HELUWIND® WK 103w-EMV-D-TORSION-MULTI

heat resistant, EMC-preferred type



TECHNICAL DATA

Torsion resistant cable acc. to UL-Std. 758 (AWM) Style 21179, CSA-Std. C22.2 No. 210 - AWM I/II A/B

Temperature range	flexible -35°C to +90°C fixed -40°C to +90°C during installation -20°C to +90°C
Permissible operating temperature of the conductor	+90°C
Nominal voltage	VDE AC U_0/U 600/1000 V UL (AWM) AC 1000 V
Max. permissible operating voltage	alternating current (AC) conductor/earth 700 V three-phase alternating current (AC) conductor/conductor 1200 V direct current (DC) conductor/earth 900 V direct current (DC) conductor/conductor 1800 V
Test voltage core/core	4000 V
Test voltage core/screen	2000 V
Minimum bending radius	flexible 10x Outer-Ø fixed 5x Outer-Ø

CABLE STRUCTURE

- Copper wire bare acc. to DIN VDE 0295 / IEC 60228
- Core insulation: special, heat-resistant compound
- Core identification: see table
- Protective conductor: starting with 3 cores, G = with protective conductor GN-YE, in the outer layer, x = without protective conductor
- Cores stranded in layers with optimal lay lengths
- Screen: helically wound tinned copper wires
- Outer sheath: special compound with low-temperature flexibility
- Sheath colour: black

PROPERTIES

- resistant to: oil, UV radiation
- Torsion tested
- recyclable
- flame-retardant
- Suitable for use in multiple climates
- Torsion angle: +/- 140°/m

TESTS

- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2, UL VW-1, CSA FT1

APPLICATION

Designed for flexible use, especially for torsional stress in the cable loop of a wind turbine. The voltage level for all dimensions is designed for 0.6/1 kV. This means that the cable can also be laid in parallel in accordance with UL standards; spatial separation of the cable routes is not necessary. The HELU WK series has been successfully tested with over 18,000 torsion cycles and therefore offers optimum functional reliability far beyond the service life of a wind turbine. EMC = Electromagnetic Compatibility; in order to optimise EMC properties, we recommend a double-sided and all-round large contact area of the D-screen.

NOTES

- the conductor is metrically (mm²) constructed, AWG numbers are approximated, and are for reference only
- Further details, as well as information regarding custom solutions and suitable connection technology, can be found at wind@heluka-bel.de

Core identification: black cores with consecutive labeling in white digits

Part no.	No. cores x cross-sec. mm²	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.
704752	4 G 0.34	22	7.7	32.0	91.0
704755	4 G 0.5	20	8.0	37.8	105.0
704758	6 G 0.5	20	9.2	53.6	130.0
704762	10 G 0.5	20	11.4	73.0	170.0
704763	12 G 0.5	20	11.7	88.4	220.0
706599	2 x 0.75	19	6.7	36.0	70.5
704764	3 G 0.75	19	7.1	43.2	97.0
706600	3 x 0.75	19	7.1	43.2	85.6
704765	4 G 0.75	19	8.3	52.6	122.0
706601	4 x 0.75	19	7.8	52.6	101.6
704767	5 G 0.75	19	9.0	63.0	145.0
704369	7 G 0.75	19	9.7	82.8	162.6
704768	8 G 0.75	19	10.7	93.0	220.0
704771	12 G 0.75	19	12.2	126.9	257.5

Part no.	No. cores x cross-sec. mm²	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.
704774	18 G 0.75	19	14.4	179.0	364.0
704268	25 G 0.75	19	17.8	256.0	547.6
705228	40 G 0.75	19	21.2	385.0	805.4
704778	41 G 0.75	19	21.2	370.8	800.0
704779	50 G 0.75	19	23.5	441.0	900.0
704784	2 x 1.5	16	6.8	44.0	86.0
704785	3 G 1.5	16	8.8	68.1	133.0
704786	4 G 1.5	16	9.4	87.9	159.0
704788	5 G 1.5	16	10.3	104.0	195.0
704790	7 G 1.5	16	11.6	140.8	237.6
704792	12 G 1.5	16	14.7	226.8	406.0
704793	3 G 2.5	14	9.3	104.4	163.4
704794	4 G 2.5	14	10.5	132.7	205.1
704795	5 G 2.5	14	11.6	161.1	249.4

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Part no.	No. cores x cross-sec. mm²	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.
704796	7 G 2.5	14	13.5	223.1	331.7
704797	12 G 2.5	14	16.7	350.6	519.8
705039	19 G 2.5	14	21.7	561.0	638.0
704798	5 G 4	12	14.0	237.4	390.8
704799	7 G 4	12	16.3	325.0	582.0
704800	12 G 4	12	20.0	532.1	790.0
704801	5 G 6	10	16.7	341.0	591.0

Part no.	No. cores x cross-sec. mm²	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.
704802	4 G 10	8	18.6	445.6	727.0
704803	5 G 10	8	20.7	550.2	935.0
704804	4 G 16	6	23.0	692.2	1072.0
704805	5 G 16	6	26.2	881.0	1502.0
704806	4 G 25	4	26.4	1059.0	1664.0
704807	5 G 25	4	28.6	1327.0	2014.0
704808	4 G 50	1	33.4	2080.0	3200.0

Core identification acc. to DIN 47100, colour coded

Part no.	No. cores x cross-sec. mm²	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.
704757	4 x 0.5	20	8.0	37.8	105.0
704759	6 x 0.5	20	9.2	53.6	130.0
704772	12 x 0.75	19	12.2	126.9	258.0
704777	32 x 0.75	19	18.8	294.0	610.0

Part no.	No. cores x cross-sec. mm²	AWG, approx.	Outer Ø mm, approx.	Cu factor per km	Weight kg/km, approx.
704780	4 x 1	18	8.7	56.0	110.0
704781	6 x 1	18	10.2	82.0	150.0
704782	8 x 1	18	11.7	106.0	210.0
704783	12 x 1	18	13.3	150.0	302.0

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