

TECWIND H07BN4-F 450/750 V

Construction



Electrical parameters

Thermal parameters

Mechanical parameters

Additional performances and special characteristics



15 N/mm²



-40 °C



+90 °C

Low Voltage cables with increased tolerance to torsional stress, improved behaviour against abrasion and extended temperature range (from -40 °C to +90 °C) UV - and ozone resistant for use and installation in wind turbines at high mechanical stress as free movable, free hanging or fixed wiring.

In the case of free-hanging operation the cables are twistable. The cables can be used indoor, outdoor, in industrial and agricultural plants and are allowed for use up to 1000 V AC or 750 V DC. In other respects DIN VDE 0298-300 (HD 516) applies.

> Design

According to DIN VDE 0282-12/HD 22.12

> Conductor

Flexible bare copper conductor, finely stranded, class 5 according to DIN VDE 0295/HD 383/IEC 60228

> Insulation

Cold and heat-resistant insulation, based on EPR (ethylene-propylene-rubber)

> Cores identification

Core colours according to DIN VDE 0293/HD 308

> Sheath

Sheath made of ozone + UV-resistant oil and cold-resistant special compound based on CM (chlorinated polyethylene) or CR (chloroprene rubber)

> Color of outer sheath

Black

> Marking

e. g. TECWIND H07BN4-F TECWIND (H) H07ZZ-F 4G25

> Max permissible operating voltage $U_{b \max}$

- Single-phase and three-phase AC operation Line-Earth/Line-Line 476/825 V

> DC-operation

Line-Earth/Line-Line 619/1238 V

> AC test voltage

2,5 kV (test duration 15 min.)

> Max permissible operation temperature at conductor

+90 °C

> Max permissible short circuit temperature at conductor

+250 °C (max. 5 s)

> Min permissible temperatures

(operation, installation, transportation and storage)

When in motion and stationary -40 °C

> Max permissible tensile load

15 N/mm² taking into account the entire copper cross-section

> Min bending radii

See technical data table

> Torsional stress for free hanging

± 150 °/m

> Oil resistance

Test according to DIN EN 60811-2-1

> Fire behaviour

Test according to IEC 60332-1-1

> Ozone resistant

Test according to DIN EN 50396

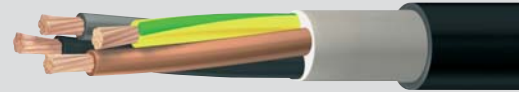
> UV resistant

Test according to ISO 4982-2, method A

TECWIND

H07BN4-F

450/750 V



1 core, with black core insulation

Number of cores and conductor size (mm ²)	Order No.	Conductor diameter (appr.) (mm)	Overall diameter of cable		Bending radius		Net weight 1000 M approx. (kg)	Tensile load max. (N)	Suspension length (safety factor 1) max. (m)	Current carrying capacity at 30 °C air temp. for 1 cable (A) ¹	Perm. short circuit current (1 s) ² (kA)
			min. (mm)	max. (mm)	when fixed installed min. (mm)	free movement and entry min. (mm)					
1 x 25	5DH7 102	6,4	12,9	14,1	56	71	371	375	101	178	3,58
1 x 35	5DH7 103	7,5	14,3	15,7	63	79	482	525	109	220	5,01
1 x 50	5DH7 104	9,0	16,5	18,0	72	90	667	750	112	275	7,15
1 x 70	5DH7 105	10,6	18,6	20,0	80	100	888	1050	118	340	10,01
1 x 95	5DH7 106	12,9	21,6	23,1	92	116	1175	1425	121	409	13,59
1 x 120	5DH7 107	14,6	24,0	25,5	102	128	1490	1800	121	479	17,16
1 x 150	5DH7 108	16,6	26,2	28,5	114	143	1803	2250	125	549	21,45
1 x 185	5DH7 109	18,0	28,4	30,7	123	154	2220	2775	125	627	26,46
1 x 240	5DH7 110	20,7	32,1	34,4	138	172	2835	3600	127	744	34,32
1 x 300	5DH7 111	23,4	34,7	36,9	148	185	3435	4500	131	861	42,90
1 x 400	5DH7 112	27,3	39,0	42,0	168	210	4490	6000	134	993	57,20

