



JS Cable

Wind Turbines Cable

Ver.01



The Innovative Challenger For
Your Dream

P r e f a c e

A new beginning to deliver the dream of customers - JS Cable

A new name of endless innovation and creative ideas - JS Cable

Since its foundation in 1968, JS Cable has been a pioneer in rubber cable industry and known for its excellence in quality and technology.

JS Cable is a world class leader in shipboard and offshore cable products with state of art facilities. We pursue global standard quality, safety and health and environment with full compliance of ISO 9001 (Quality Management), ISO 14001 (Environment Management) and OHSAS 18001 (Safety and Healthy working Environment Management) standards.

We continue to strive for a pace setter in cable manufacturing industry by implementing state of art R&D Center, best practice HR Program, and a new ERP initiative.

A mission to deliver light, energy, and information to global communities - JS Cable

A great leap into the future, relentless pursue for customer value - JS Cable

With our customers, we devote our full attention to make a better world tomorrow.

■ Products & Systems of JS Cable

Marine & Offshore Cables



Rubber & Specialty Cables



Electric Cables



Data Cables



Copper Rod



We supply our best quality products to markets all over the world

C o m p a n y P r o f i l e

- 1968 ● The company incorporated in the name of YONHAP CABLE Co., Ltd.
- 1978 ● Designated as a specialized factory for shipbuilding materials & equipment.
- 1984 ● Stock listed for public subscription.
- 1987 ● Moved to new constructed factory site located in Cheon-An.
- 1990 ● Communication cable plant completed in Mokchon.
- 1992 ● Operation of the copper smelting furnace plant commenced.
- 1995 ● ISO 9001 certification acquired (LRQA).
- 1996 ● Corporate name changed to Jinro Industries Co., Ltd.
- 2000 ● LAN cable production line started its commercial operation.
- 2001 ● TL (Telecommunication Leadership) 9000 certification acquired (LRQA).
ETL for IEEE 45 Type P Off-shore and Marine structure cables acquired.
UL for UL 1309 Type Off-shore and Marine structure cables acquired.
- 2002 ● Korean World Class Products Award for Marine Cable in 2002.
(Minister of Commerce, Industry and Energy Republic of Korea)
- 2004 ● ISO 14001 certification acquired (LRQA).
- 2005 ● OHSAS 18001 certification acquired (LRQA).
The corporate governance of the company acquired by LS Group.
- 2007 ● Corporate name changed to JS Cable Co., Ltd.

C o n t e n t s

Power & Control cables	08
· EWTC	
· EWTC-5PV	
· EWTC-5PSW	
· EWTC-2PW	
· EWTC DLO	
· EWTC DLO-S	
· EMWTC	
· H07RN-F	
· H07BN4-F	
· H07V-K	
· NYY-J, NYY-O	
· NYCY, NYCWY	
· NAYY-J	
Data & Communication cables	32
· LiYCY	
· LiYY(TP)	
· LiYCY(TP)	
· LiHH	
· LiHCH	
Appendix	43
· Torsional stress test of JS Cable	
· Flame / Fire / Smoke test	

A new beginning to deliver the dream of customers - JS Cable

Traveling



Ironwork

JS Cable

The Innovative Challenger For Your Dream



Wind Turbine

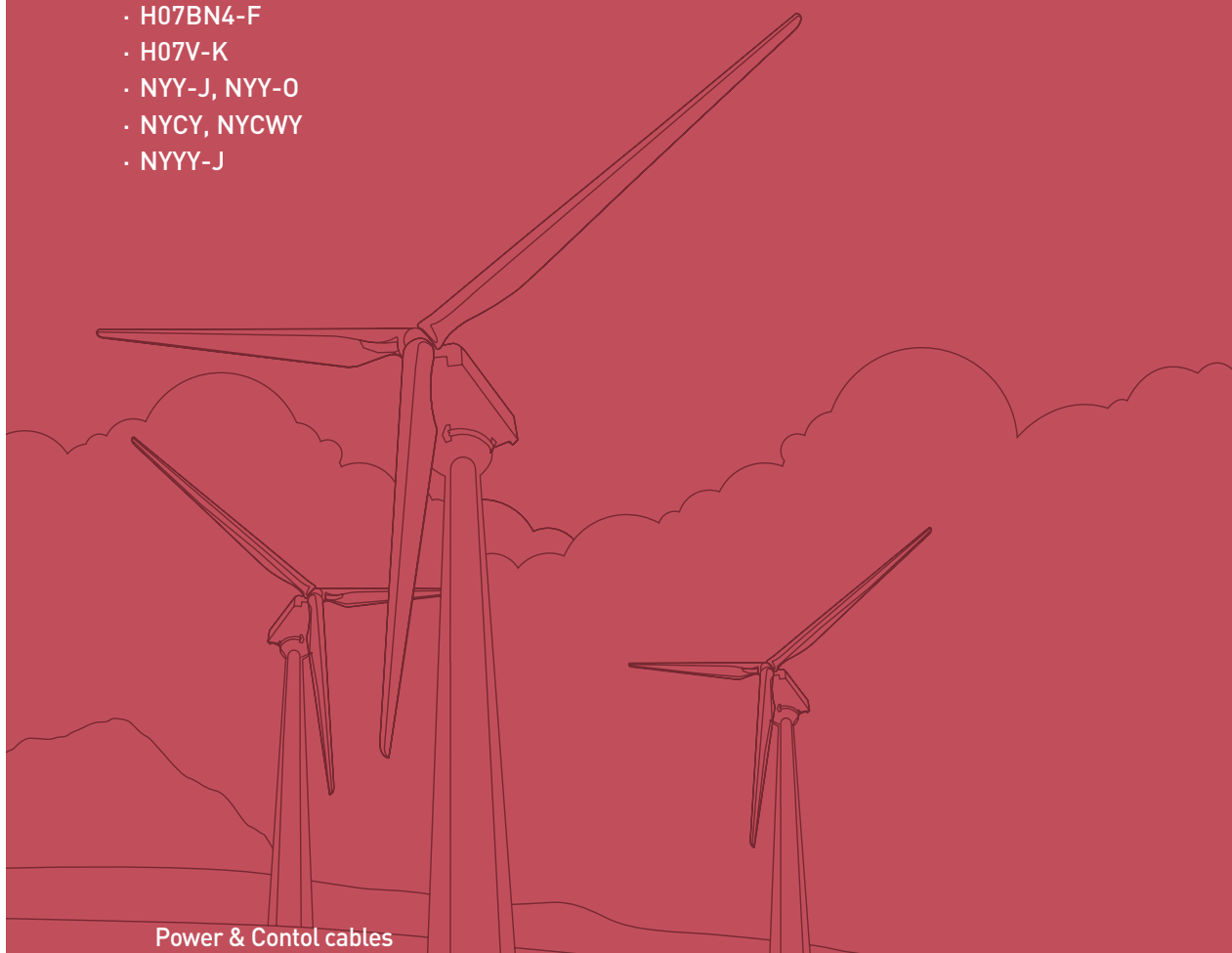
Mining

Lift

Wind Turbines Cable

Power & Control cables

- EWTC
- EWTC-5PV
- EWTC-5PSW
- EWTC-2PW
- EWTC DLO
- EWTC DLO-S
- EMWTC
- H07RN-F
- H07BN4-F
- H07V-K
- NYY-J, NYY-O
- NYCY, NYCWY
- NYYY-J



Power & Control cables

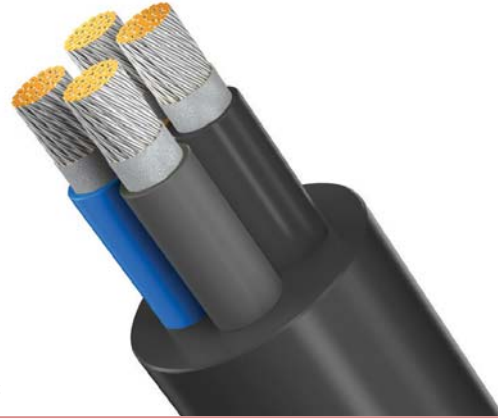
Cable type	Standard	Approval	Voltage	Core	Tem. range	Torsion	Halogen free	Page
EWTC	UL 758, HD 22	UL /cUL Recognized	1,000V	Single / Multi	-40 °C ~ +90 °C	±150°/m	-	09
EWTC-5PV	UL 758, HD 22	UL /cUL Recognized	1,000V	Single / Multi	-40 °C ~ +90 °C	±150°/m	x	11
EWTC-5PSW	UL 758, HD 22	UL /cUL Recognized	1,000V	Single / Multi	-40 °C ~ +90 °C	±150°/m	-	13
EWTC-2PW	UL 758, HD 22	UL /cUL Recognized	1,000V	Single	-40 °C ~ +90 °C	-	-	15
EWTC DLO	UL 44	UL /cUL Listed	2,000V	Single	-40 °C ~ +90 °C	±150°/m	-	16
EWTC DLO-S	UL 44	UL /cUL Listed	2,000V	Single	-40 °C ~ +90 °C	±150°/m	-	18
EMWTC	VDE 0250	-	12/20kV, 20/35kV	Multi	-40 °C ~ +90 °C	±100°/m	x	20
H07RN-F	HD 22	-	450/750V	Single / Multi	-25 °C ~ +60 °C	-	-	21
H07BN4-F	HD 22	-	450/750V	Single / Multi	-40 °C ~ +90 °C	-	-	23
H07V-F	HD 21	-	450/750V	Single	-5 °C ~ +70 °C	-	-	25
NYJ, NYY-O	VDE 0276	-	0.6/1kV	Single / Multi	-40 °C ~ +70 °C	-	-	26
NYCY, NYCWY	VDE 0276	-	0.6/1kV	Multi	-40 °C ~ +70 °C	-	-	29
NYYY-J	VDE 0276	-	0.6/1kV	Multi	-30 °C ~ +70 °C	-	-	31

EWTC

UL/cUL Style 3842/4556, Single/Multi-core, 1000V, Torsion, FT2

Application

This cable is designed for the torsion application in wind turbines.



