SUNKEAN

PROJECT LIST

SUNKEAN CABLE CO., LTD.
WUXI SUN KING ENERGY TECHNOLOGY CO., LTD.

SUNKEAN.com

PHOTOVOLTAIC

SCENE: COMMERCIAL & INDUSTRIAL
LOCATION: MALAYSIA

SUNKEAN

TIGER

Solar Cable 30km

Federal Oats Mills

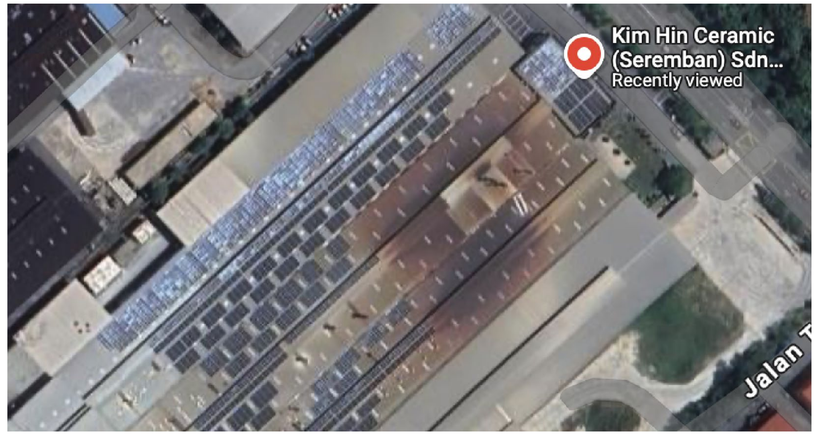
Solar Cable 30km

CE Technology

Solar Cable 40km

Columbia Asia Hospital

Solar Cable 18km



Kim Hin Seremban

Solar Cable 47km

PHOTOVOLTAIC

SCENE: COMMERCIAL & INDUSTRIAL
LOCATION: MALAYSIA

SUNKEAN

KJM Aluminium

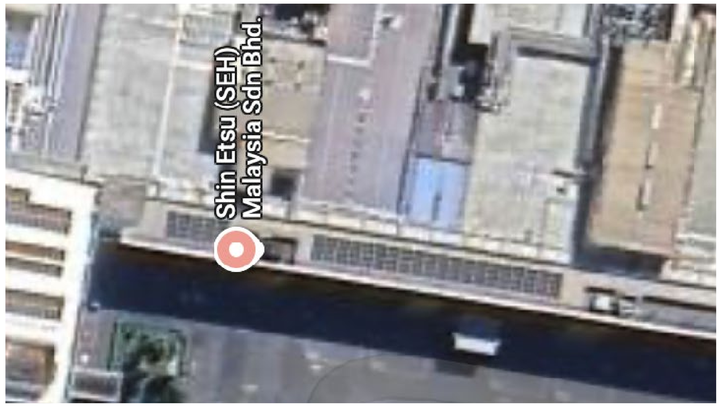
- Solar Cable
- 63km

Mydin Seremban

- Solar Cable
- 9km

SAM Penang

- Solar Cable
- 27km

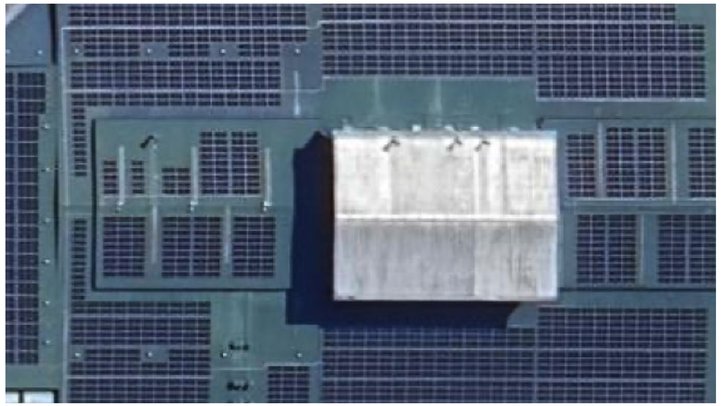


Shin Etsu

- Solar Cable
- 14km

Sunshine Bread

- Solar Cable
- 34km



Huan Hsin

- Solar Cable
- 70km

PHOTOVOLTAIC

SCENE: COMMERCIAL & INDUSTRIAL
LOCATION: MALAYSIA

SUNKEAN

Scientex Great Wall Ipoh

Solar Cable 347km

Samtec Asia Pacific Penang, Samtec Plating Johor

Solar Cable 40km

PHOTOVOLTAIC

SCENE: CARPORT
LOCATION: MALAYSIA

SUNKEAN

AEON carport 3MW

- Solar Cable
- 50km

AEON carport 500kW

- Solar Cable
- 10km

PHOTOVOLTAIC

SCENE: COMMERCIAL & INDUSTRIAL
LOCATION: JAPAN

SUNKEAN

GLP Sagamihara I 2.7MW

- Solar Extension Cable
- 44.94km

GLP Nagareyama D 2.8MW

- Solar ExtensionCable
- 133.315km

PHOTOVOLTAIC

SCENE: GROUND
LOCATION: MALAYSIA

SUNKEAN

Solar Citra 10.95MW

- Solar Cable
- 190km

Beaufort, Sabah 7MW

- Solar Cable
- 77km

PHOTOVOLTAIC

SCENE: GROUND
LOCATION: JAPAN

SUNKEAN

Pacifico Energy Iwaki Mega 42.3MW

- Solar Cable
- 1404.325km

Matsushima Donguri 50MW

- Solar Cable
- 271.92km

Tochigi Power Station 13MW

- Solar Cable
- 102.4km

CS Ibaraki Kasama Oigo 2.2MW

- Solar Cable
- 80km

Onikobari 147MW

- Solar Cable
- 1120km

FSJ Hita 21MW

- String Harness
- 262.802km

PHOTOVOLTAIC

SCENE: GROUND
LOCATION: JAPAN

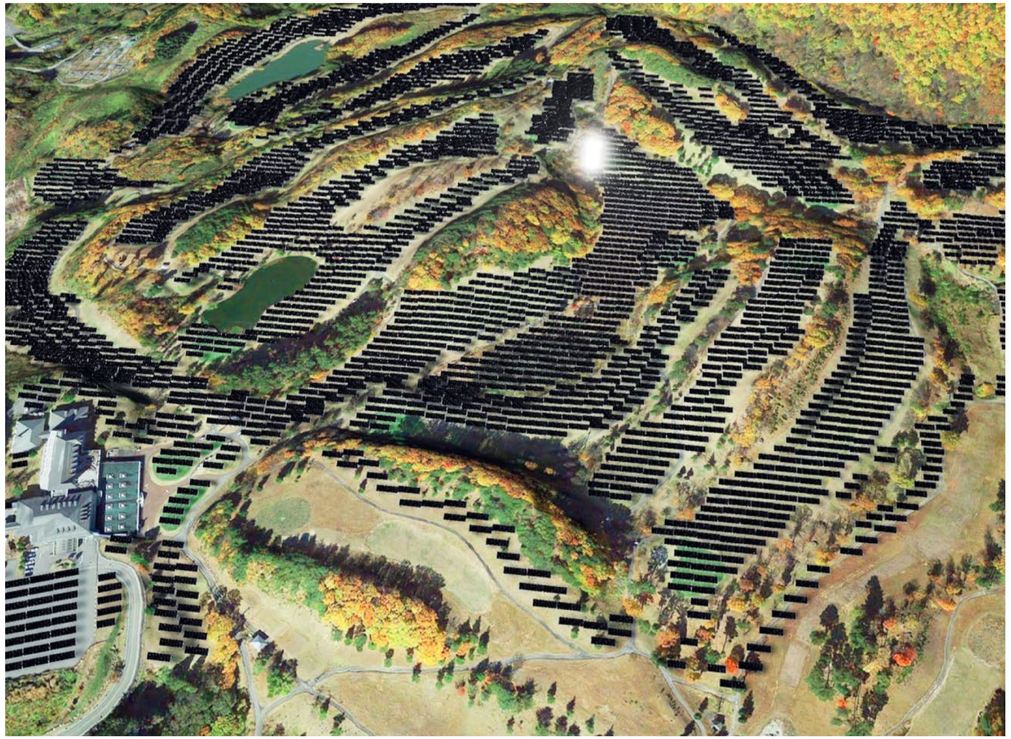
SUNKEAN

Power Plant Tsunamase 50MW

Solar Cable 130km

Bandai Solar Power Plant 25.2MW

Solar Cable 213.156km



PHOTOVOLTAIC

SCENE: GROUND
LOCATION: JAPAN

SUNKEAN

Shiraishi Solar Farm 162MW

- String Harness
- 2545set

Yonehara Solar Power Plant 31.65MW

- String Harness
- 1122set

Suimei Solar Park 52MW

- Solar Cable
- 150km

PHOTOVOLTAIC

SCENE: GROUND
LOCATION: CHILE

SUNKEAN

Valparaiso Region Solar Farm 95.2MW

- Solar Cable
- 2100km

ENERGY STORAGE

SUNKEAN

Papago, USA 1200MW

- Energy Storage Harness
- 25360set

Crimson, USA 350MW

- Energy Storage Harness
- 8115set

Borden county, USA 250MW

- Energy Storage Harness
- 6085set

Summerfield, Austial 480MW

- Energy Storage Harness
- 10160set

Tongli, China 200MW

- Energy Storage Harness
- 5060set

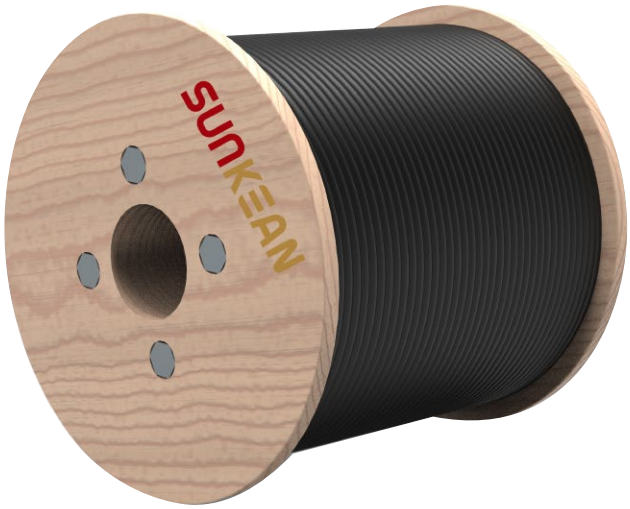
Qinghai Geermu, China 400MW

- Energy Storage Harness
- 13160set

62930 IEC131 H1Z2Z2-K Solar Cable

AD8 Water Resistance

CPR Dca



Single core solar cable

Twin core solar cable

SUNKEAN provides a number of additional advantages in comparison to conventional solar cables:

- TÜV certification acc. to EN 50618 (H1Z2Z2-K)
- TÜV certification acc. to EN 50575
- TÜV certification acc. to IEC 62930 (62930 IEC 131)
- TÜV certification acc. to 2 PfG 1169/08.07
- Water resistance AD8
- Voltage rating 1.500 V_{DC} (max. 1.800 V_{DC})
- Flammability class Dca acc. CPR
- Consecutive meter marking
- Higher insulation resistance
- Higher UV-stability
- Higher mechanical stability

Technical Data Sheet

About Us

SUNKEAN specializes in the development and production of high-quality components for photovoltaic systems. As a connection solution provider, we supply solar cables, battery cables, wire harness, PV connectors, cabling system etc. All products are certified by TUV, CE, UL, RoHS.

Rely on years of proven experience, professional technical expertise, strict quality control and considerate service, we have established the warm business relationships with the distributors, EPCs, wholesalers and installers all over the world.

Why Choose Us

- Production visualization service (Provide production schedule, delivery and loading diagram)
- Cable pre-assembly service
- Pre-sale and after-sale service to escort the order
- Short lead time
- Worldwide deliveries at favourable terms
- High quality and long life time (25 years acc. to EN 50618)
- High flexibility and bending capability
- Compatibility to all common connectors
- Colors: Optional Color
- Packaging: 100m/roll, 500m/roll, 1000m/drum

Characteristics

Conductor	Tinned stranded copper, comply with IEC60228, EN60228, VDE0295, Class 5
Insulation Material	XLPO
Insulation Color	Optional color
Sheath Material	XLPO
Sheath Color	Optional color
Voltage Rating	DC: 1500V
Test Voltage	6500V AC
Temperature Rating	Rated: -40°C to +90°C Max.conductor temp: +120°C Short Circuit: +250°C
Minimum Bending Radius	Ø ≤ 12mm 4 x overall diameter Ø > 12mm 10 x overall diameter
Testing Standard	Smoke Density Test: transmittance≥60% EN50618 Cold Bending Test: -40°C±2°C no crack EN60811-504
Reference Standard	EN50618 & IEC62930
Protection level against water ingress	AD8

Cable Name	Cross Section (mm^2)	Construction (No./mm)	Insulation O.D. (mm)	Cable O.D. (mm)	Conductor Resistance Max(Ω/km, 20°C)
62930 IEC131/ H1Z2Z2-K	2.5	49/0.25	3.50	5.20	8.21
	4.0	52/0.30	3.85	5.50	5.09
	6.0	78/0.30	4.45	6.10	3.39
	10	77/0.40	5.50	7.20	1.95
	16	126/0.40	6.90	8.80	1.24
	25	196/0.40	8.70	10.80	0.795
	35	276/0.40	10.00	12.40	0.565

Certificate

Certificate of constancy of performance

according to Regulation (EU) No. 305/2011

TÜVRheinland

Certificate No.:	1008-CPR-MC 69266647 0001
Report No.:	HU23ALHN 001
Applicant:	SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, CHINA
Manufacturer:	SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, CHINA
Manufacturing plant:	SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, CHINA
Product:	Photovoltaic cable family
Identification:	H1Z2Z2-K (62930 IEC 131) 1×2,5mm² to 1×35mm² Intended use: Electric Cables for general applications FPC Report No.: HU232D7Y 001
System of assessment and verification:	1+
Tested according to:	EN 50575:2014+A1:2016

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performance described in Annex of the above standard(s) under above system are applied and the product fulfils all the prescribed requirements set out above.
This certificate was first issued on 2023-05-10 and it will remain valid until the test methods and/or factory production control requirements included in the standard, used to assess the performance of the declared characteristics, and the product, and the manufacturing conditions in the plant are unchanged. The manufacturing plant and factory production control system of the manufacturer is supervised regularly by the Certification Body.