3 cores, without PE

3 x 25	5DH7 117	6,8	27,5	31,0	124	155	1500	1125	75	131	3,58
3 x 35	5DH7 118	8,1	31,0	34,5	138	173	1960	1575	80	162	5,01
3 x 50	5DH7 119	9,6	36,0	39,5	158	198	2640	2250	85	202	7,15
3 x 70	5DH7 120	11,2	40,5	43,5	174	218	3520	3150	89	250	10,01
3 x 95	5DH7 121	13,2	46,5	49,5	198	248	4590	4275	93	301	13,59
3 x 120	5DH7 122	14,9	50,5	55,0	220	275	5490	5400	98	352	17,16

4 cores, with PE

4 G 25	5DH7 132	6,8	30,5	34,0	136	170	1870	1500	80	131	3,58
4 G 35	5DH7 133	8,1	34,5	38,0	152	190	2320	2100	91	162	5,01
4 G 50	5DH7 134	9,6	39,0	42,0	168	210	3190	3000	94	202	7,15
4 G 70	5DH7 135	11,2	43,5	47,0	188	235	4240	4200	99	250	10,01
4 G 95	5DH7 136	13,2	51,5	56,0	224	280	5716	5700	100	301	13,59
4 G 120	5DH7 137	14,9	56,0	60,5	242	303	6950	7200	104	352	17,16

¹ The values are valid for permanent operation with DC or AC with 50 up to 60 hz at 30° C ambient temperature, with one cable touching a surface. For other ambient temperatures, the current-carrying capacities must be adjusted according to the following factors:

°C	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
f	1,15	1,12	1,08	1,04	1,00	0,96	0,91	0,87	0,82	0,76	0,71	0,65	0,58	0,50	0,41

² Permissible short-circuit currents $I_{t_{thz}}$ for other break times t_x up to 5 s are calculated using the formula $I_{t_{thz}} = I_{thr} \sqrt{\frac{t_x}{t_k}}$

Medium Voltage cables

TECWIND Wind Farm cables

TECWIND NTSCGEWOEU 12/20 kV - 18/30 kV - 20/35 kV



Construction

Electrical parameters

Thermal parameters

Mechanical parameters

Additional performances and special characteristics



20 N/mm²



-40 °C



+90 °C

Medium Voltage multi-core UV-, ozone- and mineral oil resistant cables with increased tolerance to torsional stress, improved behaviour against abrasion and extended temperature range (from -40 °C to +90 °C) for use and installation in wind turbines at high mechanical stress as free movable, free hanging or fixed wiring. In the case of free-hanging operation the cables are twistable. The cables are used for cost-effective transmission of large bulks of MV power.

In other respects DIN VDE 0250 applies.

> Design

According to DIN VDE 0250-813

> Conductor

Flexible tinned copper conductor, finely stranded, class 5 according to DIN VDE 0295/HD 383/IEC 60228

> Insulation

Cold and heat-resistant insulation, based on EPR (ethylene-propylene-rubber)

Electrical field control with inner and outer layer of semiconductive rubber compound

> Cores identification

Cores (outer semicond. layer) are black

> Sheath

Sheath made of UV- and ozone resistant oil and cold-resistant special compound based on CM (chlorinated polyethylene) or CR (chloroprene rubber)

> Color of outer sheath

Black

> Marking

e. g. TECWIND NTSCGEWOEU 3x25/25 12/20 kV

> Rated voltage (AC)

U_0/U - 12/20 kV - 18/30 kV - 20/35 kV

> Max permissible operating voltage $U_{b, max}$

- Single-phase and three-phase AC operation Line-Earth / Line-Line
13,9/24 kV - 20,8/36 kV - 24,3/42 kV

> DC-operation

Line-Earth / Line-Line

18/36 kV - 27/54 kV - 31,5/63 kV

> AC test voltage

29 kV - 43 kV - 50 kV (test duration 5 min.)