Cable Design →→→

EWTC

Approval

UL / cUL Recognized

Standard

UL 758, HD 22

Technical data

Rated voltage	1,000V
Test voltage	3,500V
Temperature range	-40°C ~ +90°C
Torsional stress	±150°/m
Oil resistant	IEC 60811-2-1
Flame retardant	IEC 60332-1, FT2
Ozone resistant	IEC 60811-2-1
UV resistant	UL 1581

Design

Conductor	Finely stranded, class 5.5* Special design for torsion property
Insulation	Special compound based on EPR
Sheath	Special compound based on CR/CPE
Core identification	HD 308
Protective conductor	G : with protective conductor Green/Yellow X : without protective conductor

* JS design standard

EWTC

UL/cUL Style 3842/4556, Single/Multi-core, 1000V, Torsion, FT2

No. cores x Cross-section	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
1x1.5	5.2	7.2	60
1x2.5	6.0	8.0	80
1x4	7.4	9.4	110
1x6	8.1	10.1	140
1x10	9.7	11.7	200
1x16	11.1	13.1	270
1x25	13.0	15.0	390
1x35	14.6	16.6	510
1x50	16.8	18.8	680
1x70	18.7	20.7	900
1x95	21.1	24.1	1,210
1x120	23.0	26.0	1,480
1x150	25.4	28.4	1,810
1x185	28.1	31.1	2,220
1x240	31.0	35.0	2,820
1x300	34.3	38.3	3,460
1x400	39.0	43.0	4,540
1x500	43.1	47.1	5,590
1x630	47.1	52.1	6,960

EWTC

UL/cUL Style 3842/4556, Single/Multi-core, 1000V, Torsion, FT2

No. cores x Cross-section	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
2x1	8.2	10.2	120
2x1.5	8.7	10.7	140
2x2.5	10.2	12.2	190
2x4	13.4	15.4	300
2x6	14.6	16.6	370
2x10	17.6	19.6	550
2x16	19.9	22.9	770
2x25	23.7	26.7	1,100
3x1	8.6	10.6	140
3x1.5	9.4	11.4	170
3x2.5	10.8	12.8	230
3x4	14.2	16.2	360
3x6	15.4	17.4	450
3x10	18.8	20.8	690
3x16	21.3	24.3	970
3x25	25.4	28.4	1,400
3x35	28.3	32.3	1,850
3x50	33.2	37.2	2,550
3x70	37.5	41.5	3,370
3x95	43.0	48.0	4,540
3x120	47.2	52.2	5,570
3x150	52.6	57.6	6,900
3x185	57.6	63.6	8,430
3x240	64.4	71.4	10,730
3x300	71.7	78.7	13,230
4x1	9.5	11.5	170
4x1.5	10.2	12.2	200
4x2.5	12.0	14.0	280
4x4	15.7	17.7	440
4x6	17.1	19.1	560
4x10	20.4	23.4	850
4x16	23.7	26.7	1,210
4x25	28.4	31.4	1,760
4x35	31.7	35.7	2,330
4x50	37.3	41.3	3,230
4x70	41.8	45.8	4,240
4x95	48.1	53.1	5,750
4x120	52.3	58.3	7,050
4x150	58.4	64.4	8,760
4x185	64.1	71.1	10,700
4x240	72.3	79.3	13,650
4x300	79.8	87.8	16,820
5x1	10.4	12.4	190
5x1.5	11.3	13.3	240
5x2.5	13.3	15.3	340
5x4	17.4	19.4	540
5x6	18.9	20.9	670
5x10	22.8	25.8	1,050
5x16	26.5	29.5	1,480
5x25	31.1	35.1	2,160
6x1.5	13.1	15.1	270
6x2.5	15.2	17.2	370
6x4	19.5	22.5	590
12x1.5	17.2	19.2	440
12x2.5	19.7	22.7	640
12x4	26.2	29.2	1,020
18x1.5	19.7	22.7	630
18x2.5	23.3	26.3	920
18x4	30.7	34.7	1,490
24x1.5	22.7	25.7	800
24x2.5	26.8	29.8	1,160
36x1.5	26.8	29.8	1,140
36x2.5	31.4	35.4	1,690

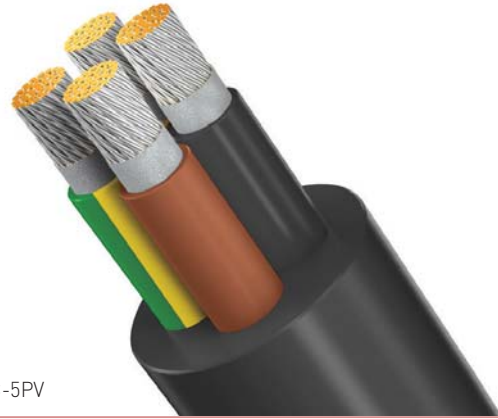
* Other sizes are available on specific request.

EWTC-5PV

UL/cUL Style 3842/4556, Single/Multi-core, 1000V, Torsion, Halogen free, FT2

Application

This cable is designed for the torsion application in wind turbines.



Cable Design →→→

EWTC-5PV

Approval

UL / cUL Recognized

Standard

UL 758, HD 22

Technical data

Rated voltage	1,000V
Test voltage	3,500V
Temperature range	-40°C ~ +90°C
Torsional stress	±150°/m
Halogen free	IEC 60754-1,2
Low smoke	IEC 61034-1,2
Oil resistant	IEC 60811-2-1
Flame retardant	IEC 60332-1, FT2
Ozone resistant	IEC 60811-2-1
UV resistant	UL 1581

Design

Conductor	Finely stranded, class 5.5* Special design for torsion property
Insulation	Special compound based on EPR
Sheath	Special compound based on EVA
Core identification	HD 308
Protective conductor	G : with protective conductor Green/Yellow X : without protective conductor

* JS design standard

EWTC-5PV

UL/cUL Style 3842/4556, Single/Multi-core, 1000V, Torsion, Halogen free, FT2

No. cores x Cross-section	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
1x1.5	1.5	6.7	8.7
1x2.5	2.0	7.3	9.3
1x4	2.8	8.9	10.9
1x6	3.3	9.6	11.6
1x10	4.3	11.2	13.2
1x16	5.5	12.4	14.4
1x25	6.8	14.5	16.5
1x35	8.2	16.3	18.3
1x50	9.8	18.5	20.5
1x70	11.5	19.9	22.9
1x95	13.6	22.9	25.9
1x120	15.3	24.8	27.8
1x150	17.1	27.2	30.2
1x185	19.0	29.4	33.4
1x240	21.6	32.8	36.8
1x300	24.1	36.1	40.1
1x400	27.8	40.8	44.8

EWTC-5PV

UL/cUL Style 3842/4556, Single/Multi-core, 1000V, Torsion, Halogen free, FT2

No. cores x Cross-section	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
1x500	31.1	44.4	49.4
1x630	35.0	48.9	53.9
2x1	1.2	9.7	11.7
2x1.5	1.5	10.2	12.2
2x2.5	2.0	11.7	13.7
2x4	2.8	15.1	17.1
2x6	3.3	16.3	18.3
2x10	4.3	18.8	21.8
2x16	5.5	21.6	24.6
2x25	6.8	25.5	28.5
3x1	1.2	10.1	12.1
3x1.5	1.5	10.7	12.7
3x2.5	2.0	12.3	14.3
3x4	2.8	15.9	17.9
3x6	3.3	17.2	19.2
3x10	4.3	20.1	23.1
3x16	5.5	23.2	26.2
3x25	6.8	27.2	30.2
3x35	8.2	30.1	34.1
3x50	9.8	35.0	39.0
3x70	11.5	39.3	43.3
3x95	13.6	44.8	49.8
3x120	15.3	49.1	54.1
3x150	17.1	53.9	59.9
3x185	19.0	59.5	65.5
3x240	21.6	66.4	73.4
3x300	24.1	73.5	80.5
4x1	1.2	11.1	13.1
4x1.5	1.5	11.7	13.7
4x2.5	2.0	13.5	15.5
4x4	2.8	17.4	19.4
4x6	3.3	18.8	20.8
4x10	4.3	22.2	25.2
4x16	5.5	25.5	28.5
4x25	6.8	29.7	33.7
4x35	8.2	33.5	37.5
4x50	39.1	43.1	3,000
4x70	43.1	48.1	3,930
4x95	50.0	55.0	5,300
4x120	54.2	60.2	6,500
4x150	60.3	66.3	8,050
4x185	65.9	72.9	9,810
4x240	74.2	81.2	12,500
4x300	81.7	89.7	15,370
5x1	11.9	13.9	210
5x1.5	12.9	14.9	250
5x2.5	15.0	17.0	350
5x4	18.6	21.6	530
5x6	20.2	23.2	660
5x10	24.6	27.6	1,010
5x16	28.3	31.3	1,420
5x25	33.0	37.0	2,050
6x1.5	13.8	15.8	290
6x2.5	16.3	18.3	410
6x4	20.4	23.4	630
12x1.5	18.2	20.2	480
12x2.5	20.8	23.8	690
12x4	27.2	30.2	1,080
18x1.5	20.8	23.8	680
18x2.5	24.5	27.5	980
18x4	31.7	35.7	1,560
24x1.5	23.7	26.7	850
24x2.5	28.0	31.0	1,240
36x1.5	28.0	31.0	1,210
36x2.5	32.6	36.6	1,780