Certification Body

Date of issue:
Budapest, 2023-05-10

Ferencne Schmidt

TÜV Rheinland InterCert Kft., Product Certification Body — H-1143 Budapest, Gizella út 51-57. — www.tuv.com
Product certification body accredited by NAH under No NAH-6-0053/2018/K, Notified Body No. 1008

Validity of certificate can be checked on www.CERTIPEDIA.com

Zertifikat *Certificate*

TÜVRheinland

Zertifikat Nr. *Certificate No.* R 50477532 — **Blatt** *Sheet* 0001

Ihr Zeichen *Client Reference*	Unser Zeichen *Our Reference*	Ausstellungsdatum	*Date of Issue* (day/mo/yr)
W.D.S.	01-WSW-60407191 001	14.08.2020	

Genehmigungsinhaber *License Holder*
SUNKEAN CABLE CO., LTD.
17-9 South Changjiang Road,
Xinwu District, Wuxi
Jiangsu
P.R. China

Fertigungsstätte *Manufacturing Plant*
SUNKEAN CABLE CO., LTD.
17-9 South Changjiang Road,
Xinwu District, Wuxi
Jiangsu
P.R. China

Prüfzeichen *Test Mark*
Type Approved Safety Regular Production Surveillance
TÜVRheinland CERTIFIED
www.tuv.com ID 1111027676

Geprüft nach *Tested acc. to*
EN 50618:2014

Zertifiziertes Produkt (Geräteidentifikation) *Certified Product (Product Identification)* — **Lizenzentgelte - Einheit** *License Fee - Unit*

Cable (Electric Cables for Photovoltaic Systems)

Type Designation	: H1Z2Z2-K 1X1,5...35mm² SUNKEAN CABLE CO.,LTD.	5
Rated Voltage	: DC 1,5kV AC 1,0/1,0kV	
Ambient Temperature	: -40°C to +90°C	
Max.Temperature at Conductor	: 120°C	

5

ANLAGE (Appendix): 1.0

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

Zertifizierungsstelle

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg
Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 http://www.tuv.com/safety

Kenny Shi

Zertifikat *Certificate*

TÜVRheinland

Zertifikat Nr. *Certificate No.* R 50477533 — **Blatt** *Sheet* 0001

Ihr Zeichen *Client Reference*	Unser Zeichen *Our Reference*	Ausstellungsdatum	*Date of Issue* (day/mo/yr)
W.D.S.	01-WSW-60407192 001	10.09.2020	

Genehmigungsinhaber *License Holder*
SUNKEAN CABLE CO., LTD.
17-9 South Changjiang Road,
Xinwu District, Wuxi
Jiangsu
P.R. China

Fertigungsstätte *Manufacturing Plant*
SUNKEAN CABLE CO., LTD.
17-9 South Changjiang Road,
Xinwu District, Wuxi
Jiangsu
P.R. China

Prüfzeichen *Test Mark*
Type Approved Safety Regular Production Surveillance
TÜVRheinland CERTIFIED
www.tuv.com ID 1111027677

Geprüft nach *Tested acc. to*
IEC 62930:2017

Zertifiziertes Produkt (Geräteidentifikation) *Certified Product (Product Identification)* — **Lizenzentgelte - Einheit** *License Fee - Unit*

Cable (Electric Cables for Photovoltaic Systems)

Type Designation	: 2043900	12
Code Marking	: 62930 IEC 131 SUNKEAN CABLE CO.,LTD.	
Additional Marking	: HALOGEN FREE LOW SMOKE	
Scope of Sizes	: 1X1,5...35mm²	
Rated Voltage	: DC 1,5kV	
Max. Storage Temperature	: +45°C	
Min.Temperature for Installation and Handling	: -25°C	
Max.Temperature at Conductor	: 120°C	

12

ANLAGE (Appendix): 1.0

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
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Zertifizierungsstelle

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg
Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 http://www.tuv.com/safety

Hao Zheng

Certificate

TÜVRheinland

Certificate no. T 50477531 01

License Holder:
SUNKEAN CABLE CO., LTD.
17-9 South Changjiang Road,
Xinwu District, Wuxi
Jiangsu
P.R. China

Manufacturing Plant:
SUNKEAN CABLE CO., LTD.
17-9 South Changjiang Road,
Xinwu District, Wuxi
Jiangsu
P.R. China

Test report no.: WSW 60407190 001 — **Client Reference:** W.D.S.
Tested to: 2 PfG 1169/08.07

Certified Product: Cables for Photovoltaic-Systems — **License Fee - Units**

Type Designation	: PV1-F 1X1,5...35mm² PV1-F 2X1,5...35mm²	12
Rated Voltage	: DC 1,0kV AC Uo/U 0,6/1kV	
Ambient Temperature	: -40°C to +90°C	
Max.Temperature at Conductor	: 120°C	
Mark of Origin	: SUNKEAN CABLE CO., LTD.	

Remark: This certificate is not valid for EU since 27.10.17.

12

ANLAGE (Appendix): 1.0

Licensed Test mark:
2 PfG 1169
TÜVRheinland CERTIFIED
www.tuv.com ID 1111027673

TÜV Rheinland (China) Ltd.
Signature
Kenny Shi

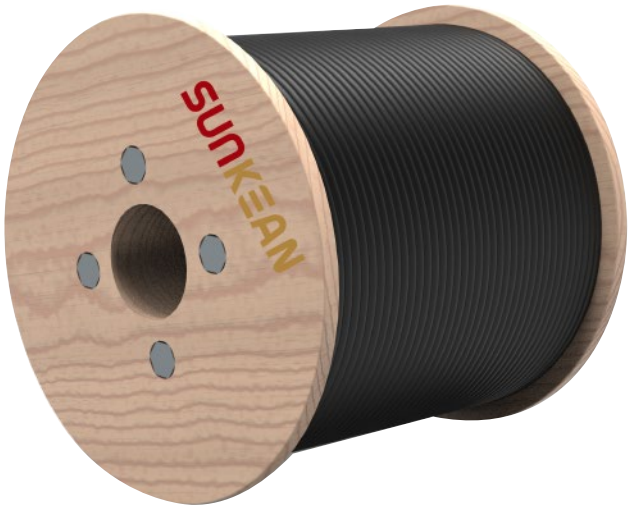
Date of Issue (day/mo/yr)
26/08/2020

TÜV Rheinland (China) Ltd
No. 01/03B-08, Floor 7 and No. 01/04B-08, Floor 11, AVIC Building, No.10B, Central Road, East 3rd Ring Road, Chaoyang District, Beijing, P.R. China
Tel.: +86 10 6566 6660 Fax: +86 10 6566 6667 E-mail: info@bj.chn.tuv.com http://www.tuv.com

62930 IEC131 H1Z2Z2-K Solar Cable

AD7 Water Resistance

CPR Dca



Single core solar cable

Twin core solar cable

SUNKEAN provides a number of additional advantages in comparison to conventional solar cables:

- TÜV certification acc. to EN 50618 (H1Z2Z2-K)
- TÜV certification acc. to EN 50575
- TÜV certification acc. to IEC 62930 (62930 IEC 131)
- TÜV certification acc. to 2 PfG 1169/08.07
- Water resistance AD7
- Voltage rating 1.500 V_{DC} (max. 1.800 V_{DC})
- Flammability class Dca acc. CPR
- Consecutive meter marking
- Higher insulation resistance
- Higher UV-stability
- Higher mechanical stability

Technical Data Sheet

About Us

SUNKEAN specializes in the development and production of high-quality components for photovoltaic systems. As a connection solution provider, we supply solar cables, battery cables, wire harness, PV connectors, cabling system etc. All products are certified by TUV, CE, UL, RoHS.

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Why Choose Us

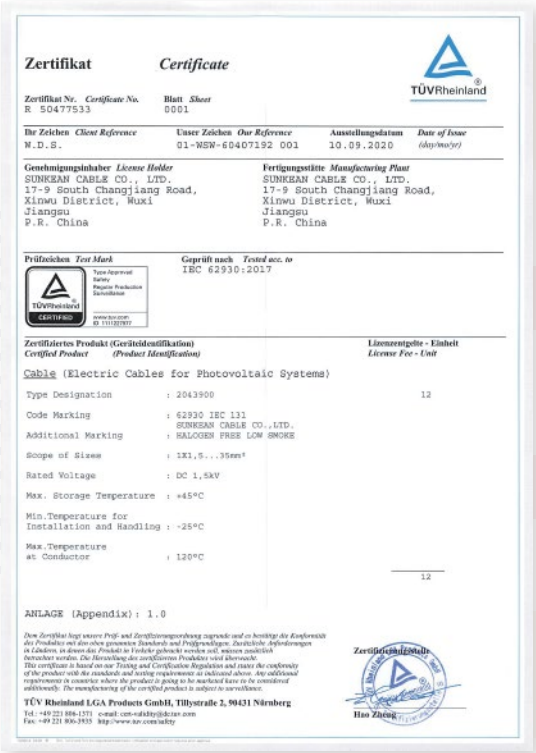
- Production visualization service (Provide production schedule, delivery and loading diagram)
- Cable pre-assembly service
- Pre-sale and after-sale service to escort the order
- Short lead time
- Worldwide deliveries at favourable terms
- High quality and long life time (25 years acc. to EN 50618)
- High flexibility and bending capability
- Compatibility to all common connectors
- Colors: Optional Color
- Packaging: 100m/roll, 500m/roll, 1000m/drum

Characteristics

Conductor	Tinned stranded copper, comply with IEC60228, EN60228, VDE0295, Class 5
Insulation Material	XLPO
Insulation Color	Optional color
Sheath Material	XLPO
Sheath Color	Optional color
Voltage Rating	DC: 1500V
Test Voltage	6500V AC
Temperature Rating	Rated: -40°C to +90°C Max.conductor temp: +120°C Short Circuit: +250°C
Minimum Bending Radius	Ø ≤ 12mm 4 x overall diameter Ø > 12mm 10 x overall diameter
Water resistant acc.to Presence of water&Voltage test on completed cable with a.c	IEC60529:1989+A1:1999 IPX7 Height of immersion 1m 23°C×30min，6.5kVAC×5min
Reference Standard	EN50618 & IEC62930
Protection level against water ingress	AD7

Cable Name	Cross Section (mm^2)	Construction (No./mm)	Insulation O.D. (mm)	Cable O.D. (mm)	Conductor Resistance Max(Ω/km, 20°C)
62930 IEC131/ H1Z2Z2-K	1.5	30/0.25	3.05	4.70	13.7
	2.5	49/0.25	3.50	5.20	8.21
	4.0	56/0.285	3.85	5.50	5.09
	6.0	84/0.285	4.45	6.10	3.39
	10	77/0.40	5.50	7.20	1.95
	16	126/0.40	6.90	8.80	1.24
	25	196/0.40	8.70	10.80	0.795
	35	276/0.40	10.00	12.40	0.565

Certificate



Zertifikat *Certificate*

TÜVRheinland

Zertifikat Nr. *Certificate No.* R 50477533 | Blatt *Sheet* 0001

Ihr Zeichen *Client Reference* N.D.S. | Unser Zeichen *Our Reference* 01-WSW-60407192 001 | Ausstellungsdatum *Date of Issue* 10.09.2020 *(day/mo/yr)*

Genehmigungsinhaber *License Holder*
SUNKEAN CABLE CO., LTD.
17-9 South Changjiang Road,
Xinwu District, Wuxi
Jiangsu
P.R. China

Fertigungsstätte *Manufacturing Plant*
SUNKEAN CABLE CO., LTD.
17-9 South Changjiang Road,
Xinwu District, Wuxi
Jiangsu
P.R. China

Prüfzeichen *Test Mark* — Type Approved Safety Regular Production Surveillance — TÜVRheinland CERTIFIED — www.tuv.com ID 1111227077

Geprüft nach *Tested acc. to* IEC 62930:2017

Zertifiziertes Produkt (Geräteidentifikation) *Certified Product (Product Identification)* | Lizenzentgelte - Einheit *License Fee - Unit*

Cable (Electric Cables for Photovoltaic Systems)

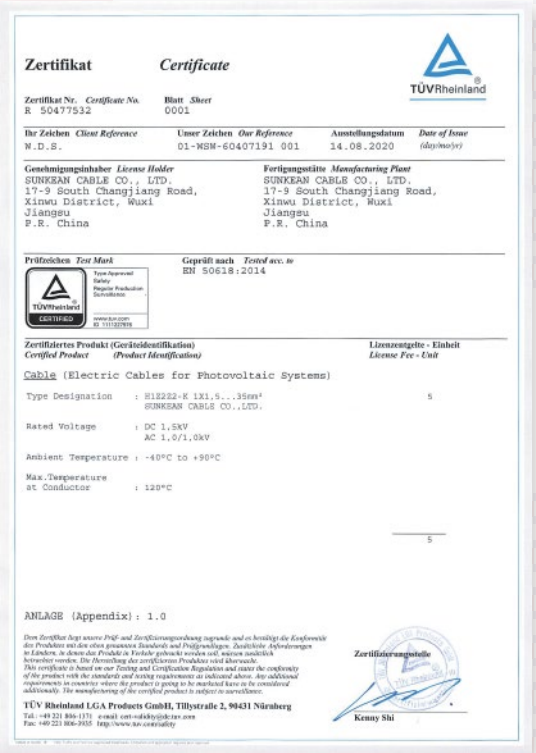
Type Designation	: 2043900	12
Code Marking	: 62930 IEC 131 SUNKEAN CABLE CO.,LTD.	
Additional Marking	: HALOGEN FREE LOW SMOKE	
Scope of Sizes	: 1X1,5...35mm²	
Rated Voltage	: DC 1,5kV	
Max. Storage Temperature	: +45°C	
Min.Temperature for Installation and Handling	: -25°C	
Max.Temperature at Conductor	: 120°C	
		12

ANLAGE (Appendix): 1.0

Dem Zertifikat liegt unsere Prüf- und Zertifizierungordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg
Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 http://www.tuv.com/safety

Zertifizierungsstelle
Hao Zheng



Zertifikat *Certificate*

TÜVRheinland

Zertifikat Nr. *Certificate No.* R 50477532 | Blatt *Sheet* 0001

Ihr Zeichen *Client Reference* N.D.S. | Unser Zeichen *Our Reference* 01-WSW-60407191 001 | Ausstellungsdatum *Date of Issue* 14.08.2020 *(day/mo/yr)*