> Max permissible operation temperature at conductor +90 °C

> Max permissible short circuit temperature at conductor +200 °C (max. 5 s)

> Min permissible temperatures (operation, installation, transportation and storage)

When in motion and stationary -40 °C

> Max permissible tensile load

20 N/mm² taking into account the entire copper cross-section

> Min bending radii

See technical data table

> Torsional stress for free hanging

±100 °/m

> Oil resistance

Test according to DIN EN 60811-2-1

> Fire behaviour

Test according to IEC 60332-1-1

> Ozone resistant

Test according to DIN EN 50396

> UV resistant

Test according to ISO 4982-2, method A

GENERATING CLEAN POWER ON LAND AND SEA

TECWIND

NTSCGEWOEU

12/20 kV – 18/30 kV – 20/35 kV



12/20 kV

Number of cores and conductor size (mm ²)	Order No.	Conductor diameter (appr.) (mm)	Overall diameter of cable		Bending radius		Net weight 1000 M approx. (kg)	Tensile load max. (N)	Suspension length (safety factor 1) max. (m)	Current carrying capacity at 30 °C air temp. for 1 cable (A) ¹	Perm. short circuit current (1 s) ² (kA)
			min. (mm)	max. (mm)	when fixed installed min. (mm)	free movement and entry min. (mm)					
3 x 25/25	5DK5 901	6,4	59,2	63,2	379	632	4780	2000	42	146	3,05
3 x 35/35	5DK5 902	7,6	63,9	67,9	407	679	5700	2800	49	181	4,27
3 x 50/50	5DK5 903	9,1	67,5	71,5	429	715	6630	4000	60	227	6,10
3 x 70/70	5DK5 904	10,8	71,5	75,5	453	755	7840	5600	71	279	8,54

18/30 kV

3 x 25/25	5DK6 901	6,4	77,1	81,1	487	811	7520	2000	27	146	3,05
3 x 35/35	5DK6 902	7,6	78,5	82,5	495	825	8050	2800	35	181	4,27
3 x 50/50	5DK6 903	9,1	81,1	85,1	511	851	8920	4000	45	227	6,10
3 x 70/70	5DK6 904	10,8	86,5	91,5	549	915	10600	5600	53	279	8,54

20/35 kV

3 x 25/25	5DK7 901	6,4	83,7	88,7	532	887	8820	2000	23	146	3,05
3 x 35/35	5DK7 902	7,6	88,3	93,3	560	933	10000	2800	28	181	4,27
3 x 50/50	5DK7 903	9,1	90,5	95,5	573	955	10830	4000	37	227	6,10
3 x 70/70	5DK7 904	10,8	93,6	98,6	592	986	12050	5600	46	279	8,54

¹ The values are valid for permanent operation with DC or AC with 50 up to 60 Hz at 30 °C ambient temperature, with one cable touching a surface. For other ambient temperatures, the current-carrying capacities must be adjusted according to the following factors:

°C	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
f	1,15	1,12	1,08	1,04	1,00	0,96	0,91	0,87	0,82	0,76	0,71	0,65	0,58	0,50	0,41

² Permissible short-circuit currents/ I_{thz} for other break times t_k up to 5 s are calculated using the formula $I_{thz} = I_{thr} \sqrt{\frac{t_s}{t_k}}$

TECWIND (H) H07ZZ-F 450/750 V



Construction

Electrical parameters

Thermal parameters

Mechanical parameters

Additional performances and special characteristics



15 N/mm²



-40 °C



+90 °C

Halogen-free cables with increased tolerance to torsional stress, improved behaviour against abrasion, extended temperature range (from -40 °C to +90 °C), UV- and ozone resistant and improved fire behaviour for use and installation in wind turbines at high mechanical stress as free movable, free hanging or fixed wiring. In the case of free-hanging operation the cables are twistable. The cables can be used indoor, outdoor, in industrial and agricultural plants and are allowed for use up to 1000 V AC or 750 V DC. In other respects DIN VDE 0298-300 (HD 516) applies.