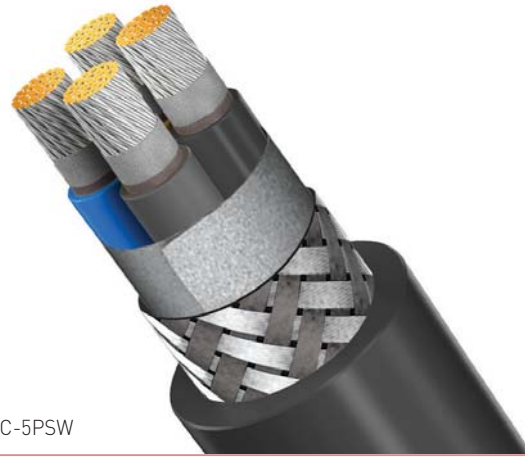
* Other sizes are available on specific request.

EWTC-5PSW

UL/cUL Style 3842/4556, Single/Multi-core, 1000V, Metal screen, Torsion, FT2

Application

This cable is designed for the torsion application in wind turbines.



Cable Design →→→

EWTC-5PSW

Approval

UL / cUL Recognized

Standard

UL 758, HD 22

Technical data

Rated voltage	1,000V
Test voltage	3,500V
Temperature range	-40°C ~ +90°C
Torsional stress	±150°/m
Oil resistant	IEC 60811-2-1
Flame retardant	IEC 60332-1, FT2
Ozone resistant	IEC 60811-2-1
UV resistant	UL 1581

Design

Conductor	Finely stranded, class 5.5* Special design for torsion property
Insulation	Special compound based on EPR
Metal screen	Braid, tinned copper wires with polyester yarn
Sheath	Special compound based on CR/CPE
Core identification	HD 308
Protective conductor	G : with protective conductor Green/Yellow
	X : without protective conductor

* JS design standard

EWTC-5PSW

UL/cUL Style 3842/4556, Single/Multi-core, 1000V, Metal screen, Torsion, FT2

No. cores x Cross-section mm ²	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
1x1.5	6.7	8.7	80
1x2.5	7.3	9.3	90
1x4	8.9	10.9	130
1x6	9.6	11.6	160
1x10	11.2	13.2	230
1x16	12.4	14.4	300
1x25	14.5	16.5	420
1x35	16.3	18.3	550
1x50	18.5	20.5	730
1x70	19.9	22.9	950
1x95	22.9	25.9	1,280
1x120	24.8	27.8	1,550
1x150	27.2	30.2	1,890
1x185	29.4	33.4	2,310
1x240	32.8	36.8	2,920
1x300	36.1	40.1	3,570
1x400	40.8	44.8	4,650

EWTC-5PSW

UL/cUL Style 3842/4556, Single/Multi-core, 1000V, Metal screen, Torsion, FT2

No. cores x Cross-section	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
1x500	44.4	49.4	5,720
1x630	48.9	53.9	7,100
2x1	9.7	11.7	120
2x1.5	10.2	12.2	140
2x2.5	11.7	13.7	180
2x4	15.1	17.1	280
2x6	16.3	18.3	340
2x10	18.8	21.8	490
2x16	21.6	24.6	670
2x25	25.5	28.5	950
3x1	10.1	12.1	150
3x1.5	10.7	12.7	170
3x2.5	12.3	14.3	230
3x4	15.9	17.9	360
3x6	17.2	19.2	440
3x10	20.1	23.1	650
3x16	23.2	26.2	910
3x25	27.2	30.2	1,300
3x35	30.1	34.1	1,700
3x50	35.0	39.0	2,320
3x70	39.3	43.3	3,060
3x95	44.8	49.8	4,100
3x120	49.1	54.1	5,020
3x150	53.9	59.9	6,190
3x185	59.5	65.5	7,550
3x240	66.4	73.4	9,620
3x300	73.5	80.5	11,800
4x1	11.1	13.1	180
4x1.5	11.7	13.7	210
4x2.5	13.5	15.5	280
4x4	17.4	19.4	440
4x6	18.8	20.8	550
4x10	22.2	25.2	820
4x16	25.5	28.5	1,150
4x25	29.7	33.7	1,650
4x35	33.5	37.5	2,180
4x50	39.1	43.1	3,000
4x70	43.1	48.1	3,930
4x95	50.0	55.0	5,300
4x120	54.2	60.2	6,500
4x150	60.3	66.3	8,050
4x185	65.9	72.9	9,810
4x240	74.2	81.2	12,500
4x300	81.7	89.7	15,370
5x1	11.9	13.9	210
5x1.5	12.9	14.9	250
5x2.5	15.0	17.0	350
5x4	18.6	21.6	530
5x6	20.2	23.2	660
5x10	24.6	27.6	1,010
5x16	28.3	31.3	1,420
5x25	33.0	37.0	2,050
6x1.5	13.8	15.8	290
6x2.5	16.3	18.3	410
6x4	20.4	23.4	630
12x1.5	18.2	20.2	480
12x2.5	20.8	23.8	690
12x4	27.2	30.2	1,080
18x1.5	20.8	23.8	680
18x2.5	24.5	27.5	980
18x4	31.7	35.7	1,560
24x1.5	23.7	26.7	850
24x2.5	28.0	31.0	1,240
36x1.5	28.0	31.0	1,210
36x2.5	32.6	36.6	1,780

* Other sizes are available on specific request.

EWTC-2PW

UL/cUL Style 3842, Single-core, 1000V, FT2

Application

This cable is designed for wind turbines.



Cable Design →→→

EWTC-2PW

Approval

UL / cUL Recognized

Standard

UL 758, HD 22

Technical data

Rated voltage	1,000V
Test voltage	3,500V
Temperature range	-40°C ~ +90°C
Oil resistant	IEC 60811-2-1
Flame retardant	IEC 60332-1, FT2
Ozone resistant	IEC 60811-2-1
UV resistant	UL 1581

Design

Conductor	Circular, stranded, class 2
Insulation	Special compound based on EPR
Sheath	Special compound based on CR/CPE

EWTC-2PW

UL/cUL Style 3842, Single-core, 1000V, FT2

No. cores x Cross-section mm ²	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
1x1,5	5,2	7,2	60
1x2,5	5,8	7,8	70
1x4	6,3	8,3	90
1x6	6,9	8,9	120
1x10	7,8	9,8	160
1x16	9,1	11,1	230
1x25	10,8	12,8	340
1x35	12,2	14,2	450
1x50	13,9	15,9	590
1x70	15,3	18,3	790
1x95	17,7	20,7	1,060
1x120	18,9	22,9	1,320
1x150	20,9	24,9	1,600
1x185	22,7	26,7	1,870
1x240	26,6	30,6	2,580
1x300	29,1	34,1	3,200
1x400	33,5	38,5	4,320
1x500	36,9	41,9	5,220

* Other sizes are available on specific request.

EWTC DLO

UL/cUL Listed, Single-core, 2000V, Torsion, FT4

Application

This cable is designed for the torsion application in wind turbines.



