240.0           | 520.0                 | 11003812 | 16 G 1.5                               | 16           | 16.4 - 17.2          | 230.4           | 550.0                 |
| 11003809 | 10 x 1.5                               | 16           | 13.7 - 14.3          | 144.0           | 390.0                 | 11003836 | 16 G 2.5                               | 14           | 18.4 - 19.2          | 384.0           | 750.0                 |

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