> Design

According to DIN VDE 0282-12/HD 22.12

> Conductor

Flexible bare copper conductor, finely stranded, class 5 according to DIN VDE 0295/HD 383/IEC 60228

> Insulation

Halogen-free, cold and heat-resistant insulation, based on EPR (ethylene-propylene-rubber)

> Cores identification

Core colours according to DIN VDE 0293/HD 308

> Sheath

Sheath made of halogen-free, ozone and UV-resistant oil and cold-resistant special compound based on EVA (ethylene vinyl-acetate copolymer)

> Color of outer sheath

Black

> Marking

e. g. TECWIND (H) H07ZZ-F 4G25

> Rated voltage (AC)

U₀/U 450/750 V

> Max permissible operating voltage U₀ max

- Single-phase and three-phase AC operation Line-Earth/Line-Line
476/825 V

> DC-operation

Line-Earth/Line-Line 619/1238 V

> AC test voltage

2,5 kV (test duration 15 min.)

> Current-carrying capacity

The values are valid for 1 cable in permanent operation with DC or AC with 50 up to 60 Hz at 30 °C ambient temperature, installed on surfaces

> Max permissible operation temperature at conductor

+90 °C

> Max permissible short circuit temperature at conductor

+250 °C (max. 5 s)

> Min permissible temperatures (operation, installation, transportation and storage)

When in motion and stationary -40 °C

> Max permissible tensile load

15 N/mm² taking into account the entire copper cross-section

> Min bending radii

See selection table

> Torsional stress for free hanging

±150 °/m

> Oil resistance

Test according to DIN EN 60811-2-1

> Fire behaviour

Test according to IEC 60332-1-1 and IEC 60332-3-24

> Smoke emission

Test according to IEC 61034-2

> Halogen free

Test according to IEC 60754-2

> Ozone resistant

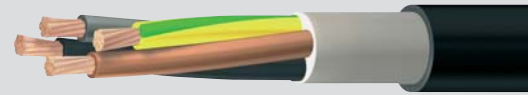
Test according to DIN EN 50396

> UV resistant

Test according to ISO 4982-2, method A

TECWIND (H)

H07ZZ-F
450/750 V



1 core, with black core insulation

Number of cores and conductor size (mm ²)	Order No.	Conductor diameter (appr.) (mm)	Overall diameter of cable		Bending radius		Net weight 1000 M approx. (kg)	Tensile load max. (N)	Suspension length (safety factor 1) max. (m)	Current carrying capacity at 30 °C air temp. for 1 cable (A) ¹	Perm. short circuit current (1 s) ² (kA)
			min. (mm)	max. (mm)	when fixed installed min. (mm)	free movement and entry min. (mm)					
1 x 25	5DH9 102	6,4	12,9	14,1	56	71	371	375	101	178	3,58
1 x 35	5DH9 103	7,5	14,3	15,7	63	79	482	525	109	220	5,01
1 x 50	5DH9 104	9,0	16,5	18,0	72	90	667	750	112	275	7,15
1 x 70	5DH9 105	10,6	18,6	20,0	80	100	888	1050	118	340	10,01
1 x 95	5DH9 106	12,9	21,6	23,1	92	116	1175	1425	121	409	13,59
1 x 120	5DH9 107	14,6	24,0	25,5	102	128	1490	1800	121	479	17,16
1 x 150	5DH9 108	16,6	26,2	28,5	114	143	1803	2250	125	549	21,45
1 x 185	5DH9 109	18,0	28,4	30,7	123	154	2220	2775	125	627	26,46
1 x 240	5DH9 110	20,7	32,1	34,4	138	172	2835	3600	127	744	34,32
1 x 300	5DH9 111	23,4	34,7	36,9	148	185	3435	4500	131	861	42,90
1 x 400	5DH9 112	27,3	39,0	42,0	168	210	4490	6000	134	993	57,20

3 cores, without PE

3 x 25	5DH9 117	6,8	27,5	31,0	124	155	1500	1125	75	131	3,58
3 x 35	5DH9 118	8,1	31,0	34,5	138	173	1960	1575	80	162	5,01
3 x 50	5DH9 119	9,6	36,0	39,5	158	198	2640	2250	85	202	7,15
3 x 70	5DH9 120	11,2	40,5	43,5	174	218	3520	3150	89	250	10,01
3 x 95	5DH9 121	13,2	46,5	49,5	198	248	4590	4275	93	301	13,59
3 x 120	5DH9 122	14,9	50,5	55,0	220	275	5490	5400	98	352	17,16