Cable Design →→→

EWTC DLO

Approval

UL / cUL Listed

Standard

UL 44

Technical data

Rated voltage	2,000V
Test voltage	up to 11kV
Temperature range	-40°C ~ +90°C
Torsional stress	±150°/m
Oil/Gasoline resistant	PR I, GR I
Flame retardant	WW-1, FT1, FT2, CT, FT4
Ozone resistant	IEC 60811-2-1
UV resistant	UL 1581

Design

Conductor	Finely stranded, class 5.5* Special design for torsion property
Insulation	Special compound based on EPR Black color
Jacket	Special compound based on CPE Black color

* JS design standard

EWTC DLO

UL/cUL Listed, Single core, 2000V, Torsion, FT4

Size of conductor	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
2.5	5.0	7.0	60
4	7.0	9.0	100
6	8.0	10.0	130
10	9.0	11.0	170
16	10.2	12.2	240
25	11.5	13.5	320
35	14.8	16.8	490
50	16.4	18.4	630
70	18.1	20.1	830
95	20.7	23.7	1,130
120	23.2	26.2	1,410
150	25.0	28.0	1,700
185	26.9	29.9	2,030
240	29.0	33.0	2,540
300	32.3	36.3	3,140
400	36.0	40.0	4,060
500	39.3	43.3	4,970
630	45.4	50.4	6,440

Size of conductor	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
12	5.3	7.3	80
10	6.7	8.7	110
8	7.9	9.9	160
6	9.8	11.8	230
4	11.3	13.3	320
3	12.2	14.2	390
2	13.6	15.6	470
1	15.8	17.8	620
1/0	17.2	19.2	750
2/0	18.6	20.6	920
3/0	19.4	22.4	1,080
4/0	22.2	25.2	1,380
262	24.5	27.5	1,670
313	26.2	29.2	1,960
373	27.9	30.9	2,270
444	29.2	33.2	2,650
535	32.1	36.1	3,180
646	34.4	38.4	3,720
777	37.0	41.0	4,400
1111	44.7	49.7	6,360

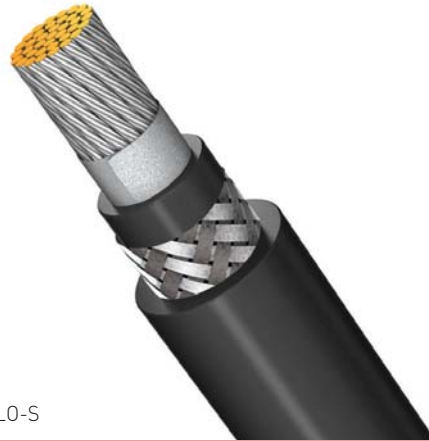
* Other sizes are available on specific request.

EWTC DLO-S

UL/cUL Listed, Single-core, 2000V, Torsion, FT4

Application

This cable is designed for the torsion application in wind turbines.



Cable Design →→→

EWTC DLO-S

Approval

UL / cUL Listed

Standard

UL 44

Technical data

Rated voltage	2,000V
Test voltage	up to 11kV
Temperature range	-40°C ~ +90°C
Torsional stress	±150°/m
Oil/Gasoline resistant	PR I, GR I
Flame retardant	WV-1, FT1, FT2, CT, FT4
Ozone resistant	IEC 60811-2-1
UV resistant	UL 1581

Design

Conductor	Finely stranded, class 5.5* Special design for torsion property
Insulation	Special compound based on EPR Black color
Metal screen	Braid, tinned copper wire polyester yarn
Jacket	Special compound based on CPE Black color

* JS design standard

EWTC DLO-S

UL/cUL Listed, Single core, 2000V, Torsion, FT4

Size of conductor	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
2.5	6.5	8.5	70
4	8.5	10.5	110
6	9.5	11.5	140
10	10.5	12.5	180
16	11.7	13.7	250
25	13.0	15.0	330
35	16.3	18.3	500
50	17.9	19.9	650
70	19.6	21.6	850
95	22.2	25.2	1,160
120	24.7	27.7	1,440
150	26.5	29.5	1,740
185	28.4	31.4	2,080
240	30.5	34.5	2,600
300	33.8	37.8	3,210
400	37.5	41.5	4,150
500	40.8	44.8	5,070
630	46.9	51.9	6,570

Size of conductor	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
12	6.8	8.8	90
10	8.2	10.2	120
8	9.4	11.4	170
6	11.3	13.3	240
4	12.8	14.8	330
3	13.7	15.7	400
2	15.1	17.1	480
1	17.3	19.3	640
1/0	18.7	20.7	770
2/0	20.1	22.1	940
3/0	20.9	23.9	1,110
4/0	23.7	26.7	1,410
262	26.0	29.0	1,710
313	27.7	30.7	2,000
373	29.4	32.4	2,320
444	30.7	34.7	2,710
535	33.6	37.6	3,250
646	35.9	39.9	3,800
777	38.5	42.5	4,490
1111	46.2	51.2	6,490

* Other sizes are available on specific request.

EMWTC

Multi-core, 12/20kV, 20/35kV, Torsion, Halogen free

Application

This cable is designed for the torsion application in wind turbines.



Cable Design →→→

EMWTC

Standard

IEC 60840, VDE 0250-813

Technical data

Rated voltage	12/20kV , 20/35kV
Test voltage	up to 50kV
Temperature range	-40 °C ~ +90 °C
Torsional stress	±100° /m
Min. bending radius	6 x D (D : Cable diameter)
Halogen free	IEC 60754-1,2
Low smoke	IEC 61034-1,2
Oil resistant	IEC 60811-2-1, IRM 902, Mobil SHC 524 etc.
Flame retardant	IEC 60332-1
Ozone resistant	IEC 60811-2-1
UV resistant	UL 1581

Design

Conductor	Very finely stranded, class 5.5* Special design for torsion property
Insulation	Special compound based on EPR
Field control	Inner/Outer semiconductive layer Newly developed special compound
Sheath	Special compound based on EVA Newly developed special compound

* JS design standard

EMWTC

Multi core, 12/20kV, 20/35kV, Torsion, Halogen free

No. cores x Cross-section	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
12/20kV 3x70/70	58.0	67.0	6000
20/35kV 3x70/70	74.0	82.0	7000

* Other sizes are available on specific request.

H07RN-F

Single/Multi-core, 450/750V

Application

This cable is designed for wind turbines.



Cable Design →→→

H07RN-F

Standard

HD 22

Technical data

Rated voltage	450/750V
Test voltage	2,500V
Temperature range	-25°C ~ +60°C
Oil resistant	IEC 60811-2-1
Flame retardant	IEC 60332-1
Ozone resistant	IEC 60811-2-1

Design

Conductor	Finely stranded, class 5
Insulation	EPR
Sheath	CR/CPE
Core identification	HD 308
Protective conductor	G : with protective conductor Green/Yellow
	X : without protective conductor

H07RN-F

Single/Multi-core, 450/750V

No. cores x Cross-section	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
1x1.5	5.7	7.1	50
1x2.5	6.3	7.9	70
1x4	7.2	9.0	90
1x6	7.9	9.8	120
1x10	9.5	11.9	200
1x16	10.8	13.4	270
1x25	12.7	15.8	390
1x35	14.3	17.9	510
1x50	16.5	20.6	720
1x70	18.6	23.3	980
1x95	20.8	26.0	1,270
1x120	22.8	28.6	1,540
1x150	25.2	31.4	1,880
1x185	27.6	34.4	2,250
1x240	30.6	38.3	2,930
1x300	33.5	41.9	3,600
1x400	37.4	46.8	4,680
2x1.5	8.5	11.0	130
2x2.5	10.2	13.1	180
2x4	11.8	15.1	250
2x6	13.1	16.8	320
2x10	17.7	22.6	630
2x16	20.2	25.7	830
2x25	24.3	30.7	1,170
3x1.5	9.2	11.9	150
3x2.5	10.9	14.0	220
3x4	12.7	16.2	300
3x6	14.1	18.0	400
3x10	19.1	24.2	770
3x16	21.8	27.6	1,030
3x25	26.1	33.0	1,460
3x35	29.3	37.1	1,910
3x50	34.1	42.9	2,690
3x70	38.4	48.3	3,510
3x95	43.3	54.0	4,590
3x120	47.4	60.0	5,530
3x150	52.0	66.0	6,750
3x185	57.0	72.0	8,090
3x240	65.0	82.0	10,650
3x300	72.0	90.0	13,220
4x1.5	10.2	13.1	190
4x2.5	12.1	15.5	270
4x4	14.0	17.9	370
4x6	15.7	20.0	500
4x10	20.9	26.5	950
4x16	23.8	30.1	1,280
4x25	28.9	36.6	1,850
4x35	32.5	41.1	2,420
4x50	37.7	47.5	3,400
4x70	42.7	54.0	4,470
4x95	48.4	61.0	5,900
4x120	53.0	66.0	7,050
4x150	58.0	73.0	8,630
4x185	64.0	80.0	10,370
4x240	72.0	91.0	13,640
5x1.5	11.2	14.4	230
5x2.5	13.3	17.0	330
5x4	15.6	19.9	460
5x6	17.5	22.2	640
5x10	22.9	29.1	1,160
5x16	26.4	33.3	1,580
5x25	32.0	40.4	2,280

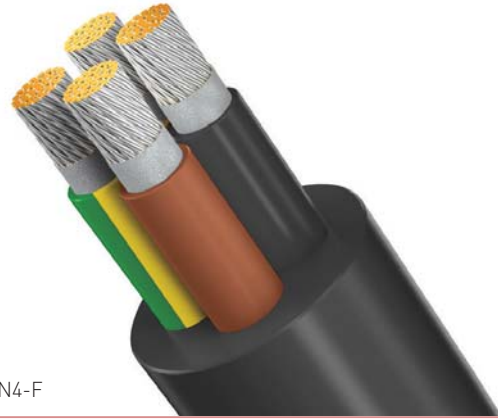
* Other sizes are available on specific request.