Genehmigungsinhaber *License Holder*
SUNKEAN CABLE CO., LTD.
17-9 South Changjiang Road,
Xinwu District, Wuxi
Jiangsu
P.R. China

Fertigungsstätte *Manufacturing Plant*
SUNKEAN CABLE CO., LTD.
17-9 South Changjiang Road,
Xinwu District, Wuxi
Jiangsu
P.R. China

Prüfzeichen *Test Mark* — Type Approved Safety Regular Production Surveillance — TÜVRheinland CERTIFIED — www.tuv.com ID 1111227076

Geprüft nach *Tested acc. to* EN 50618:2014

Zertifiziertes Produkt (Geräteidentifikation) *Certified Product (Product Identification)* | Lizenzentgelte - Einheit *License Fee - Unit*

Cable (Electric Cables for Photovoltaic Systems)

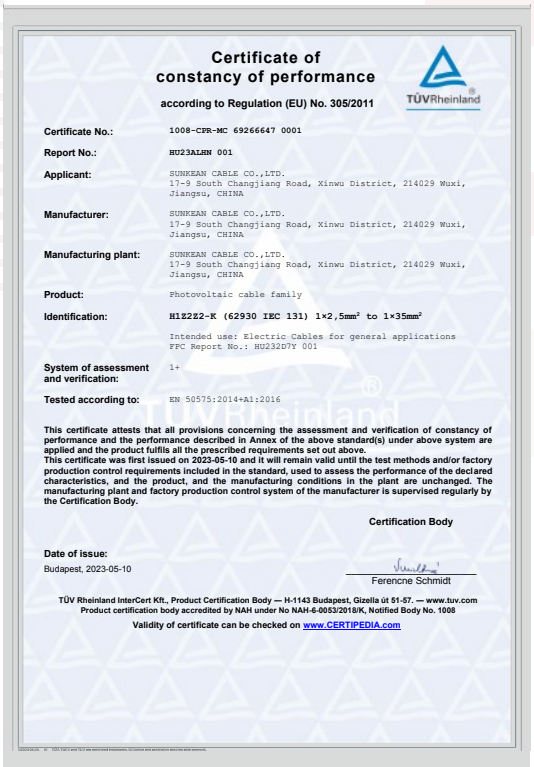
Type Designation	: H1Z2Z2-K 1X1,5...35mm² SUNKEAN CABLE CO.,LTD.	5
Rated Voltage	: DC 1,5kV AC 1,0/1,0kV	
Ambient Temperature	: -40°C to +90°C	
Max.Temperature at Conductor	: 120°C	
		5

ANLAGE (Appendix): 1.0

Dem Zertifikat liegt unsere Prüf- und Zertifizierungordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg
Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 http://www.tuv.com/safety

Zertifizierungsstelle
Kenny Shi



Certificate of constancy of performance

according to Regulation (EU) No. 305/2011

TÜVRheinland

Certificate No.:	1008-CPR-MC 69266647 0001
Report No.:	HU23ALHN 001
Applicant:	SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, CHINA
Manufacturer:	SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, CHINA
Manufacturing plant:	SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, CHINA
Product:	Photovoltaic cable family
Identification:	**H1Z2Z2-K (62930 IEC 131) 1×2,5mm² to 1×35mm²** Intended use: Electric Cables for general applications FFC Report No.: HU2320?Y 001
System of assessment and verification:	1+
Tested according to:	EN 50575:2014+A1:2016

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performance described in Annex of the above standard(s) under above system are applied and the product fulfils all the prescribed requirements set out above.
This certificate was first issued on 2023-05-10 and it will remain valid until the test methods and/or factory production control requirements included in the standard, used to assess the performance of the declared characteristics, and the product, and the manufacturing conditions in the plant are unchanged. The manufacturing plant and factory production control system of the manufacturer is supervised regularly by the Certification Body.

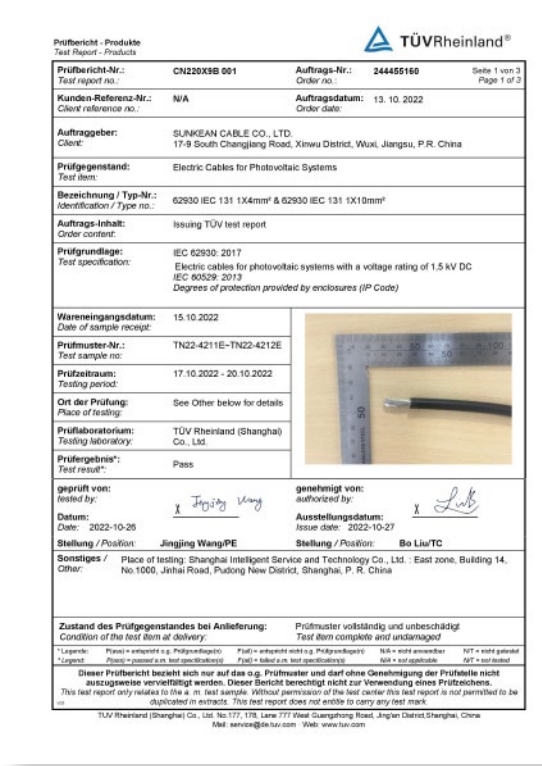
Certification Body

Date of issue:
Budapest, 2023-05-10

Ferencne Schmidt

TÜV Rheinland InterCert Kft., Product Certification Body — H-1143 Budapest, Gizella út 51-57. — www.tuv.com
Product certification body accredited by NAH under No NAH-6-0053/2018/K, Notified Body No. 1008

Validity of certificate can be checked on www.CERTIPEDIA.com



Prüfbericht - Produkte
Test Report - Products

TÜVRheinland®

Prüfbericht-Nr.: *Test report no.:*	CN220X9B 001	**Auftrags-Nr.:** *Order no.:*	244455160	Seite 1 von 3 *Page 1 of 3*
Kunden-Referenz-Nr.: *Client reference no.:*	N/A	**Auftragsdatum:** *Order date:*	13. 10. 2022	
Auftraggeber: *Client:*	SUNKEAN CABLE CO., LTD. 17-9 South Changjiang Road, Xinwu District, Wuxi, Jiangsu, P.R. China			
Prüfgegenstand: *Test item:*	Electric Cables for Photovoltaic Systems			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	62930 IEC 131 1X4mm² & 62930 IEC 131 1X10mm²			
Auftrags-Inhalt: *Order content:*	Issuing TÜV test report			
Prüfgrundlage: *Test specification:*	IEC 62930: 2017 Electric cables for photovoltaic systems with a voltage rating of 1,5 kV DC *IEC 60529: 2013 Degrees of protection provided by enclosures (IP Code)*			
Wareneingangsdatum: *Date of sample receipt:*	15.10.2022			
Prüfmuster-Nr.: *Test sample no:*	TN22-4211E~TN22-4212E			
Prüfzeitraum: *Testing period:*	17.10.2022 - 20.10.2022			
Ort der Prüfung: *Place of testing:*	See Other below for details			
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: *Test result*:*	Pass			

geprüft von: *tested by:* X Jingjing Wang
Datum: *Date:* 2022-10-26
Stellung / *Position:* **Jingjing Wang/PE**

genehmigt von: *authorized by:* X Liu
Ausstellungsdatum: *Issue date:* 2022-10-27
Stellung / *Position:* **Bo Liu/TC**

Sonstiges / *Other:* Place of testing: Shanghai Intelligent Service and Technology Co., Ltd. : East zone, Building 14, No.1000, Jinhai Road, Pudong New District, Shanghai, P. R. China

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery:* Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged*

* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet
* Legend: *P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested*

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark

TÜV Rheinland (Shanghai) Co., Ltd. No.177, 178, Lane 777 West Guangzhong Road, Jing'an District,Shanghai, China
Mail: service@de.tuv.com · Web: www.tuv.com

SUNKEAN

CPR, Construction Products Regulation

CPR
COMPLIANT
BS EN 50575
Construction Products Regualation

SUNKEAN.com

What is it and how does it affect electrical cables?

SUNKEAN

What is the CPR?

The CPR (Construction Product Regulation) is a regulation issued by the European Union, in force since 1st July 2016. The purpose of the CPR is to:

- Ensure the harmonisation across Europe of the materials used in construction
- Achieve higher safety levels for fire and dangerous substances in materials used in construction
- Provide greater clarity and traceability of products used in construction

Construction Works - Definition

The CPR states that power control and data telecommunications cable is subject to the rules when installed in "Construction Works". Construction Works as defined by the CPR refer to any permanent or temporary building or civil engineering work.

- Public Locals
- Civil engineering works
- Households
- Connecting facilities

Why CPR?

In the case of cables, whose standard application is developed in EN 50575. CPR affects only those power cables, telecommunications, data and control, to be incorporated in construction works permanently. The benefits of the cables which will be regulated by the CPR are:

Reaction to fire:
Contribution of a cable (by decomposition of the component materials during a fire) to the spread of it.

Fire resistance:
Ability of a cable to maintain its performance under fire condition.

Emissions of hazardous substances:
Examine the acid gases during a fire.

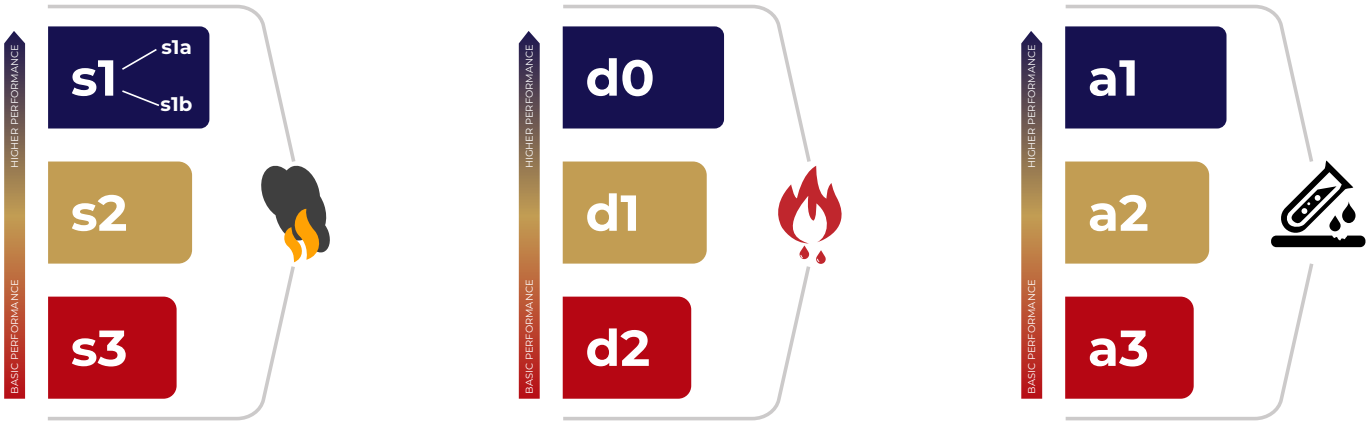
The new classes

At present time national regulations have been established across Europe specifying CPR Classes between Eca and B2ca. The industry is accordingly supplying products with this range of performance.

Additional Classification Levels: s, d, a.

Three Additional Classification Levels Have Been Established Regarding:

- The amount of smoke produced (s)
- The particles released by the cable during combustion (d)
- The acidity – or toxicity – of the smoke (a)



Cca-S1a, d0,a2 **Dca-s2,d2,a2**

SMOKE OPACITY

s1: Little production and slow propagation of smoke
s1a: S1 with visibility over 80% (UNE-EN 61034-2)
s1b: S1 with visibility over 60% and below 80%(UNE-EN 61034-2)
s2: Intermediate values of production and propagation of smoke
s3: Neither s1 or s2

FALL OF DROPLETS DURING COMBUSTION

d0: No fall of droplets or flamed particles (UNE-EN 50399)
d1: Fall of droplets and inflamed particles that persist for less than 10 seconds (UNE-EN50399)
d2: Neither d0 or d1

SMOKE ACIDITY

a1: Low acidity (UNE-EN 60754-2 conductivity <2,5ms/mm y pH > 4.3)
a2: Intermediate values of acid (UNE-EN 60754-2 conductivity <10 ms/mm y pH > 4.3)
a3: Neither a1 or a2

Summary of CPR classification

This new European classification system enables the easy comparison of different products in order to select the most suitable cable for each type of installation.

HIGHER PERFORMANCE → BASIC PERFORMANCE

Class	Main classification criteria			Additional criteria		
	UNE-EN 50399 (heat emission, firegrowth rate)	UNE-EN 50399 (Non-propagation of fire)	UNE-EN 60332-1 (Non-propagation of fire)	UNE-EN 50399/ 61034-2 s → Smoke emission	UNE-EN 50399 d → Flamed particles	UNE-EN 60754-2 a → Acidity
B2	+++	+++	+++	S1a +++++ S1b ++++ S1 ++ S2 + S3	d0 +++ d1 + d2	a1 +++ a2 + a3
C	++	++	+++	S1a +++++ S1b ++++ S1 ++ S2 + S3	d0 +++ d1 + d2	a1 +++ a2 + a3
D	++		+++	S1a +++++ S1b ++++ S1 ++ S2 + S3	d0 +++ d1 + d2	a1 +++ a2 + a3
E			+++			

Where to apply?

Based on the risk of fire, here we provide some suggestions about how to apply the CPR-compliant cables in proper environment or circumstances. The below chart shows the use of applications by different risk of fire level.