4 cores, with PE

4 G 25	5DH9 132	6,8	30,5	34,0	136	170	1870	1500	80	131	3,58
4 G 35	5DH9 133	8,1	34,5	38,0	152	190	2320	2100	91	162	5,01
4 G 50	5DH9 134	9,6	39,0	42,0	168	210	3190	3000	94	202	7,15
4 G 70	5DH9 135	11,2	43,5	47,0	188	235	4240	4200	99	250	10,01
4 G 95	5DH9 136	13,2	51,5	56,0	224	280	5716	5700	100	301	13,59
4 G 120	5DH9 137	14,9	56,0	60,5	242	303	6950	7200	104	352	17,16

¹ The values are valid for permanent operation with DC or AC with 50 up to 60 Hz at 30 °C ambient temperature, with one cable touching a surface. For other ambient temperatures, the current-carrying capacities must be adjusted according to the following factors:

°C	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
f	1,15	1,12	1,08	1,04	1,00	0,96	0,91	0,87	0,82	0,76	0,71	0,65	0,58	0,50	0,41

² Permissible short-circuit currents I_{thz} for other break times t_b , up to 5 s are calculated using the formula $I_{thz} = I_{thr} \sqrt{\frac{t_b}{t_k}}$

Medium Voltage cables

TECWIND Wind Farm cables

TECWIND (H) (N)TSCGEWOEU 12/20 kV - 18/30 kV - 20/35 kV



Construction

Electrical parameters

Thermal parameters

Mechanical parameters

Additional performances and special characteristics



20 N/mm²



-40 °C



+90 °C

Medium Voltage multi-core halogen-free cables with special fire performance and increased tolerance to torsional stress, improved behaviour against abrasion and extended temperature range (from -40 °C to +90 °C) for use and installation in wind turbines at high mechanical stress as free movable, free hanging or fixed wiring. In the case of free-hanging operation the cables are twistable. The cables are used for cost-effective transmission of large bulks of MV power.

In other respects DIN VDE 0250 applies.

> Design

Based on the German Standard DIN VDE 0250-813

> Conductor

Flexible tinned copper conductor, finely stranded, class 5 according to DIN VDE 0295/IEC 60228

> Insulation

Halogen-free, cold and heat-resistant insulation, based on EPR (ethylene-propylene-rubber)

Electrical field control with inner and outer layer of semiconductive rubber compound

> Cores identification

Cores (outer semicond. layer) are black

> Sheath

Sheath made of halogen-free, oil and cold-resistant UV - and ozone-resistant special compound based on EVA (ethylene vinyl-acetat copolymer)

> Color of outer sheath

Black

> Marking

e. g. TECWIND (H) (N)TSCGEWOEU 3x25/25 12/20 kV

> Rated voltage (AC)

U₀/U - 12/20 kV - 18/30 kV - 20/35 kV

> Max permissible operating voltage U₀ max

- Single-phase and three-phase AC operation Line-Earth / Line-Line
13,9/24 kV - 20,8/36 kV - 24,3/42 kV

> DC-operation

Line-Earth / Line-Line

18/36 kV - 27/54 kV - 31,5/63 kV

> AC test voltage

29 kV - 43 kV - 50 kV (test duration 5 min.)

> Max permissible operation temperature at conductor

+90 °C

> Max permissible short circuit temperature at conductor

+200 °C (max. 5 s)

> Min permissible temperatures (operation, installation, transportation and storage)