H07BN4-F

Single/Multi-core, 450/750V

Application

This cable is designed for wind turbines.



H07BN4-F

Cable Design →→→

Standard

HD 22

Technical data

Rated voltage	450/750V
Test voltage	2,500V
Temperature range	-40°C ~ +90°C
Oil resistant	IEC 60811-2-1
Flame retardant	IEC 60332-1
Ozone resistant	IEC 60811-2-1

Design

Conductor	Finely stranded, class 5
Insulation	EPR
Sheath	CR/CPE
Core identification	HD 308
Protective conductor	G : with protective conductor Green/Yellow
	X : without protective conductor

H07BN4-F

Single/Multi-core, 450/750V

No. cores x Cross-section	Overall diameter		Net weight (approx.) kg / km
	min. mm	max. mm	
1x1.5	5.7	7.1	50
1x2.5	6.3	7.9	70
1x4	7.2	9.0	90
1x6	7.9	9.8	120
1x10	9.5	11.9	200
1x16	10.8	13.4	270
1x25	12.7	15.8	390
1x35	14.3	17.9	510
1x50	16.5	20.6	720
1x70	18.6	23.3	980
1x95	20.8	26.0	1,270
1x120	22.8	28.6	1,540
1x150	25.2	31.4	1,880
1x185	27.6	34.4	2,250
1x240	30.6	38.3	2,930
1x300	33.5	41.9	3,600
1x400	37.4	46.8	4,680
2x1.5	8.5	11.0	130
2x2.5	10.2	13.1	180
2x4	11.8	15.1	250
2x6	13.1	16.8	320
2x10	17.7	22.6	630
2x16	20.2	25.7	830
2x25	24.3	30.7	1,170
3x1.5	9.2	11.9	150
3x2.5	10.9	14.0	220
3x4	12.7	16.2	300
3x6	14.1	18.0	400
3x10	19.1	24.2	770
3x16	21.8	27.6	1,030
3x25	26.1	33.0	1,460
3x35	29.3	37.1	1,910
3x50	34.1	42.9	2,690
3x70	38.4	48.3	3,510
3x95	43.3	54.0	4,590
3x120	47.4	60.0	5,530
3x150	52.0	66.0	6,750
3x185	57.0	72.0	8,090
3x240	65.0	82.0	10,650
3x300	72.0	90.0	13,220
4x1.5	10.2	13.1	190
4x2.5	12.1	15.5	270
4x4	14.0	17.9	370
4x6	15.7	20.0	500
4x10	20.9	26.5	950
4x16	23.8	30.1	1,280
4x25	28.9	36.6	1,850
4x35	32.5	41.1	2,420
4x50	37.7	47.5	3,400
4x70	42.7	54.0	4,470
4x95	48.4	61.0	5,900
4x120	53.0	66.0	7,050
4x150	58.0	73.0	8,630
4x185	64.0	80.0	10,370
4x240	72.0	91.0	13,640
5x1.5	11.2	14.4	230
5x2.5	13.3	17.0	330
5x4	15.6	19.9	460
5x6	17.5	22.2	640
5x10	22.9	29.1	1,160
5x16	26.4	33.3	1580
5x25	32.0	40.4	2280

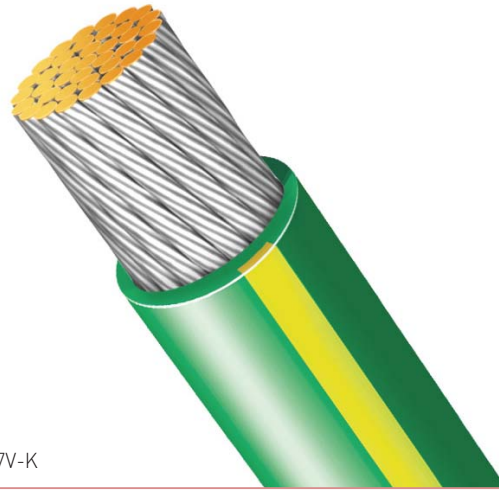
* Other sizes are available on specific request.

H07V-K

PVC insulated single conductor

Application

This cable is designed for fixed installation



Cable Design →→→

H07V-K

Standard

BS 6360, HD 21

Technical data

Rated voltage	U ₀ /U	450/750V
Test voltage		2,500V
Temperature range	Flexing	-5°C ~ 70°C
Min. bending radius		6 x D (D : Cable diameter)

Design

Conductor	Finely stranded, class 5
Insulation	PVC
Color	Black, Green/Yellow

H07V-K

PVC insulated single conductor

No. cores x Cross-section	Overall diameter max.	Net weight (approx.)
mm ²	mm	kg / km
1x1.5	3.5	44
1x2.5	4.2	61
1x4	4.8	75
1x6	6.4	129
1x10	7.6	164
1x16	8.8	199
1x25	11.0	319
1x35	12.5	392
1x50	14.5	502
1x70	17.0	660
1x95	19.0	764
1x120	21.0	913
1x150	23.5	1,133
1x185	26.0	1,378
1x240	29.5	1,703

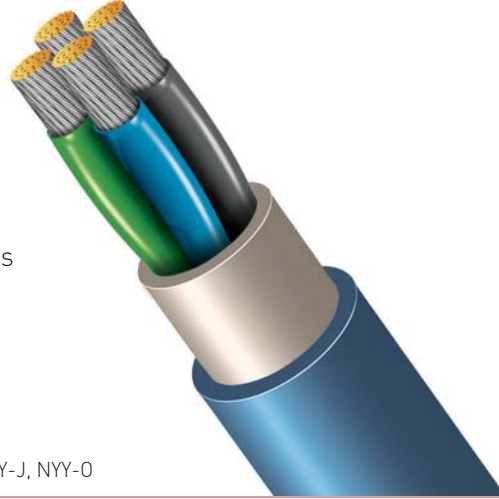
* Other sizes are available on specific request.

NYY-J, NYY-O

Wind tower installation

Application

As a fixed installation power and control cables



Cable Design →→→

NYY-J, NYY-O

Standard

VDE 0276 Part 603, VDE 0276 Part 627

Technical data

Core identification code	≤ 5 cores	VDE 0293-308
Test voltage	≥ 6 cores	Black with white numbers
Conductor stranding	Single or Multi-wire	
Min. bending radius	Single core	15 x outer diameter
	Multi core	12 x outer diameter
Rated voltage	U _o /U	0.6/1kV
Test voltage	4,000V	
Range of temperature	Flexing	+5°C ~ +50°C
	Fixed	-40°C ~ +70°C
Flame retardant	IEC 60332-1-2	

Design

Conductor of bare copper wires
Core insulation : Based on PVC
Filling compound over the core assembly
PVC based outer sheath

re : round conductor, single wire

rm : round conductor, multi wire

sm : sectorial conductor

NYY-J, NYY-O

Wind tower installation

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
NYY-J			
1x25,0 rm	13	240	380
1x35,0 rm	14	336	447
1x50,0 rm	15	480	650
1x70,0 rm	17	672	864
3x1,5 re	12	43	223
4x1,5 re	13	58	256
5x1,5 re	14	72	293
7x1,5 re	15	101	360
10x1,5 re	18	144	520
12x1,5 re	19	173	560
14x1,5 re	20	202	620
16x1,5 re	21	230	680
19x1,5 re	22	274	760
24x1,5 re	24	346	900

NYY-J, NYY-O

Wind tower installation

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
30x1,5 re	26	432	1,100
3x2,5 re	13	72	272
4x2,5 re	14	96	316
5x2,5 re	15	120	323
7x2,5 re	16	168	450
10x2,5 re	20	240	630
12x2,5 re	20	288	680
14x2,5 re	21	336	790
19x2,5 re	23	456	990
24x2,5 re	26	576	1,300
30x2,5 re	28	720	1,400
3x4,0 re	15	115	373
4x4,0 re	16	154	439
5x4,0 re	17	192	510
3x6,0 re	16	173	466
4x6,0 re	17	230	547
5x6,0 re	19	288	640
3x10,0 re	18	288	629
4x10,0 re	19	384	743
5x10,0 re	21	480	899
3x16,0 re	20	461	850
4x16,0 re	22	614	1,039
5x16,0 re	23	768	1,240
3x25,0 rm / 16,0 re	25	874	1,595
4x25,0 rm	27	960	1,620
3x35,0 sm / 16,0 re	27	1,162	1,718
4x35,0 sm	27	1,344	1,916
3x50,0 sm / 25,0 rm	31	1,680	2,383
4x50,0 sm	31	1,920	2,639
3x70,0 sm / 35,0 sm	33	2,352	3,196
4x70,0 sm	35	2,688	3,576
3x95,0 sm / 50,0 sm	38	3,216	4,271
4x95,0 sm	40	3,648	4,746
3x120,0 sm / 70,0 sm	41	4,128	5,281
4x120,0 sm	43	4,608	5,813
3x150,0 sm / 70,0 sm	46	4,992	6,408
4x150,0 sm	48	5,760	7,263
3x185,0 sm / 95,0 sm	50	6,240	7,909
4x185,0 sm	53	7,104	8,905
3x240,0 sm / 120,0 sm	57	8,064	10,162
4x240,0 sm	60	9,216	11,430

* Other sizes are available on specific request.