Class	Risk of fire	Insulation Place (Enviroment Example)
B2	Very High	Hospital, Tunnel, Underground railways, High rises buildingwith large of occupants
C	High	Airports, Shopping Center, Public Building, Escape routes
D	Medium	Commercial premises, Large office, Large storehouses
E	Low	Single residential, Industrial premises, Small store buildingwith few occupants

62930 IEC131 H1Z2Z2-K Solar Cable

EXPECTED 25 YEARS LIFETIME

Single core solar cable

Twin core solar cable

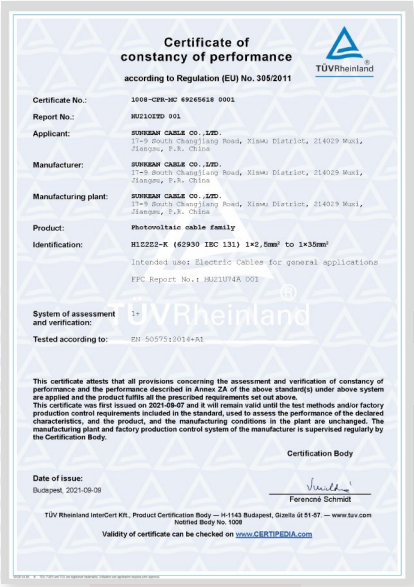
SUNKEAN provides a number of additional advantages in comparison to conventional solar cables:

- Voltage rating 1.500 V_{DC} (max. 1.800 V_{DC})
- Consecutive meter marking
- Higher UV-stability
- Higher water resistance
- Flammability class acc. CPR
- Higher insulation resistance
- Higher mechanical stability

Characteristics

Conductor	Tinned stranded copper, comply with IEC60228, EN60228, VDE0295, Class 5	**Temperature Rating**	Rated: -40°C to +90°C Max.conductor temp: +120°C Short Circuit: +250°C
Insulation Material	XLPO	**Minimum Bending Radius**	Ø ≤ 12mm 4 x overall diameter Ø > 12mm 10 x overall diameter
Insulation Color	Optional color		
Sheath Color	XLPO	**Testing Standard**	Smoke Density Test: transmittance≥60% EN50618 Cold Bending Test: -40°C±2°C no crack EN60811-504
Voltage Rating	DC: 1500V		
Test Voltage	6500V AC	**Reference Standard**	EN50618 & IEC62930

Certificate



Certificate of constancy of performance

according to Regulation (EU) No. 305/2011

Certificate No.: 1008-CPR-MC 69265618 0001

Report No.: HU210ZTD 001

Applicant: SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, P.R. China

Manufacturer: SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, P.R. China

Manufacturing plant: SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, P.R. China

Product: Photovoltaic cable family

Identification: H1Z2Z2-K (62930 IEC 131) 1×2,5mm² to 1×35mm²

Intended use: Electric Cables for general applications

FPC Report No.: HU21U74A 001

System of assessment and verification: 1+

Tested according to: EN 50575:2014+A1

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performance described in Annex ZA of the above standard(s) under above system are applied and the product fulfils all the prescribed requirements set out above.
This certificate was first issued on 2021-09-07 and it will remain valid until the test methods and/or factory production control requirements included in the standard, used to assess the performance of the declared characteristics, and the product, and the manufacturing conditions in the plant are unchanged. The manufacturing plant and factory production control system of the manufacturer is supervised regularly by the Certification Body.

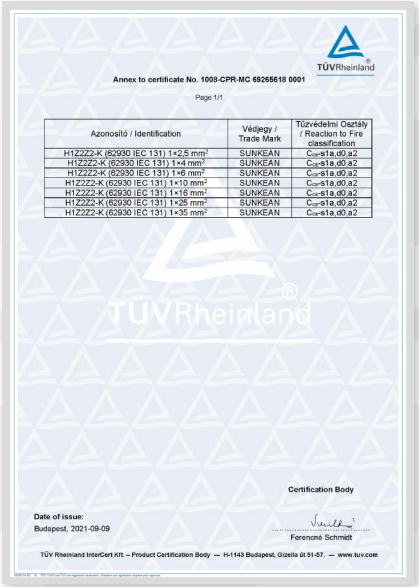
Certification Body

Date of issue: Budapest, 2021-09-09

Ferencné Schmidt

TÜV Rheinland InterCert Kft., Product Certification Body — H-1143 Budapest, Gizella út 51-57. — www.tuv.com
Notified Body No. 1008

Validity of certificate can be checked on www.CERTIPEDIA.com



Annex to certificate No. 1008-CPR-MC 69265618 0001

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Azonosító / Identification	Védjegy / Trade Mark	Tűzvédelmi Osztály / Reaction to Fire classification
H1Z2Z2-K (62930 IEC 131) 1×2,5 mm²	SUNKEAN	C_{ca}-s1a,d0,a2
H1Z2Z2-K (62930 IEC 131) 1×4 mm²	SUNKEAN	C_{ca}-s1a,d0,a2
H1Z2Z2-K (62930 IEC 131) 1×6 mm²	SUNKEAN	C_{ca}-s1a,d0,a2
H1Z2Z2-K (62930 IEC 131) 1×10 mm²	SUNKEAN	C_{ca}-s1a,d0,a2
H1Z2Z2-K (62930 IEC 131) 1×16 mm²	SUNKEAN	C_{ca}-s1a,d0,a2
H1Z2Z2-K (62930 IEC 131) 1×25 mm²	SUNKEAN	C_{ca}-s1a,d0,a2
H1Z2Z2-K (62930 IEC 131) 1×35 mm²	SUNKEAN	C_{ca}-s1a,d0,a2

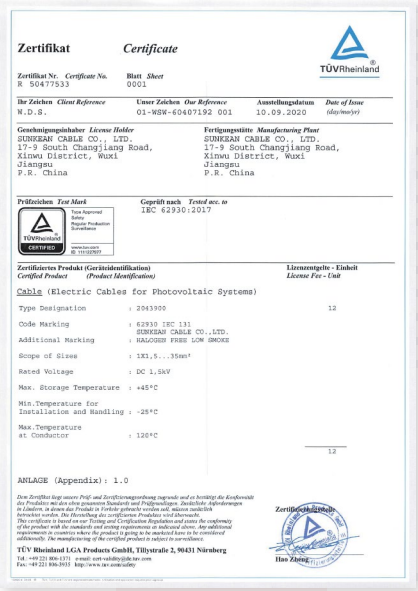
Certification Body

Date of issue: Budapest, 2021-09-09

Ferencné Schmidt

TÜV Rheinland InterCert Kft. – Product Certification Body — H-1143 Budapest, Gizella út 51-57. — www.tuv.com

▲ Cca-s1a, d0, a2



Zertifikat / Certificate

Zertifikat Nr. / Certificate No.: R 50477533

Blatt / Sheet: 0001

Ihr Zeichen / Client Reference: N.D.S.

Unser Zeichen / Our Reference: 01-WSW-60407192 001

Ausstellungsdatum / Date of Issue: 10.09.2020 (day/mo/yr)

Genehmigungsinhaber / License Holder: SUNKEAN CABLE CO., LTD. 17-9 South Changjiang Road, Xinwu District, Wuxi Jiangsu P.R. China

Fertigungsstätte / Manufacturing Plant: SUNKEAN CABLE CO., LTD. 17-9 South Changjiang Road, Xinwu District, Wuxi Jiangsu P.R. China

Prüfzeichen / Test Mark: Type Approved Safety Regular Production Surveillance — CERTIPEDIA — www.tuv.com/ID 1111027977

Geprüft nach / Tested acc. to: IEC 62930:2017

Zertifiziertes Produkt (Gerätebezeichnung) / Certified Product (Product Identification): Cable (Electric Cables for Photovoltaic Systems)

Lizenzentgelte - Einheit / License Fee - Unit

Type Designation	: 2043900	12
Code Marking	: 62930 IEC 131 SUNKEAN CABLE CO.,LTD.	
Additional Marking	: HALOGEN FREE LOW SMOKE	
Scope of Sizes	: 1X1,5...35mm²	
Rated Voltage	: DC 1,5kV	
Max. Storage Temperature	: +45°C	
Min.Temperature for Installation and Handling	: -25°C	
Max.Temperature at Conductor	: 120°C	
		12

ANLAGE (Appendix): 1.0

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Zertifizierungsstelle: Hao Zhou

▲ IEC 62930

Certificate of constancy of performance

according to Regulation (EU) No. 305/2011

Certificate No.: 1008-CPR-MC 69266647 0001

Report No.: HU23ALHN 001

Applicant: SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, CHINA

Manufacturer: SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, CHINA

Manufacturing plant: SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, 214029 Wuxi, Jiangsu, CHINA

Product: Photovoltaic cable family

Identification: H1Z2Z2-K (62930 IEC 131) 1×2,5mm² to 1×35mm²

Intended use: Electric Cables for general applications

FPC Report No.: HU232D7Y 001

System of assessment and verification: 1+

Tested according to: EN 50575:2014+A1:2016

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performance described in Annex of the above standard(s) under above system are applied and the product fulfils all the prescribed requirements set out above.
This certificate was first issued on 2023-05-10 and it will remain valid until the test methods and/or factory production control requirements included in the standard, used to assess the performance of the declared characteristics, and the product, and the manufacturing conditions in the plant are unchanged. The manufacturing plant and factory production control system of the manufacturer is supervised regularly by the Certification Body.

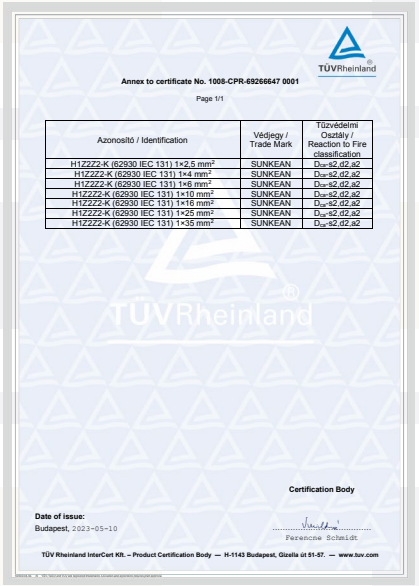
Certification Body

Date of issue: Budapest, 2023-05-10

Ferencné Schmidt

TÜV Rheinland InterCert Kft., Product Certification Body — H-1143 Budapest, Gizella út 51-57. — www.tuv.com
Product certification body accredited by NAH under No NAH-E-0053/20188K, Notified Body No. 1008

Validity of certificate can be checked on www.CERTIPEDIA.com



Annex to certificate No. 1008-CPR-69266647 0001

Page 1/1

Azonosító / Identification	Védjegy / Trade Mark	Tűzvédelmi Osztály / Reaction to Fire classification
H1Z2Z2-K (62930 IEC 131) 1×2,5 mm²	SUNKEAN	D_{ca}-s2,d2,a2
H1Z2Z2-K (62930 IEC 131) 1×4 mm²	SUNKEAN	D_{ca}-s2,d2,a2
H1Z2Z2-K (62930 IEC 131) 1×6 mm²	SUNKEAN	D_{ca}-s2,d2,a2
H1Z2Z2-K (62930 IEC 131) 1×10 mm²	SUNKEAN	D_{ca}-s2,d2,a2
H1Z2Z2-K (62930 IEC 131) 1×16 mm²	SUNKEAN	D_{ca}-s2,d2,a2
H1Z2Z2-K (62930 IEC 131) 1×25 mm²	SUNKEAN	D_{ca}-s2,d2,a2
H1Z2Z2-K (62930 IEC 131) 1×35 mm²	SUNKEAN	D_{ca}-s2,d2,a2

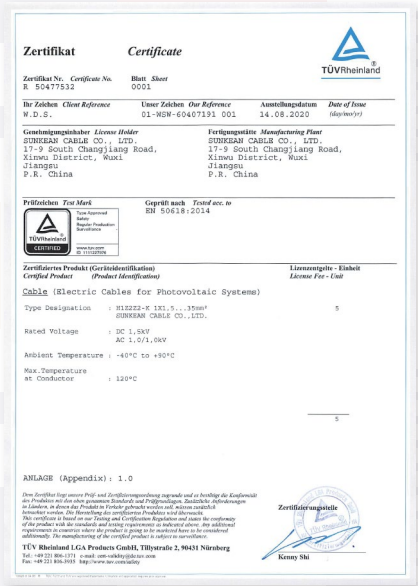
Certification Body

Date of issue: Budapest, 2023-05-10

Ferencné Schmidt

TÜV Rheinland InterCert Kft. – Product Certification Body — H-1143 Budapest, Gizella út 51-57. — www.tuv.com

▲ Dca-s2, d2, a2



Zertifikat / Certificate

Zertifikat Nr. / Certificate No.: R 50477532

Blatt / Sheet: 0001

Ihr Zeichen / Client Reference: N.D.S.

Unser Zeichen / Our Reference: 01-WSW-60407191 001

Ausstellungsdatum / Date of Issue: 14.08.2020 (day/mo/yr)

Genehmigungsinhaber / License Holder: SUNKEAN CABLE CO., LTD. 17-9 South Changjiang Road, Xinwu District, Wuxi Jiangsu P.R. China

Fertigungsstätte / Manufacturing Plant: SUNKEAN CABLE CO., LTD. 17-9 South Changjiang Road, Xinwu District, Wuxi Jiangsu P.R. China

Prüfzeichen / Test Mark: Type Approved Safety Regular Production Surveillance — CERTIPEDIA — www.tuv.com/ID 1111028296

Geprüft nach / Tested acc. to: EN 50618:2014

Zertifiziertes Produkt (Gerätebezeichnung) / Certified Product (Product Identification): Cable (Electric Cables for Photovoltaic Systems)

Lizenzentgelte - Einheit / License Fee - Unit

Type Designation	: H1Z2Z2-K 1X1,5...35mm² SUNKEAN CABLE CO.,LTD.	5
Rated Voltage	: DC 1,5kV AC 1,0/1,0kV	
Ambient Temperature	: -40°C to +90°C	
Max.Temperature at Conductor	: 120°C	
		5

ANLAGE (Appendix): 1.0

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Zertifizierungsstelle: Kenny Shi

▲ EN50618

SUNKEAN

SUNKEAN CABLE CO., LTD.

Contents

Overview

SUNKEAN connects reliable future

01.

About Us

PV Solar, Energy Storage, and EV Charging Cabling Solutions Provider

Unlocking the potential of renewable energy, SUNKEAN stands as your trusted partner. Since 2013, we've honed expertise in solar, energy storage, and charging technologies. Our cutting-edge manufacturing and rigorous quality control ensure unmatched reliability. From solar, energy storage, to charging, SUNKEAN delivers excellence at every turn.

TOP3

Market share in Malaysia, Japan, and Australia.