When in motion and stationary -40 °C

> Max permissible tensile load

20 N/mm² taking into account the entire copper cross-section

> Min bending radii

See technical data table

> Torsional stress for free hanging

±100 °/m

> Oil resistance

Test according to DIN EN 60811-2-1

> Fire behaviour

Test according to DIN EN 60332-2-1

> Smoke emission

Test according to IEC 61034-2

> Halogen free

Test according to IEC 60754-2

> Ozone resistant

Test according to DIN EN 50396

> UV resistant

Test according to ISO 4982-2, method A

GENERATING CLEAN POWER ON LAND AND SEA

TECWIND (H) (N)TSCGEWOEU

12/20 kV – 18/30 kV – 20/35 kV



12/20 kV

Number of cores and conductor size (mm ²)	Order No.	Conductor diameter (appr.) (mm)	Overall diameter of cable		Bending radius		Net weight 1000 M approx. (kg)	Tensile load max. (N)	Suspension length (safety factor 1) max. (m)	Current carrying capacity at 30 °C air temp. for 1 cable (A) ¹	Perm. short circuit current (1 s) ² (kA)
			min. (mm)	max. (mm)	when fixed installed min. (mm)	free movement and entry min. (mm)					
3x25/25	5DK9 501	6,4	59,2	63,2	379	632	5210	2000	38	146	3,05
3x35/35	5DK9 502	7,6	63,9	67,9	407	679	6200	2800	45	181	4,27
3x50/50	5DK9 503	9,1	67,5	71,5	429	715	7190	4000	56	227	6,10
3x70/70	5DK9 504	10,8	71,5	75,5	453	755	8460	5600	66	279	8,54

18/30 kV

3x25/25	5DK9 601	6,4	77,1	81,1	487	811	8250	2000	24	146	3,05
3x35/35	5DK9 602	7,6	78,5	82,5	495	825	8800	2800	32	181	4,27
3x50/50	5DK9 603	9,1	81,1	85,1	511	851	9720	4000	41	227	6,10
3x70/70	5DK9 604	10,8	86,5	91,5	549	915	11530	5600	49	279	8,54

20/35 kV

3x25/25	5DK9701	6,4	83,7	88,7	532	887	9670	2000	21	146	3,05
3x35/35	5DK9702	7,6	88,3	93,3	560	933	10950	2800	26	181	4,27
3x50/50	5DK9703	9,1	90,5	95,5	573	955	11830	4000	34	227	6,10
3x70/70	5DK9704	10,8	93,6	98,6	592	986	13120	5600	43	279	8,54

¹ The values are valid for permanent operation with DC or AC with 50 up to 60 Hz at 30 °C ambient temperature, with one cable touching a surface. For other ambient temperatures, the current-carrying capacities must be adjusted according to the following factors:

°C	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
f	1,15	1,12	1,08	1,04	1,00	0,96	0,91	0,87	0,82	0,76	0,71	0,65	0,58	0,50	0,41

² Permissible short-circuit currents/ I_{thz} for other break times t_k up to 5 s are calculated using the formula $I_{thz} = I_{thr} \sqrt{\frac{t_s}{t_k}}$

GENERATING CLEAN POWER ON LAND AND SEA

Prysmian Cables and Systems

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PRYSMIAN
CABLES & SYSTEMS

Medium Voltage cables

TECWIND Wind Farm cables

TECWIND (HM) (N)TSCGEWOEU 12/20 kV - 18/30 kV - 20/35 kV



Construction

Electrical parameters

Thermal parameters



Mechanical parameters

Additional performances and special characteristics



15 N/mm²



-40 °C



+90 °C

Medium Voltage multi-core halogen-free cables with special fire performance, increased tolerance to torsional stress and reduced dimensions (Medium Wall), improved behaviour against abrasion and extended temperature range (from -40 °C to +90 °C) for use and installation in wind turbines at high mechanical stress as free movable, free hanging or fixed wiring.

In the case of free-hanging operation the cables are twistable. The cables are used for cost-effective transmission of large bulks of MV power.

In other respects DIN VDE 0250 applies.