NYY-J, NYY-O

Wind tower installation

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
NYY-O			
1x10,0 re	10.0	96	176
1x16,0 re	11.0	154	239
1x25,0 rm	13.0	240	380
1x35,0 rm	14.0	336	447
1x50,0 rm	15.0	480	650
1x70,0 rm	17.0	672	864
1x95,0 rm	19.0	912	1,132
1x120,0 rm	21.0	1,152	1,405
1x150,0 rm	22.0	1,440	1,710
1x185,0 rm	24.0	1,776	2,086
1x240,0 rm	27.0	2,304	2,669
1x300,0 rm	30.0	2,880	3,305
1x500,0 rm	39.0	4,800	5,400
2x1,5 re	11.0	29	210
2x2,5 re	12.0	48	250
4x2,5 re	14.0	96	316
2x4,0 re	14.0	77	360
4x4,0 re	16.0	154	439
2x6,0 re	15.0	115	400
4x6,0 re	17.0	230	547
2x10,0 re	17.0	192	500
4x10,0 re	19.0	384	743
4x16,0 re	22.0	614	1,039
4x25,0 rm	27.0	960	1,620
4x35,0 sm	27.0	1,344	1,916
4x50,0 sm	31.0	1,920	2,639
4x70,0 sm	35.0	2,688	3,576
4x95,0 sm	40.0	3,648	4,746

* Other sizes are available on specific request.

NYCY, NYCWY

Wind tower installation

Application

As a fixed installation power and control cables



NYCY, NYCWY

Cable Design →→→

Standard

VDE 0276 Part 603, VDE 0276 Part 627

Technical data

Core identification code	≤ 5 cores	VDE 0293-308
Test voltage	≥ 6 cores	Black with white numbers
Conductor stranding	Single or Multi-wire	
Min. bending radius	Fixed	12 x outer diameter
Rated voltage	U ₀ /U	0.6/1kV
Test voltage	4,000V	
Range of temperature	Flexing	+5 °C ~ +50 °C
	Fixed	-40 °C ~ +70 °C

Design

Conductor of bare copper wires
Core insulation : Based on PVC
Filling compound over the core assembly
Concentric outside conductor of bare copper wires, ceander-shaped(NYCWY, only), with counter spiral of copper band
PVC based outer sheath

re : round conductor, single wire

rm : round conductor, multi wire

sm : sectorial conductor

NYCY, NYCWY

Wind tower installation

Number of cores and mm ² per conductor	Outer diameter in mm approx.		Copper index	weight (approx.)
	mm ²	mm	kg / km	kg / km
NYCY				
2x1,5 re/ 1,5		14	52	245
3x1,5 re/ 1,5		14	66	280
4x1,5 re/ 1,5		15	81	302
7x1,5 re/ 2,5		17	133	450
12x1,5 re/ 2,5		20	205	580
24x1,5 re/ 6,0		26	413	1,100
3x2,5 re/ 2,5		15	104	316
4x2,5 re/ 2,5		16	128	360
7x2,5 re/ 2,5		18	200	530
16x2,5 re/ 6,0		23	451	950
4x4,0 re/ 4,0		18	200	485
4x6,0 re/ 6,0		19	297	616

NYCY, NYCWY

Wind tower installation

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
NYCWY			
2x10,0 re/ 10,0	19	312	610
3x10,0 re/ 10,0	20	408	775
4x10,0 re/ 10,0	21	504	897
3x16,0 re/ 16,0	22	643	1,066
4x16,0 re/ 16,0	24	796	1,250
3x25,0 rm/ 25,0	26	1,003	1,584
4x25,0 rm/ 16,0	28	1,142	1,822
3x35,0 sm/ 35,0	26	1,402	1,710
4x35,0 sm/ 16,0	29	1,526	2,146
3x50,0 sm/ 50,0	30	2,000	2,368
4x50,0 sm/ 25,0	33	2,203	3,031
4x70,0 sm/ 35,0	38	3,082	4,056
3x95,0 sm/ 50,0	38	3,296	4,256
3x95,0 sm/ 95,0	39	3,791	4,600
4x95,0 sm/ 50,0	43	4,208	5,364
3x120,0 sm/ 70,0	41	4,236	5,314
4x120,0 sm/ 70,0	46	5,388	6,748
3x150,0 sm/ 70,0	45	5,100	6,344
4x150,0 sm/ 70,0	51	6,540	8,159
3x185,0 sm/ 95,0	50	6,383	8,054

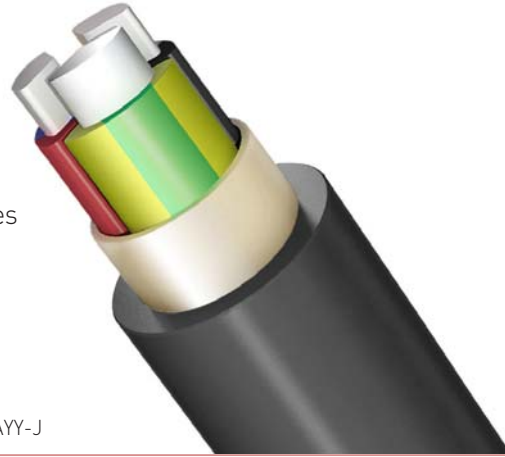
* Other sizes are available on specific request.

NAYY-J

Wind tower installation

Application

As a fixed installation power and control cables



Cable Design →→→

NAYY-J

Standard

VDE 0276 Part 603

Technical data

Core identification code	According to VDE 0293-308	
Conductor stranding	Single wire	
Min. bending radius	Fixed	12 x outer diameter
Rated voltage	U ₀ /U	0.6/1kV
Min. bending radius	Fixed	12 x cable diameter
Test voltage	4,000V	
Range of temperature	Flexing	+5 °C ~ +50 °C
	Fixed	-30 °C ~ +70 °C
Flame retardant	IEC 60332-1-2	

Design

Conductor of aluminium
Core insulation : Based on PVC
Filling compound over the core assembly
PVC based outer sheath

re : round conductor, single wire

rm : round conductor, multi wire

sm : sectorial conductor

NAYY-J

Wind tower installation

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
4x35,0 re	28.2	406	1,170
4x50,0 se	29.8	580	1,305
4x70,0 se	34.2	812	1,730
4x95,0 se	38.6	1,102	2,205
4x120,0 se	41.9	1,392	2,655
4x150,0 se	45.6	1,740	3,150
4x185,0 se	50.8	2,146	3,925
4x240,0 se	59.6	2,784	4,880

* Other sizes are available on specific request.

Wind Turbines Cable

Data & Communication cables

- LiYCY
- LiYY(TP)
- LiYCY(TP)
- LiHH
- LiHCH



Data & Communication cables

Cable type	StandardPage	Peak working voltage	Halogen free	Page
LiYCY	VDE 0812	250V	-	33
LiYY(TP)	VDE 0812, VDE 0814	350V, 500V	-	36
LiYCY(TP)	VDE 0812, VDE 0814	350V, 500V	-	38
LiHH	VDE 0812	250V	x	40
LiHCH	VDE 0812	250V	x	41

LiYCY

DIN colour code

Application

Used for computer systems,
MSR technology, office machinery,
screened cables



Cable Design →→→

LiYCY

Standard

VDE 0812

Technical data

Core identification code	DIN 47100 without colour repetition	
Mutual capacitance	C/C	approx. 140nF/km
	C/S	approx. 150nF/km
Peak working voltage	250V[not for power applications]	
Insulation resistance	> 20 Gohm x cm	
Inductivity	approx. 0.65mH/km	
Min. bending radius	Flexing	15 x cable diameter
	Fixed	6 x cable diameter
Test voltage	≤ 0.14mm ²	1200V
	> 0.14mm ²	1500V
Flame retardant	IEC 60332-1-2	

Design

Bare copper wire stranded conductor
PVC core insulation and outer sheath
Screen made of tinned copper wire braid
Colour : pebble grey (RAL 7032)