Key Stats

Wuxi, CN	80+	60+	19000m²	500km	200000set
Headquarters	Proprietary intellectual properties	International Certifications	Factory area	Cable Daily Output	Harness Monthly Output

Vision

Becoming the Global Leader in Connection Solutions

Mission

CONNECTS
RELIABLE FUTURE

World class

Manufacturer of sustainable energy connectivity solutions

Values

· Customer Success · Hard Work and Dedication · Self-Reflection · Openness and Progress · Integrity and Trustworthiness · Teamwork

Company mission

Providing Better Connection Solutions for Sustainable Energy

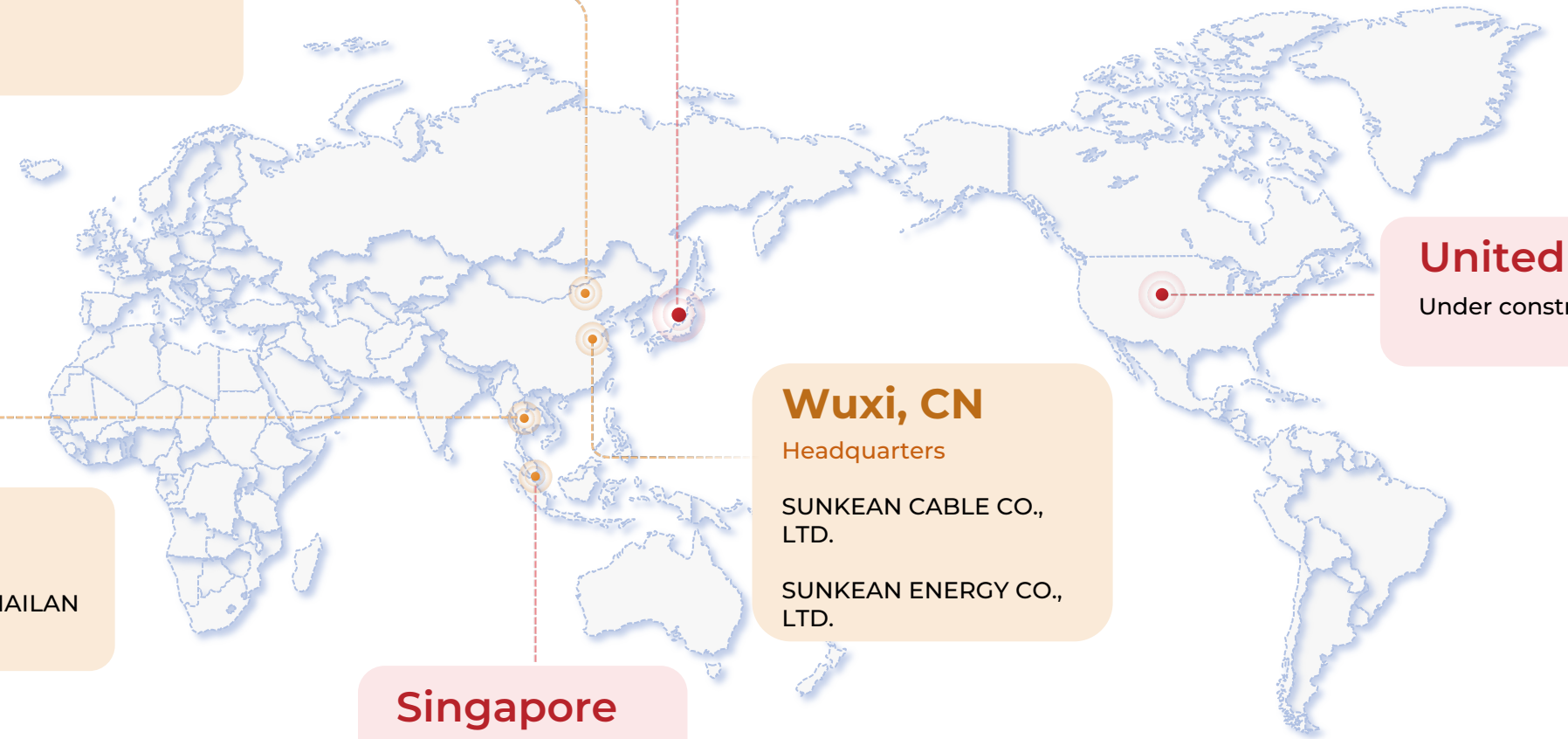
Global

Promoting green and sustainable development to achieve the "Dual Carbon" goals

Branch Offices

Hebei, CN
Fence Factory

Japan
SUNKEAN JAPAN K.K.



United States
Under construction

Wuxi, CN
Headquarters

SUNKEAN CABLE CO., LTD.

SUNKEAN ENERGY CO., LTD.

Thailand
SUNKEAN CONNECTIVITY(THAILAND) CO., LTD.

Singapore
DEFREE PTE.LTD.

Milestones

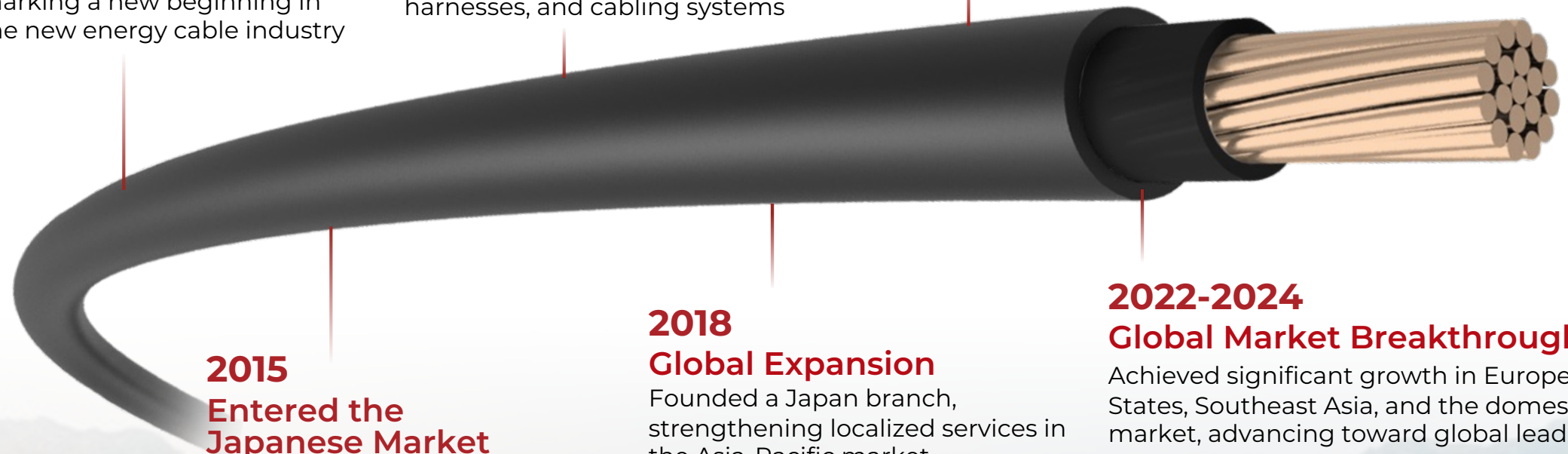
2013
SUNKEAN Founded
Headquartered in Wuxi, China, marking a new beginning in the new energy cable industry

2015
Entered the Japanese Market
Successfully penetrated the Japanese market and established long-term cooperation with a leading distributor

2017
Built Core Manufacturing Facility
Established a state-of-the-art cable factory, focusing on photovoltaic (PV) cables, energy storage solutions, string harnesses, and cabling systems

2018
Global Expansion
Founded a Japan branch, strengthening localized services in the Asia-Pacific market

2020
Production Capacity Doubled
Factory size doubled, production capacity increase

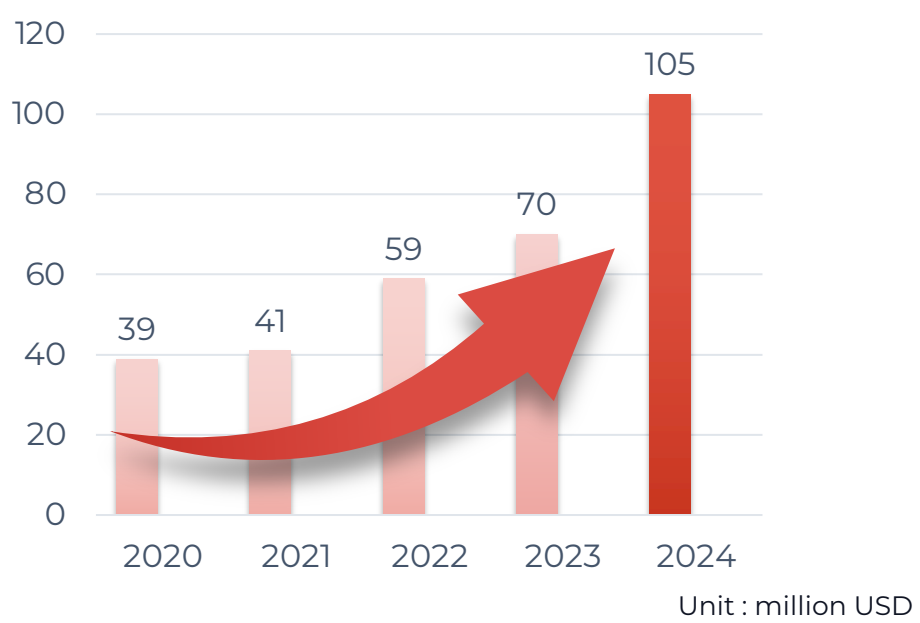


2022-2024
Global Market Breakthrough
Achieved significant growth in Europe, the United States, Southeast Asia, and the domestic Chinese market, advancing toward global leadership.

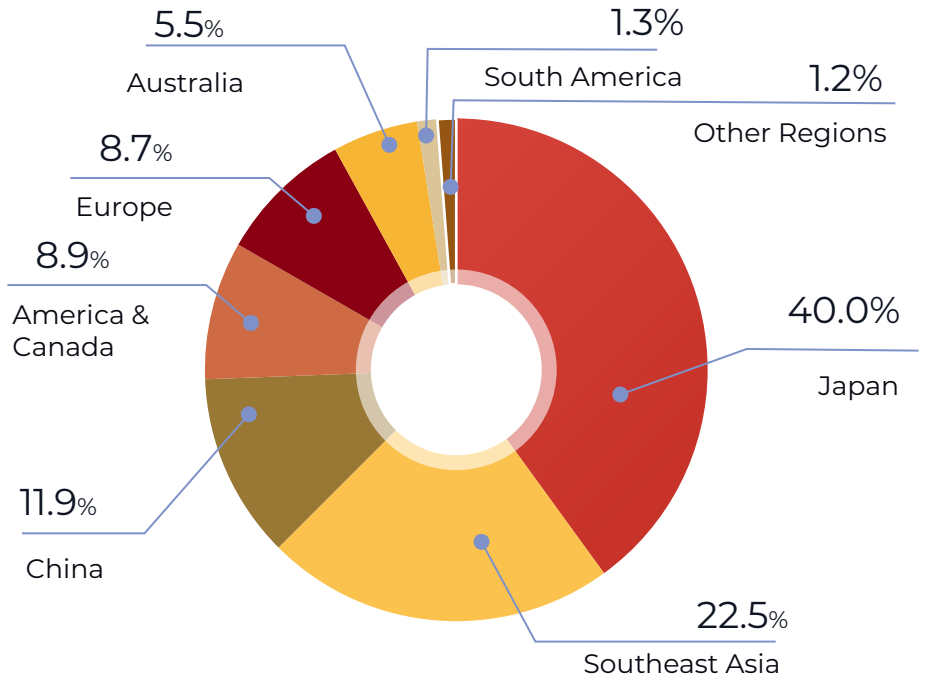
Financial Performance

SUNKEAN is convinced that the best product quality warranty is that "the longevity of the enterprise should be longer than that of its products".
SUNKEAN has maintained an excellent financial performance and joins hands with customers and partners in the long run.

Figures in recent 5 years



Gegraphic Distribution



Expertise that Powers Connections

A dynamic team dedicated to delivering safer, greener, and smarter energy connections for a sustainable future.

Our team comprises seasoned professionals with extensive expertise in the cable, wire harness, photovoltaic, and energy storage industries.

15+

years average industry expertise

50+

global projects supported annually

Engineers with decades of experience *in designing and manufacturing high-performance cables*

Specialists in **energy storage and photovoltaic systems**, *driving new possibilities in sustainable energy*

Professionals experienced in connecting industries and markets across the globe

Strengths

SUNKEAN connects reliable future

02.

Enterprise qualification

Member of Wire and Cable Industry Association

Specialization and Innovation Certificate

Wuxi Engineering Research Center Certificate

High-tech enterprise certification

TÜV AQM PV Cable Award

Patents and certificates

Proprietary
Intellectual Properties

80+

International
Product Certifications

60+

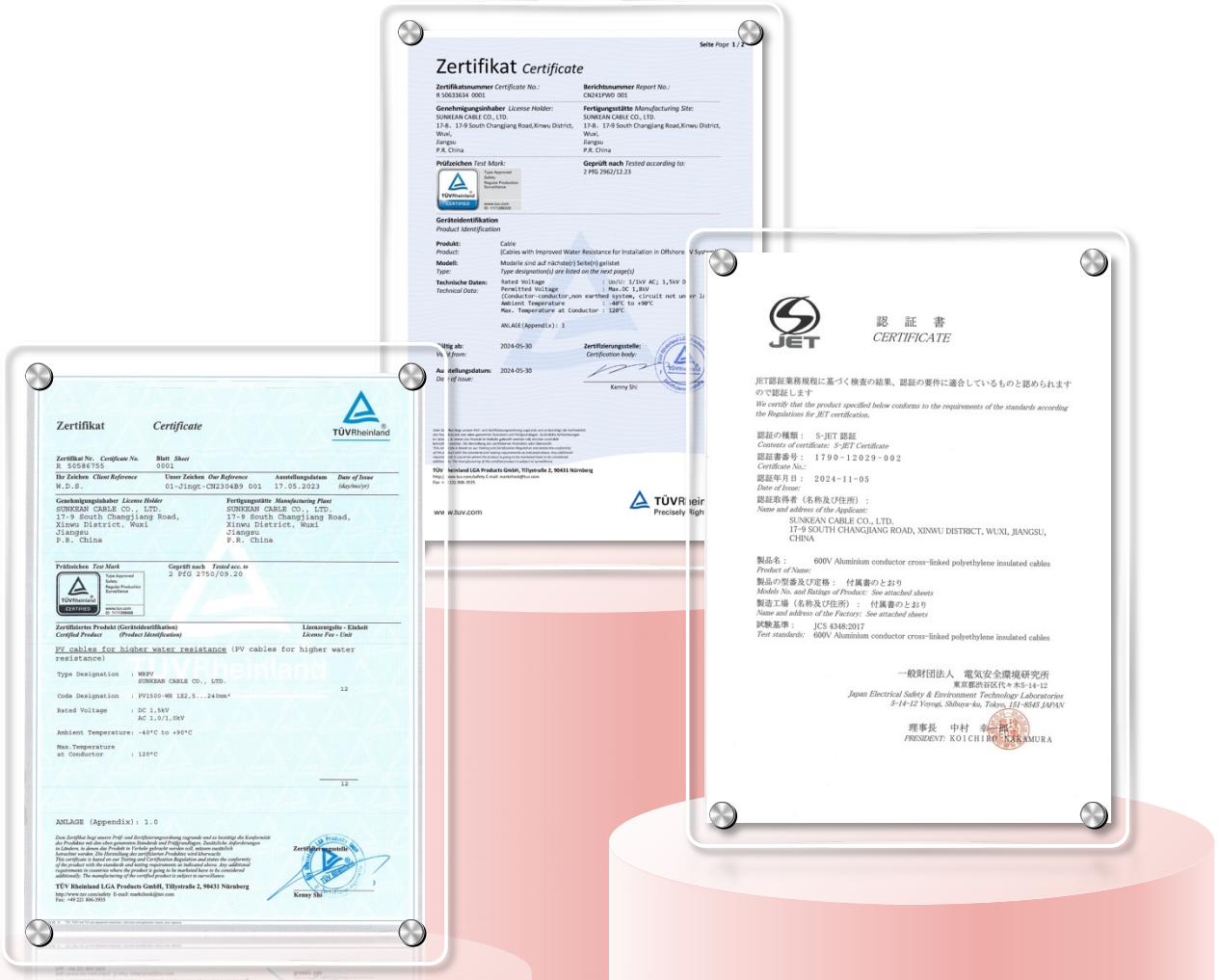
Pioneering Excellence, Globally Recognized

With multiple global first certifications, SUNKEAN's products stand as a testament to our unmatched innovation and industry expertise.