> Design

Based on the German Standard DIN VDE 0250-813

> Conductor

Flexible tinned copper conductor, finely stranded, class 5 according to DIN VDE 0295/IEC 60228

> Insulation

Halogen-free, cold and heat-resistant insulation, based on EPR (ethylene-propylene-rubber)

Electrical field control with inner and outer layer of semiconductive rubber compound

> Cores identification

Cores (outer semicond. layer) are black

> Sheath

Sheath made of halogen-free, oil and cold-resistant UV - and ozone-resistant special compound based on EVA (ethylene vinyl-acetate copolymer)

> Color of outer sheath

Black

> Marking

e. g. TECWIND (HM) (N)TSCGEWOEU 3x25/25 12/20 kV

> Rated voltage (AC)

U₀/U - 12/20 kV - 18/30 kV - 20/35 kV

> Max permissible operating voltage U_{b max}

- Single-phase and three-phase AC operation Line-Earth / Line-Line
13,9/24 kV - 20,8/36 kV - 24,3/42 kV

> DC-operation

Line-Earth / Line-Line

18/36 kV - 27/54 kV - 31,5/63 kV

> AC test voltage

29 kV - 43 kV - 50 kV (test duration 5 min.)

> Max permissible operation temperature at conductor

+90 °C

> Max permissible short circuit temperature at conductor

+200 °C (max. 5 s)

> Min permissible temperatures (operation, installation, transportation and storage)

When in motion and stationary -40 °C

> Max permissible tensile load

20 N/mm² taking into account the entire copper cross-section

> Min bending radii

See technical data table

> Torsional stress for free hanging

±100 °/m

> Oil resistance

Test according to DIN EN 60811-2-1

> Fire behaviour

Test according to DIN EN 60332-2-1

> Smoke emission

Test according to IEC 61034-2

> Halogen free

Test according to IEC 60754-2

> Ozone resistant

Test according to DIN EN 50396

> UV resistant

Test according to ISO 4982-2, method A

GENERATING CLEAN POWER ON LAND AND SEA

TECWIND (HM)

(N)TSCGEWOEU

12/20 kV - 18/30 kV - 20/35 kV



12/20 kV

Number of cores and conductor size (mm ²)	Order No.	Conductor diameter (appr.) (mm)	Overall diameter of cable		Bending radius		Net weight 1000 M approx. (kg)	Tensile load max. (N)	Suspension length (safety factor 1) max. (m)	Current carrying capacity at 30 °C air temp. for 1 cable (A) ¹	Perm. short circuit current (1 s) ² (kA)
			min. (mm)	max. (mm)	when fixed installed min. (mm)	free movement and entry min. (mm)					
3x25/25	SDK9 511	6,4	46,7	49,7	298	497	3410	2000	59	146	3,05
3x35/35	SDK9 512	7,6	50,6	54,6	328	546	4200	2800	67	181	4,27
3x50/50	SDK9 513	9,1	54,1	58,1	349	581	5060	4000	79	227	6,10
3x70/70	SDK9 514	10,8	58,1	62,1	373	621	6190	5600	90	279	8,54

18/30 kV

3x25/25	SDK9 611	6,4	55,8	59,8	359	598	4580	2000	44	146	3,05
3x35/35	SDK9 612	7,6	58,6	62,6	376	626	5250	2800	53	181	4,27
3x50/50	SDK9 613	9,1	63,5	67,5	405	675	6390	4000	63	227	6,10
3x70/70	SDK9 614	10,8	67,5	71,5	429	715	7600	5600	74	279	8,54

20/35 kV

3x25/25	SDK9 711	6,4	62,3	66,3	398	663	5520	2000	36	146	3,05
3x35/35	SDK9 712	7,6	65,2	69,2	415	692	6230	2800	45	181	4,27
3x50/50	SDK9 713	9,1	68,8	72,8	437	728	7210	4000	55	227	6,10
3x70/70	SDK9 714	10,8	74,2	78,2	469	782	8730	5600	64	279	8,54

¹ The values are valid for permanent operation with DC or AC with 50 up to 60 Hz at 30 °C ambient temperature, with one cable touching a surface. For other ambient temperatures, the current-carrying capacities must be adjusted according to the following factors:

°C	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
f	1,15	1,12	1,08	1,04	1,00	0,96	0,91	0,87	0,82	0,76	0,71	0,65	0,58	0,50	0,41

² Permissible short-circuit currents/ I_{thz} for other break times t_k up to 5 s are calculated using the formula $I_{thz} = I_{thr} \sqrt{\frac{t_s}{t_k}}$