LiYCY

DIN colour code

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
2x0.14	3.9	12.0	20.0
3x0.14	4.1	13.0	28.0
4x0.14	4.3	14.3	33.0
5x0.14	4.6	15.5	38.0
6x0.14	4.9	18.2	38.0
7x0.14	4.9	19.0	49.0
8x0.14	5.8	21.2	56.0
10x0.14	6.1	28.5	66.0
12x0.14	6.3	30.4	78.0
14x0.14	6.7	32.0	80.0
15x0.14	6.9	37.8	86.0
16x0.14	7.0	43.0	90.0
18x0.14	7.3	48.8	104.0
20x0.14	7.7	53.9	116.0
21x0.14	7.9	55.5	121.0
25x0.14	8.4	63.0	149.0
28x0.14	8.5	66.1	153.0
30x0.14	8.7	69.0	158.0
32x0.14	9.0	73.6	164.0
36x0.14	9.3	83.0	183.0
40x0.14	10.4	87.5	210.0
44x0.14	10.7	110.5	225.0
50x0.14	11.1	122.5	253.0
2x0.25	4.5	16.0	32.0
3x0.25	4.7	21.0	37.0
4x0.25	5.0	24.0	41.3
5x0.25	5.6	29.0	51.2
6x0.25	6.0	30.0	58.0
7x0.25	6.0	37.0	65.0
8x0.25	7.1	42.0	73.0
10x0.25	7.5	46.0	82.0
12x0.25	7.7	53.0	145.0
14x0.25	8.0	59.0	99.0
15x0.25	8.3	61.0	111.0
16x0.25	8.4	64.0	124.0
18x0.25	8.8	83.0	143.0
20x0.25	9.3	88.0	152.3
21x0.25	9.6	93.0	161.0
25x0.25	10.7	114.0	172.0
28x0.25	10.8	126.0	181.1
30x0.25	11.0	132.0	189.0
32x0.25	11.4	138.0	203.0
36x0.25	11.8	148.0	220.0
40x0.25	12.7	157.0	248.0
50x0.25	13.8	178.0	318.0
61x0.25	15.0	205.0	365.2
2x0.34	4.9	21.0	37.0
3x0.34	5.1	27.0	49.0
4x0.34	5.7	28.0	59.0
5x0.34	6.2	30.0	66.0
6x0.34	6.8	45.0	79.0
7x0.34	6.8	48.0	83.0
8x0.34	7.8	52.0	94.0
10x0.34	8.3	74.0	129.2
12x0.34	8.5	80.0	142.0

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
14x0.34	8.9	86	154.0
15x0.34	9.2	90	155.0
16x0.34	9.4	94	160.0
18x0.34	10.2	103	173.0
20x0.34	10.7	112	192.0
21x0.34	11.1	116	199.2
25x0.34	11.9	135	259.0
28x0.34	12.0	153	280.0
30x0.34	12.3	159	291.1
32x0.34	13.0	165	305.0
36x0.34	13.4	179	331.0
40x0.34	14.8	200	365.0
50x0.34	15.9	235	431.0
2x0.50	5.6	29	54.0
3x0.50	5.9	38	67.0
4x0.50	6.3	43	77.0
5x0.50	7.0	51	90.0
6x0.50	7.6	59	104.0
7x0.50	7.6	65	112.0
8x0.50	8.7	70	135.0
10x0.50	9.3	88	160.0
12x0.50	9.6	99	177.0
18x0.50	11.8	134	239.0
20x0.50	12.1	149	276.0
25x0.50	13.7	211	352.0
30x0.50	14.5	230	397.0
2x0.75	6.0	38	64.0
3x0.75	6.3	49	76.0
4x0.75	7.0	58	92.0
5x0.75	7.6	67	109.0
7x0.75	8.2	100	156.0
10x0.75	10.5	130	187.0
12x0.75	10.8	154	218.0
18x0.75	13.0	195	327.0
25x0.75	15.3	280	454.0
30x0.75	15.8	312	486.0
2x1.00	6.3	43	72.0
3x1.00	6.8	56	90.0
4x1.00	7.3	68	109.0
5x1.00	8.0	79	126.0
7x1.00	8.6	118	171.0
10x1.00	11.1	140	228.0
12x1.00	11.4	168	259.0
18x1.00	13.4	252	389.0
25x1.00	16.2	335	517.0
2x1.50	7.5	58	90.0
3x1.50	7.9	74	115.0
4x1.50	8.5	108	153.0
5x1.50	9.3	129	176.0
7x1.50	10.5	164	220.0
12x1.50	13.7	254	376.0
18x1.50	16.3	350	519.0
25x1.50	19.9	550	901.0

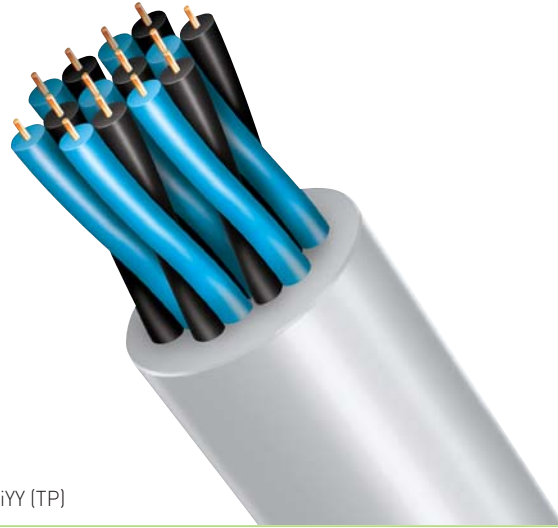
* Other sizes are available on specific request.

LiYY (TP)

DIN colour code

Application

Electronic systems normally have little space available for cable installation. Short distances and small bending radius required.



LiYY (TP)

Cable Design →→→

Standard

VDE 0812, VDE 0814(DIN 47414)

Technical data

Core identification code	DIN 47100
Mutual capacitance	approx. 120nF/km
Peak working voltage	≤ 0.14mm ² 350V
	≥ 0.25mm ² 500V
Insulation resistance	> 20 Gohm x cm
Coupling (1kHz)	approx. 300pF at 100m
Inductivity	approx. 0.65mH/km
Min. bending radius	Flexing 10 x cable diameter
	≤ 0.14mm ² 1200V
Test voltage	> 0.14mm ² 1500V
	Flexing -5°C ~ +70°C
Temperature range	Fixed -40°C ~ +80°C
	Flame retardant IEC 60332-1-2

Design

Bare copper wire stranded conductor
PVC core insulation and outer sheath
Twisted in pairs to considerably reduce decoupling
Colour : pebble grey (RAL 7032)

LiYY (TP)

DIN colour code

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
2x2x0.14	4.8	5.4	25.5
3x2x0.14	4.9	8.0	32.0
4x2x0.14	5.5	10.7	38.5
5x2x0.14	5.7	13.4	45.5
6x2x0.14	6.2	16.1	51.0
10x2x0.14	8.0	26.9	77.5
12x2x0.14	8.2	32.3	94.5
16x2x0.14	9.1	43.0	110.5
2x2x0.25	6.1	9.6	38.0
3x2x0.25	6.2	14.4	48.0
4x2x0.25	6.9	19.2	59.0
6x2x0.25	7.8	28.8	80.0
8x2x0.25	9.2	38.4	98.0
10x2x0.25	10.3	48.0	115.0
2x2x0.5	7.9	19.2	72.0
3x2x0.5	8.0	28.8	83.0
4x2x0.5	8.7	38.4	115.0
8x2x0.5	12.2	76.8	206.0
10x2x0.5	13.2	96.0	247.0

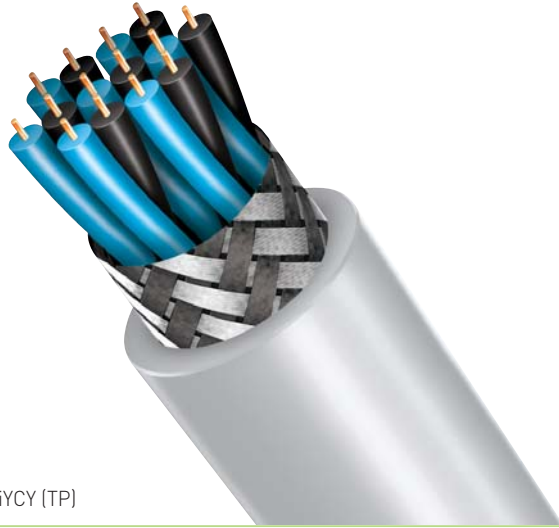
* Other sizes are available on specific request.

LiYCY (TP)

DIN colour code

Application

Good protection against the capacitive influence due to electric field (e.g. power cable)



Cable Design →→→

LiYCY (TP)

Standard

VDE 0812, VDE 0814

Technical data

Core identification code	DIN 47100	
Mutual capacitance	C/C	approx. 140nF/km
	C/S	approx. 150nF/km
Peak working voltage	≤ 0.14mm ²	350V
	≥ 0.25mm ²	500V
Insulation resistance	> 20 Gohm x cm	
Coupling (1kHz)	approx. 300pF at 100m	
Inductivity	approx. 0.65mH/km	
Min. bending radius	Flexing	15 x cable diameter
	Fixed	6 x cable diameter
Test voltage	≤ 0.14mm ²	1200V
	> 0.14mm ²	1500V
Temperature range	Flexing	-5°C ~ +70°C
	Fixed	-40°C ~ +80°C
Flame retardant	IEC 60332-1-2	

Design

Bare copper wire stranded conductor
PVC core insulation and outer sheath
TP structure
Screen braiding made from tinned copper wire
Colour : pebble grey (RAL 7032)

LiYCY (TP)