TÜV 2750
Floating PV Certification
First Certification Nationwide in China

TÜV 2962
Floating PV Certification
Among the First Certifications Nationwide in China

600V AL-CV & CVT Certification
The World's First Certification

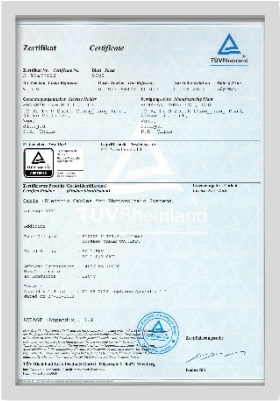


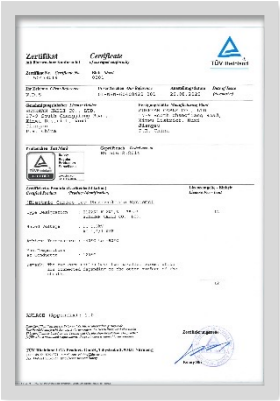
SUNKEAN

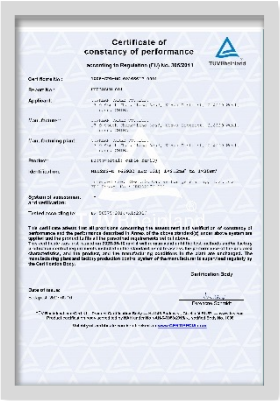
Certificates

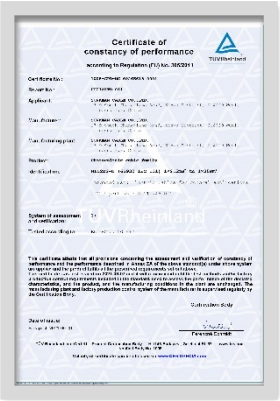
UL Standard

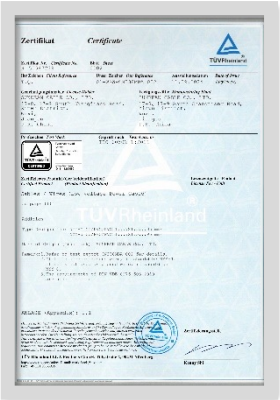
C(UL) Standard

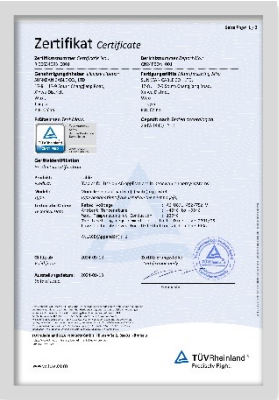












Certificates

TÜV Standard

Certificates

RETIE

iticcol

Certificado de Conformidad de Producto
Product Certificate of Conformity

Certificado No. *Certificate No.*	PRI-100807
Informe No. *Report No.*	BSP-0554
Nombre y dirección del titular *Holder's name and address*	SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, Wuxi City, Jiangsu 214192 P.R. China
Nombre y dirección de la fábrica(s) *Name and address of the factory(ies)*	SUNKEAN CABLE CO.,LTD. 17-9 South Changjiang Road, Xinwu District, Wuxi City, Jiangsu 214192 P.R. China
Origen *Origin*	R.P. China *P.R. China*
Producto *Product*	Cable para uso en instalaciones fotovoltaicas *Cable for photovoltaic systems*
Referencia(s) *Model(s)*	H1Z2Z2-K/62930 IEC131
Marca *Trademark*	SUNKEAN
Características principales *Main characteristics*	Área transversal / *Cross section*: 1.5, 2.5, 4, 6, 10, 16, 25, 35 mm2, 2x1.5, 2x2.5, 2x4, 2x6, 2x10, 2x16, 2x25, 2x35 mm2 Tensión / *Voltage*: 1.5 kV (DC) Material / *Material*: Flexible cobre alambre estañado, clase 5 / *Flexible tinned copper wire, class 5* Aislamiento / *Isulation*: XLPO (Polietileno reticulado), libre de halógenos y bajo en emisión de humos / *(cross-linked polyethylene), halogen free and low smoke*
Evaluado de acuerdo con *Assessed according to*	Resolución 90708: 2013 Ministerio de Minas y Energía de Colombia, Reglamento técnico de Instalaciones eléctricas. RETIE, artículo 20 y 20.28. (IEC 62930:2017, Cables eléctricos para sistemas fotovoltaicos). *Resolution 90708: 2013, Mines and Energy Minister, Colombian Mandatory Regulation related to Product electrical safety, article 20 and 20.28* *(IEC 62930:2017, Electric cables for photovoltaic systems).*
Esquema de certificación *Certification type scheme*	Esquema Tipo 5 *Type 5 scheme*
Fecha de emisión / *Valid from*	22/11/2022
Fecha de actualización / *Last update*	20/03/2024
Vigente hasta / *Valid until*	21/11/2025
Autorizado Por *Authorized by*	

Ivan Ramirez
IVAN RAMIREZ
Jefe de Operaciones Producto
ITICCOL S.A.S.
Cra.47 No. 106a-51 Bogotá - CO
+57 601 3907080

IAF · ONAC ACREDITADO · iticcol

CE

UDEM

LOW VOLTAGE DIRECTIVE,
ELECTROMAGNETIC COMPATIBILITY DIRECTIVE
ATTESTATION OF CONFORMITY

Technical file of the company mentioned below has been inspected and audit has been completed successfully.
2014/30/EU Electromagnetic Compatibility Directive and 2014/35/EU Low Voltage Directive has been taken as references for these processes.

Company Name	: SUNKEAN CABLE CO., LTD.
Company Address	: 17-8, 17-9 South Changjiang Road, Xinwu District, Wuxi Jiangsu, P.R. China
Related Directives and Annex	: 2014/35/EU Low Voltage Directive /Annex III 2014/30/EU Electromagnetic Compatibility Directive /Annex II
Related Standards	: EN 50525-1:2011, EN 50228:2005, EN 60332-1-2:2004+A12:2020 EN IEC 61000-6-1:2019, EN IEC 61000-6-3:2021 EN IEC 61000-3-2:2019+A2:2024, EN 61000-3-3:2013+A2:2021
Product Name	: Wire and Cable
Report No and Date	: XMT02024007285/LVD, XMT02024007273/EMC
Product Brand/Model/Type	: SUNKEAN / PV1500DC-AL, PV1500DC-AL DB, PV1500DC-AL K, …
Certificate Number	: M.2024.206.C106750
Initial Assessment Date	: 11.09.2024
Registration Date	: 12.09.2024
Reissue Date/No	:
Expiry Date	: 11.09.2029

UDEM International Certification Auditing Training Centre Industry and Trade Inc. Co.
General Manager

E-mail: info@udem.com.tr www.udem.com.tr

ETL

intertek
Total Quality. Assured.

AUTHORIZATION TO MARK

Applicant:	SUNKEAN CABLE CO., LTD.	Manufacturer:	SUNKEAN CABLE CO., LTD.
Country:	China	Country:	China

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Intertek Testing Services Ltd. Zhejiang
Control Number: 5024311 Authorized by: for L. Matthew Snyder, Certification Manager

Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.

Standard(s):	Outline of Investigation for Distributed Generation Wiring Harnesses [UL SUBJECT 9703:2018 Ed.3]
Product:	Photovoltaic Wiring Harness
Brand Name:	SUNKEAN

Page 1 of 2

CQC

CERTIFICATE OF PRODUCT CERTIFICATION

Valid until: Apr.25,2027

NAME AND REGISTERED ADDRESS OF THE APPLICANT	Sunkean Cable Co., Ltd. 17-8, 17-9 South Changjiang Road, Xinwu District, Wuxi, Jiangsu, China
NAME AND REGISTERED ADDRESS OF THE MANUFACTURER	Sunkean Cable Co., Ltd. 17-8, 17-9 South Changjiang Road, Xinwu District, Wuxi, Jiangsu, China
NAME AND LOCATION OF THE FACTORY	Sunkean Cable Co., Ltd. 17-8, 17-9 South Changjiang Road, Xinwu District, Wuxi, Jiangsu, China
PRODUCT NAME, MODEL AND SPECIFICATION	Electric vehicle charging cables for AC charging systems
THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS	
TYPE OF CERTIFICATION SCHEMES	Type Testing of Product + Initial Factory Inspection + Follow-up Factory Inspection

SIGNATURE 谢肇煦

中国质量认证中心
CHINA QUALITY CERTIFICATION CENTRE

CHINA QUALITY CERTIFICATION CENTRE CO., LTD.
Section 9, No.188, Nansihuan Xilu, Beijing 100070 P. R. China
http://www.cqc.com.cn

TÜV SUD

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

CERTIFICATE
No. B 123946 0001 Rev. 00

Holder of Certificate:	SUNKEAN CABLE CO.,LTD. No.17-8,17-9 South Changjiang Road Xinwu District 214142 Wuxi, Jiangsu PEOPLE'S REPUBLIC OF CHINA
Certification Mark:	
Product:	Electric Cables Electric cables for photovoltaic systems with a voltage rating of 2,0 kV DC
Model(s):	PV 2000DC(TC5) 1×2.5mm², 1×4mm², 1×6mm², 1×10mm² 1×16mm², 1×25mm² 1×35mm², 1×50mm² 1×70mm², 1×95mm², 1×120mm², 1×150mm² 1×185mm², 1×240mm²
Parameters:	Rated Voltage: DC 2000V Class (IEC 61140): II Ambient Temperature: -40°C ~+90°C Max. Temperature at conductor: 120°C
Tested according to:	PPP 58209A:2022

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704072367501-00
Valid until: 2028-12-25

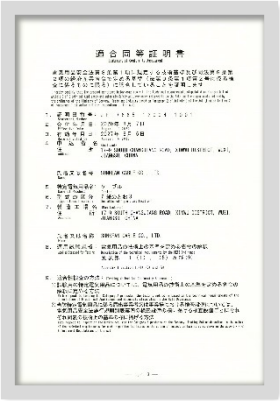
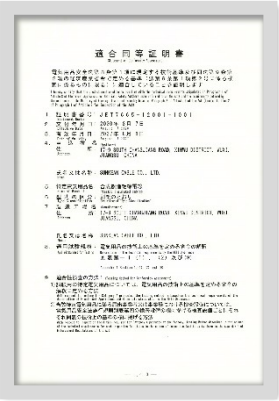
Date, 2023-12-27

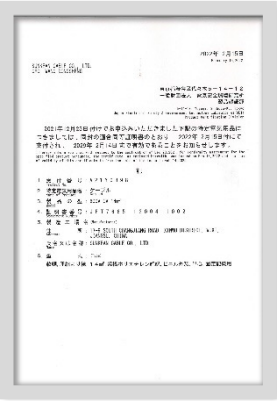
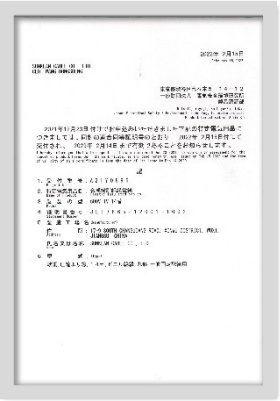
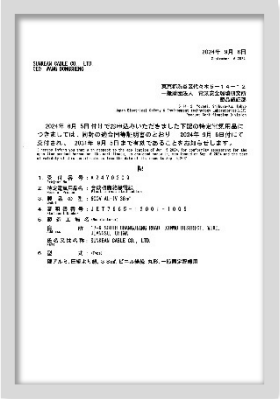
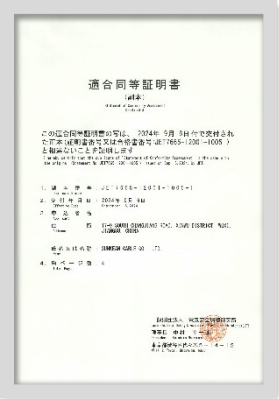
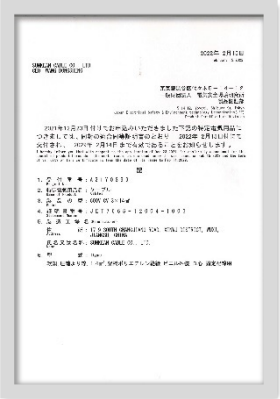
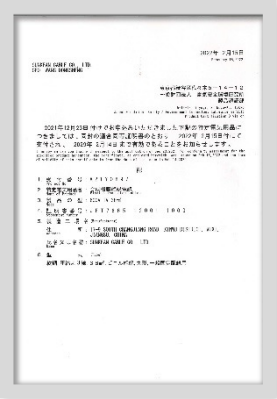
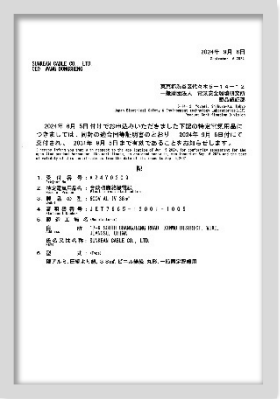
(Yaqun Alex Liu)

Page 1 of 1
TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Certificates

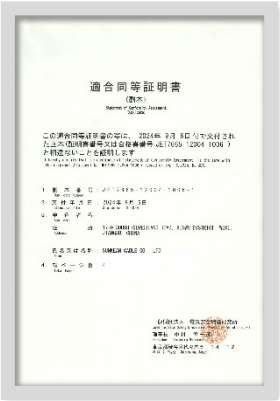
PSE Standard

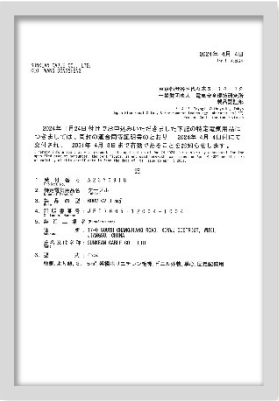



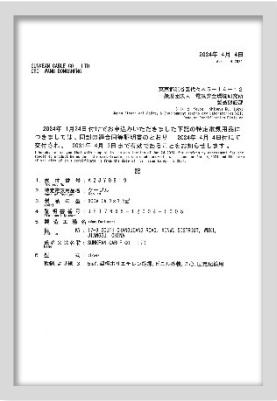








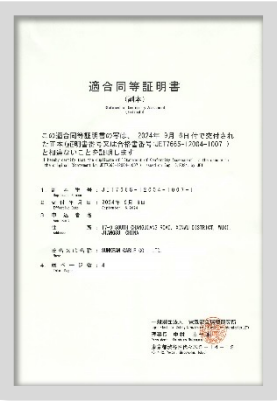
Certificates

PSE Standard









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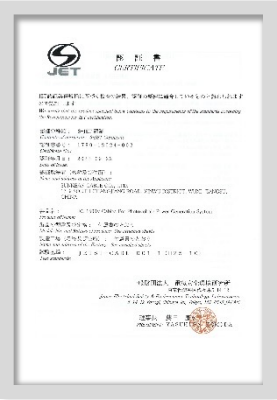


Quality Inspection and Testing

During the production process, we strictly follow the requirements of ISO 9001 quality management system for quality control and inspect and test each process. We use advanced testing equipment and technology, including high voltage testing, insulation resistance testing, appearance inspection, etc., to ensure that the products meet the requirements of various international standards.

Incoming Inspection → In-process Inspection → Finshed Products Inspection → Outgoing Inspection

IATF 16949 Certificate

ISO 9001 Certificate

ISO 14001 Certificate

Factory View

Cable Factory

Strength

We have advanced production equipment and process flow to meet the needs of orders of different sizes and complexities.

Factory Area **10000m²**

6 insulation extrusion lines

12 rewinding process lines

2 complete extrusion-cabling lines

Monthly production capacity **15,000km**

Factory View

Harness Factory
Strength

Our production plants are carefully designed and optimized, with efficient production lines and strict quality control systems to ensure a stable supply and consistency of products.

Factory Area **9000m²**

53 injection molding machines

10 wire cutting machines

12 crimping machines

12 nut machines

4 welding machines

3 coiling machines

Monthly production capacity **200,000set**

Uncompromising Quality, Proven in Every Test

Electrical Performance Testing

- Insulation Resistance
- Conductor Resistance
- Withstand voltage
- Long-Term Insulation
- DC Withstanding
- Temperature Rise

.....

Thermal Performance Testing

- Aging
- High Temperature and Humidity
- Thermal Elongation
- Thermal Deformation
- Thermal Shock

.....

Mechanical Performance Testing

- Low-Temperature Bending
- Low-Temperature Tensile
- Plastic Film Brittleness Test at Low Temperatures
- Oil Resistance

.....

Combustion Performance Testing

- IEC60332-1 Combustion
- JISC3005 Inclined Combustion
- FT-1 Combustion
- VW-1 Combustion

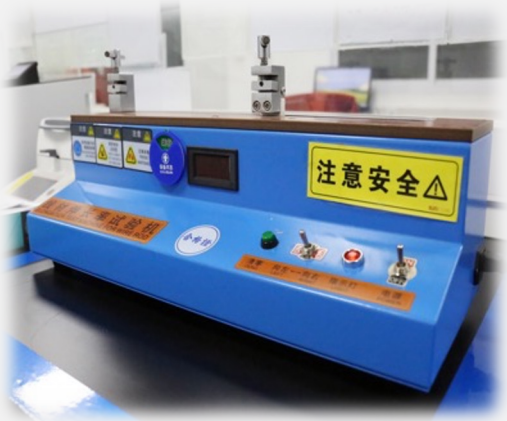
.....

Advanced testing equipment ensures the durability of products in various environments.

Cable Inspection Equipment (Partial)

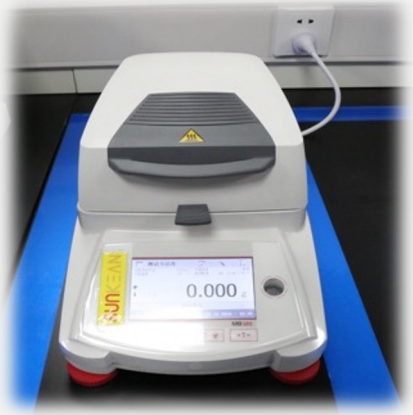
Electronic Densitometer

Test item:
Rubber Material Density Test



Elongation Testing Machine

Test item:
Conductor Elongation Test



Moisture Analyzer

Test item:
Rubber Material Moisture Test

DC Resistance Bridge

Test item:
Conductor Resistance

Cable Inspection Equipment (Partial)

Projector

Test item:
- Minimum Insulation & Sheath Thickness
- Average Insulation & Sheath Thickness
- Concentricity
- Ovality (or Eccentricity, in some contexts)

Diameter Gauge

Test item:
Single Conductor Wire Diameter Measurement

Low-Temperature Chamber

Test item:
- Low-Temperature Bending Test
- Low-Temperature Tensile Test
- Cold Elongation Test

Aging Chamber

Test item:
- Mutual Influence Test
- Indentation Resistance Test
- Sheath Heat Shrinkage Test
- Heat Elongation Test
- Thermal Life Test

Cable Inspection Equipment (Partial)

Thermal deformation testing

Test item:
- Thermal deformation experiment
- Damp Heat Test

Temperature and humidity test chamber

Test item:
- High Temperature and High Humidity Test
- High and Low Temperature Cycling Test
- Double 85% Test (refers to 85° C and 85% relative humidity test, commonly used for reliability testing)

Thermal shock test chamber

Test item:
Thermal Shock Test

Combustion Test Machine

Test item:
- IEC 60332-1 Combustion Test
- JIS C 3005 Inclined Combustion Test
- FT-1 Combustion Test
- VW-1 Combustion Test

Cable Inspection Equipment (Partial)

Low-temperature brittleness tester

Test item:
Low-Temperature Brittleness of Plastic Sheets

Constant temperature oil bath

Test item:
Oil Resistance Test

Tensile strength and elongation tester

Test item:
Conductor Tensile Strength Test

Withstand voltage tester

Test item:
- Withstanding Voltage Test
- Long-Term Insulation Resistance Test under DC Voltage

Harness Inspection Equipment (Partial)

Temperature rise tester

Test item:
Temperature Rise Test

Cross-section analyzer

Test item:
Cross-Sectional Analysis

Tensile testing machine

Test item:
- Tensile Strength of Terminal
- Post-Riveting Tensile Strength
- Connector Tensile Strength Test

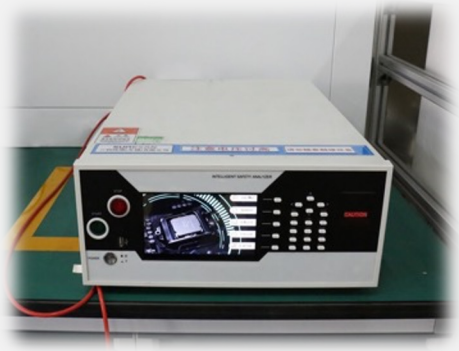
X-ray

Test item:
- Connector Crimping Condition
- Connection Condition Between Inner and Outer Molds
- Presence of Bubbles Inside Injection-Molded Parts

Harness Inspection Equipment (Partial)

Internal Resistance Tester

Test item:
- Internal Resistance Test
- Continuity Test



Insulation resistance tester

Test item:
- Insulation Resistance Test in Water
- Withstanding Voltage Test
- Waterproof Test

AC, DC overload equipment

Test item:
Overload Test

Cross-Section Analyzer

Test item:
- Copper-Aluminum Tube, Splice Sleeve, Connector and Fuse Crimping Test
- Crimp Cross-Section Compression Ratio

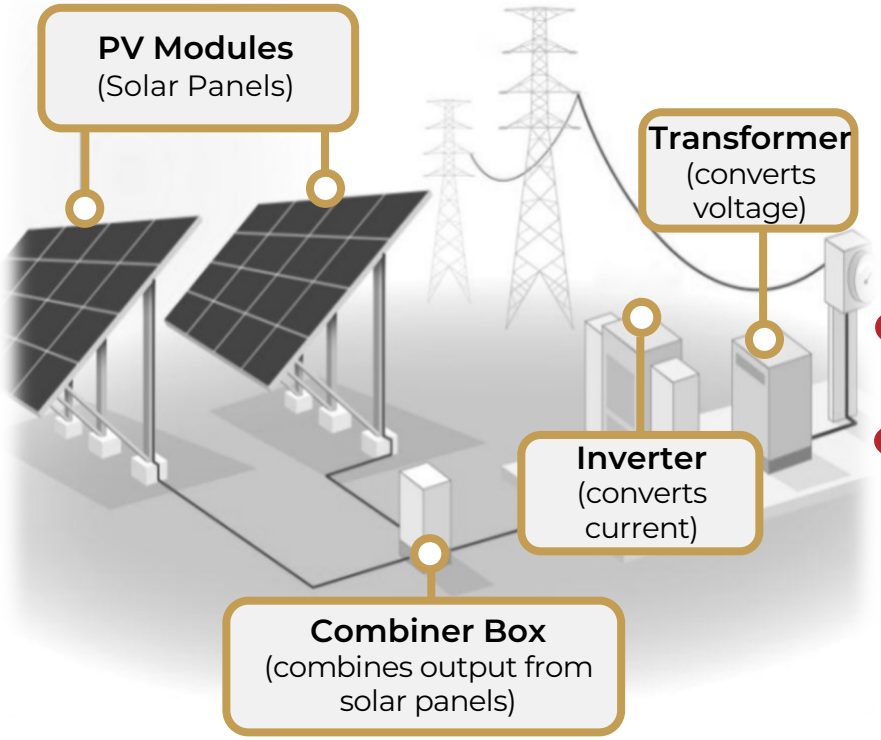
Product

SUNKEAN connects reliable future

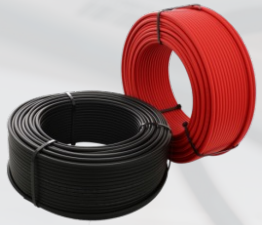
03.

Solar Connection Solution

SUNKEAN solar connection product solution that transfers power from solar panels to the inverter, which allows power to be sent to grid



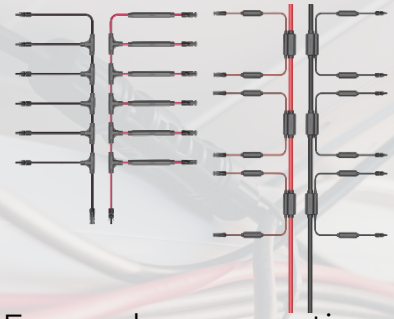
DC Solar Cable



Specially designed for PV power generation systems.

- UV resistance
- High temperature
- resistance
- High flame retardant

Wiring Harness



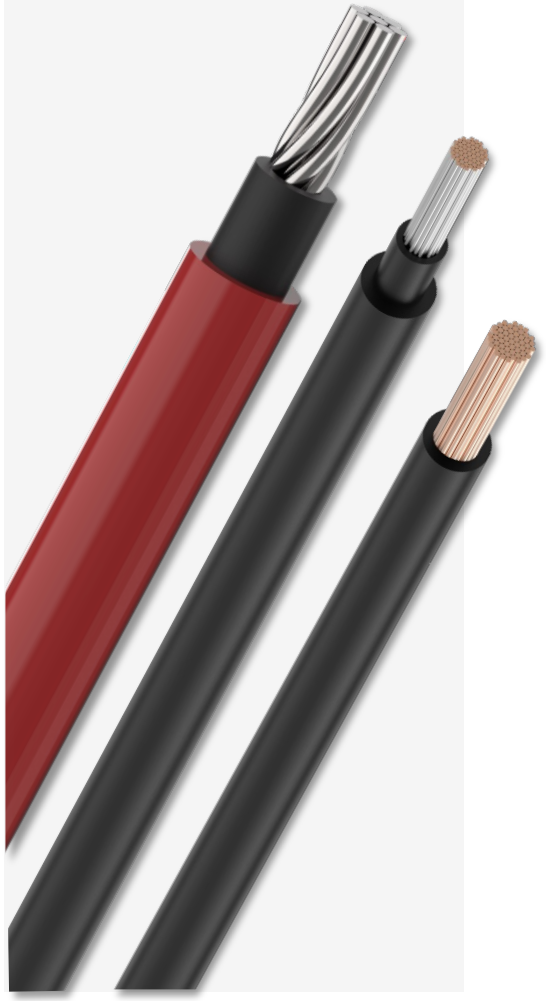
Fewer plug connections reduce DC power loss.

- Less material
- Shorter assembly time

AC Cable

AC Cable efficiently transmits converted AC power in solar systems with excellent conductivity, high temperature resistance, weather durability, and enhanced safety features.