DIN colour code

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
2x2x0.14	5.7	18.5	39
3x2x0.14	5.8	23.0	48
4x2x0.14	6.2	26.6	54
6x2x0.14	7.1	48.5	85
8x2x0.14	8.2	53.7	97
10x2x0.14	8.7	59.0	110
12x2x0.14	8.9	66.0	142
16x2x0.14	10.2	79.0	154
20x2x0.14	11.3	97.0	184
25x2x0.14	12.5	113.0	238
2x2x0.25	7.0	28.0	54
3x2x0.25	7.1	39.6	66
4x2x0.25	7.6	44.9	81
6x2x0.25	8.5	69.5	115
8x2x0.25	10.3	76.9	130
10x2x0.25	11.0	102.0	158
12x2x0.25	11.3	120.0	190
16x2x0.25	12.5	146.5	238
25x2x0.25	16.1	205.0	344
2x2x0.5	8.6	48.1	93
3x2x0.5	8.7	73.7	129
4x2x0.5	9.4	82.0	146
6x2x0.5	11.1	110.0	198
8x2x0.5	13.1	139.0	259
12x2x0.5	14.9	198.3	354
16x2x0.5	16.5	240.0	459
2x2x0.75	8.5	58.0	106
3x2x0.75	9.4	84.0	140
4x2x0.75	10.7	108.0	179
5x2x0.75	11.1	126.0	215
6x2x0.75	12.1	146.0	246
8x2x0.75	14.7	180.0	305
12x2x0.75	16.2	261.0	456
2x2x1	10.3	84.0	142
3x2 x 1	10.4	96.0	173
4x2 x 1	11.3	121.0	212
5x2 x 1	11.8	161.0	266

* Other sizes are available on specific request.

LiHH

Halogen-free

Application

Suited for areas with a high density of people, e.g. public buildings or transport systems, as well as high value property that must be protected in case of fire.



Cable Design →→→

LiHH

Standard
VDE 0812

Technical data

Core identification code	DIN 47100 without colour repetition	
Mutual capacitance	Approx. 80nF/km	
Peak working voltage	250V (not for power applications)	
Insulation resistance	> 20 Gohm x cm	
Inductivity	approx. 0.65mH/km	
Min. bending radius	Flexing	10 x cable diameter
Test voltage	1200V	
Temperature range	Flexing	-30°C ~ +70°C
Flame retardant	IEC 60332-1-2	

Design

Conductor	Finely stranded, class 5 Special design for torsion property
Insulation	Special compound based on EPR
Sheath	Special compound based on CR/CPE
Core identification	HD 308
Protective conductor	G : with protective conductor Green/Yellow X : without protective conductor

LiHH

Halogen-free

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
2x2x0.25	7.0	28.0	54
3x2x0.25	7.1	39.6	66
4x2x0.25	7.6	44.9	81
6x2x0.25	8.5	69.5	115
2x2x0.5	8.6	48.1	93
3x2x0.5	8.7	73.7	129
4x2x0.5	9.4	82.0	146
6x2x0.5	11.1	110.0	198
4x2x0.75	10.7	108.0	179
5x2x0.75	11.1	113.0	215

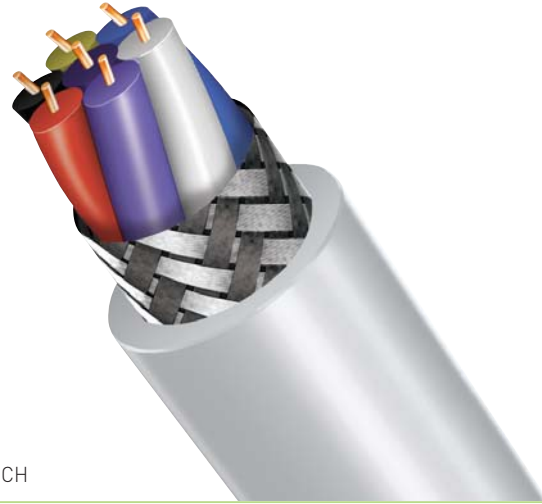
* Other sizes are available on specific request.

LiHCH

Halogen-free

Application

Suited for areas with a high density of people, e.g. public buildings or transport systems, as well as high value property that must be protected in case of fire.



Cable Design →→→

LiHCH

Standard

VDE 0812

Technical data

Core identification code	DIN 47100	
Mutual capacitance	C/C	approx. 80nF/km
	C/S	approx. 120nF/km
Peak working voltage	250V (not for power applications)	
Insulation resistance	> 20 Gohm x cm	
Coupling (1kHz)	LiHCH (TP) : at 1kHz :	
	Approx. 300pF / 100m	
Inductivity	approx. 0.65mH/km	
	Flexin	15 x cable diameter
Min. bending radius	Fixed	6 x cable diameter
	Test voltage	1200V
Temperature range	Operation	-30°C ~ +70°C
Flame retardant	IEC 60332-1-2	

Design

Bare copper wire stranded conductor
Halogen-free core insulation and outer sheath
Core colour code in accordance with DIN 47100
but no colour repetition
Screen made of tinned copper wire braid
Colour : pebble grey (RAL 7032)

LiHCH

Halogen-free

Number of cores and mm ² per conductor	Outer diameter in mm approx.	Copper index	weight (approx.)
mm ²	mm	kg / km	kg / km
2x0.14	4.1	12.0	22.0
3x0.14	4.3	14.1	25.0
4x0.14	4.5	15.9	29.0
6x0.14	5.1	22.0	35.0
7x0.14	5.1	24.0	38.0
8x0.14	6.0	26.0	41.0
12x0.14	6.5	30.4	78.0
16x0.14	7.2	43.0	90.0
25x0.14	8.7	63.0	149.0
2x0.25	4.7	15.0	25.0
3x0.25	4.9	18.0	30.0
4x0.25	5.2	22.0	35.0
6x0.25	6.2	30.0	49.0
7x0.25	6.2	32.0	52.0
8x0.25	7.3	35.0	58.0
10x0.25	7.7	42.0	81.0
25x0.25	10.9	114.0	172.0
2x0.34	5.1	17.0	30.0
3x0.34	5.3	21.0	35.0
4x0.34	5.9	25.0	42.0
5x0.34	6.4	30.0	53.0
7x0.34	7.0	42.0	73.0
8x0.34	8.0	45.0	84.0
10x0.34	8.5	63.0	101.0
16x0.34	9.6	94.0	160.0
25x0.34	12.1	144.0	259.0
2x0.5	5.8	29.0	38.0
3x0.5	6.1	35.0	47.0
4x0.5	6.5	45.0	67.0
5x0.5	7.2	50.0	76.0
6x0.5	7.8	59.0	84.0
7x0.5	7.8	68.0	91.0
8x0.5	8.9	75.0	135.0
10x0.5	9.5	93.0	131.0
12x0.5	9.8	99.0	177.0
18x0.5	11.7	134.0	239.0
25x0.5	13.9	211.0	352.0
2x0.75	6.2	35.0	45.0
3x0.75	6.5	46.0	69.0
4x0.75	7.2	56.0	80.0
5x0.75	7.8	70.0	99.0
7x0.75	8.3	90.0	120.0
2x1	6.5	43.0	72.0
3x1	7.0	56.0	90.0
4x1	7.5	68.0	109.0
7x1	8.8	118.0	171.0
2x1.5	7.7	58.0	90.0
3x1.5	8.1	74.0	115.0
5x1.5	9.5	129.0	176.0

* Other sizes are available on specific request.

Torsional stress test of JS Cable

for Testing torsion resistance of wind turbine cables



- Torsion angles**
 $\pm 100^\circ$, $\pm 150^\circ$, $\pm 180^\circ$, $\pm 200^\circ$
- Torsion cycles**
2,000, 5,000, 10,000
- Torsion speed**
Max. 35rpm
- Torsion length**
Max. 5m
- Torsion load**
Max. 5,000N
- Temperature**
 $-40^\circ\text{C} \sim +30^\circ\text{C}$

Test conditions for the torsion tests

Flame / Fire / Smoke test

Flame Retardant



IEC-60332-3. CAT. A Test (VTFT)



IEC-60332-1test (VFT)

Fire Resistance (IEC 60331-21 at 750i□)



Upgraded to 1000 can be supplied on request.

Smoke Emission (IEC 61034-1,2)



Minimum light transmittance is 60%





■ Products & Systems of JS Cable



Marine & Offshore Cables



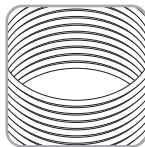
Rubber & Specialty Cables



Electric Cables



Data Cables



Copper Rod

Head Office
Mokcheon Factory
Seoul Office
Busan Office

#569, Boseong-ri, Pungse-Myeon, Cheonan-Ci, Chungnam, Korea / Tel : +82-41-559-4800, Fax : +82-41-566-7919
#242-2, Sosa-ri, Mokcheon-eup, Cheonan-Ci, Chungnam, Korea / Tel : +82-41-566-5641, Fax : +82-41-566-5863
Bently Bldg. 5F, #106-2 Yangjae-dong, Seocho-gu, Seoul, Korea / Tel : +82-2-580-4557, Fax : +82-2-580-4559
Haebong Bldg. 7F, #1146-7, Choryang-dong, Dong-gu, Busan, Korea / Tel : +82-51-465-7906, Fax : +82-51-462-7759