DC Cable UL/cUL Approved



UL4703

Voltage:
2000V
Conductor:
Copper (18AWG~2000kcmil)
Tinned copper (18AWG~2000kcmil)
Aluminum or Copper-clad aluminum (12AWG~2000kcmil)
According to:
UL4703

RPVU90, 105

Voltage:
2000V
Conductor:
Copper (14AWG~4/0AWG)
Tinned copper (14AWG~4/0AWG)
Aluminum or Copper-clad aluminum (12AWG~2000kcmil)
According to:
CSA C22.2 NO.271

PV/RPVU90, 105

Voltage:
2000V
Conductor:
Copper (18AWG~2000kcmil)
Tinned copper (18AWG~2000kcmil)
Aluminum or Copper-clad aluminum (12AWG~2000kcmil)
According to:
UL4703, CSA C22.2 NO.271

DC Cable TÜV Approved

62930 IEC131/H1Z2Z2-K

Voltage:
2000V
Conductor:
Tinned copper (1.5~400mm^2)
According to:
IEC62930 / EN50618

EN 50618 H1Z2Z2-K / UL4703

Voltage:
2000V
Conductor:
Tinned copper (1.5~400mm^2)
According to:
EN50618 UL4703

PV1500DC-AL PV1500DC-AL-K

Voltage:
1500V
Conductor:
Aluminum
(PV1500DC-AL: 1...2x10~400mm^2
PV1500DC-AL-K: 2.5~400mm^2)
According to:
TÜV 2PfG 2642

PV1500-WR (Floating)

Voltage:
1500V
Conductor:
Tinned copper (2.5~240mm^2)
According to:
TÜV 2PfG 2750

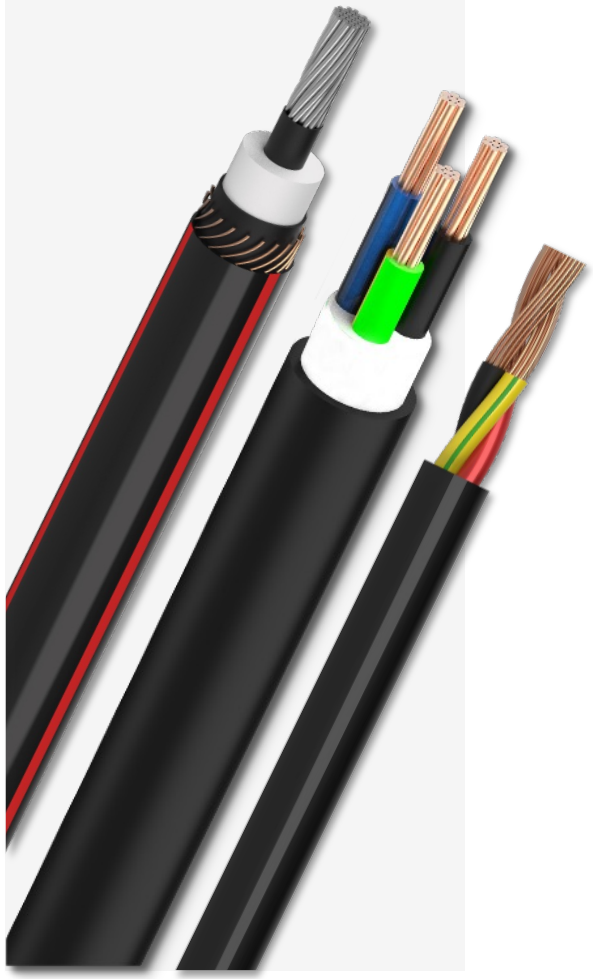
PV1500-SWR /62930 IEC 131 (Offshore)

Voltage:
1500V
Conductor:
Tinned copper (1.5~240mm^2)
According to:
TÜV 2PfG 2962, IEC62930

PV 2000DC(TC5)

Voltage:
2000V
Conductor:
Tinned copper (1.5~240mm^2)
According to:
PPP 58209A：09.22

AC Cable UL/cUL Approved



DG Flat

Voltage:
600V
Conductor:
Copper (2C x 18AWG~10AWG)
According to:
UL3003, UL83

DG Round

Voltage:
600V
Conductor:
Copper (2C...37C x 18AWG~10AWG)
According to:
UL3003, UL44

CIC

Voltage:
600V
Conductor:
Copper (2C...37C x 18AWG~10AWG)
According to:
CSA C22.2 NO.239

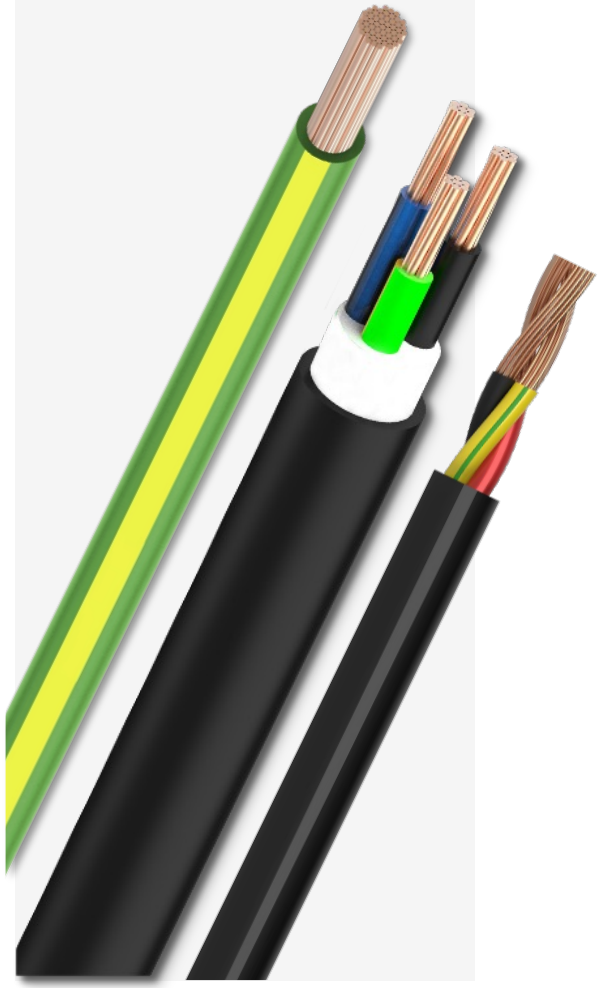
TC TC-ER

Voltage:
600V
Conductor:
Copper (2C...4C x 8AWG~750kcmil)
According to:
UL1277, UL44

MV-90, MV-105 (MV Cable)

Voltage:
35kV
Conductor:
Aluminum (4/0AWG~250kcmil)
According to:
UL1072

AC Cable TÜV Approved



PV07AC-F

Voltage:
AC U_0/U 450 /750 V
Conductor:
Tinned copper (2...5C x 0.75~16mm^2)
According to:
TÜV 2PfG 1940

NYY-J, NYY-O

Voltage:
Uo/U 0.6/1 kV
Conductor:
Copper (1C...7C x 1.5~95mm^2)
According to:
IEC60502-1

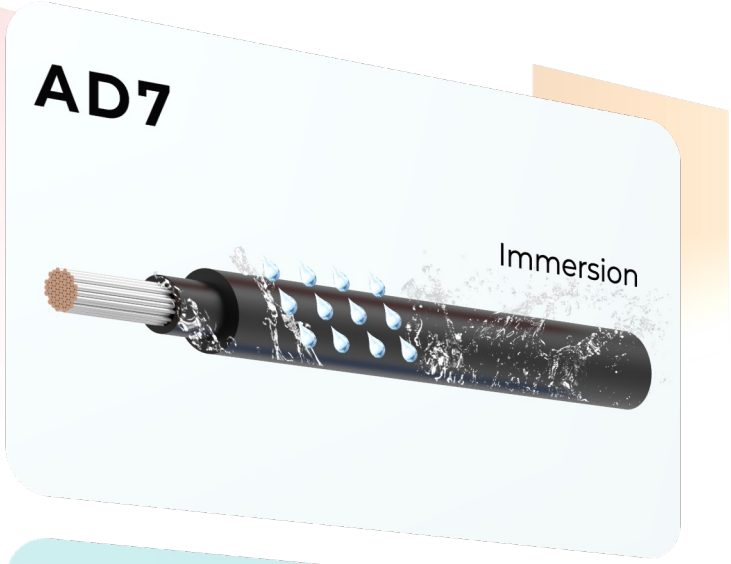
H05V-K

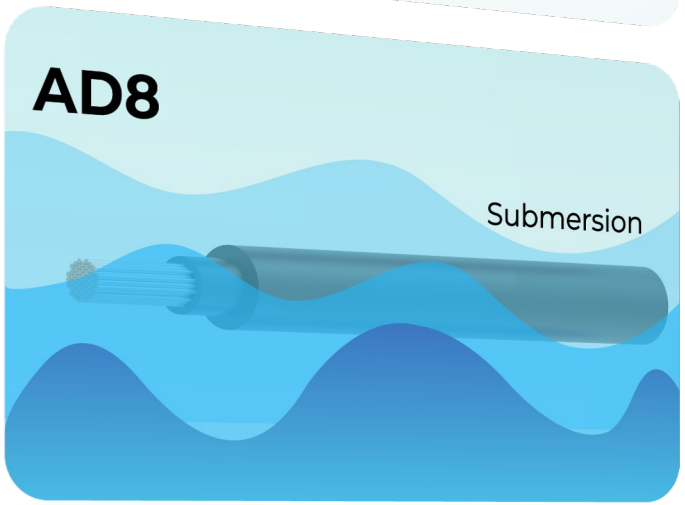
Voltage:
U_0/U 300/500V
Conductor:
Tinned or Bare Copper (0.5~1.0mm^2)
According to:
EN 50525-2-31

H07V-K

Voltage:
U_0/U 450/750V
Conductor:
Tinned or Bare Copper (1.5~120mm^2)
According to:
EN 50525-2-31

Water Resistant Series





Water Resistant Series

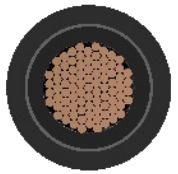
Specially designed for photovoltaic water floating applications.

AD7:
Most PV projects do not require long-term exposure to water, possibility of intermittent, partial or total flooding by water.
AD8:
Possibility of permanent and total water flooding.

Anti-termite/Anti-Rodent

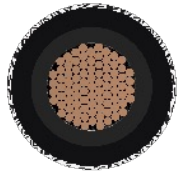
Chemical Additive

- Use termite and rodent repellent additives that are environmentally friendly. This solution is more cost-effective than steel braided cables and can be used on roofs and power plants where required.



Nylon Layer

- Add nylon layer for structural protection, make the effective time longer.



Stainless Steel Shield Braid

- Outer stainless steel braiding for structural protection, higher protection than nylon layer, effective time is long, the cost is the most expensive.

Flame Resistant PV Cable

HIGHER PERFORMANCE

BASIC PERFORMANCE

Class	Main classification criteria			Additional criteria		
	UNE-EN 50399 (heat emission, firegrowth rate)	UNE-EN 50399 (Non-propagation of fire)	UNE-EN 60332-1 (Non-propagation of fire)	UNE-EN 50399/ 61034-2 s → Smoke emission	UNE-EN 50399 d → Flamed particles	UNE-EN 60754-2 a → Acidity
B2	+++	+++	+++	S1a +++++ S1b ++++ S1 ++ S2 + S3	d0 +++ d1 + d2	a1 +++ a2 + a3
C	++	++	+++	S1a +++++ S1b ++++ S1 ++ S2 + S3	d0 +++ d1 + d2	a1 +++ a2 + a3
D	++		+++	S1a +++++ S1b ++++ S1 ++ S2 + S3	d0 +++ d1 + d2	a1 +++ a2 + a3
E			+++			

CPR-Cca/Dca

- Flame Resistant
- IEC60332-3 Tested

Cable Packing Procedure

1. Wrap film tightly
2. Stick the label
3. Stack nearly---label to label
4. Wrap the first layer of film
5. Put the carboard for protection & double wrap the film
6. Pack the straps

Wiring Harness Products

Optional connector model

AMPHENOL H4S	STAUBLI MC4- EVO2
STAUBLI MC4	TE PV-S
QC4.10 Plus	TLIAN T4
TRINA TS4	JINKO JK03M2
LONGI PV-LR5	TL-CABLE E01S

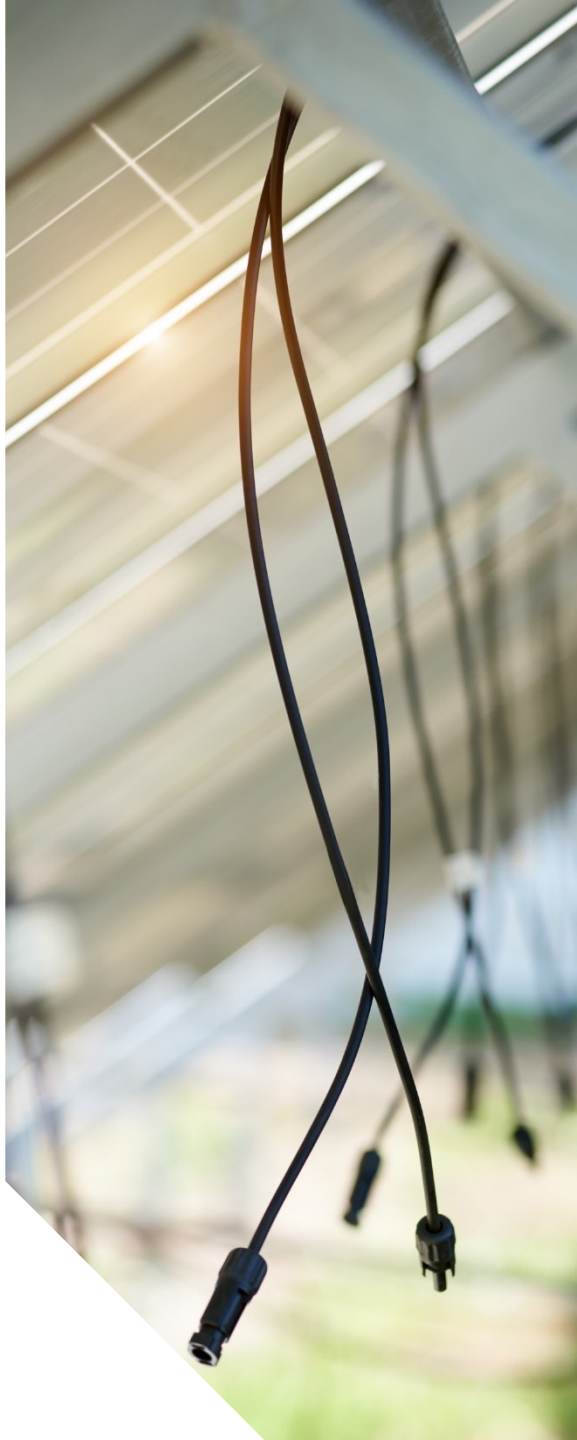
Features

- Adapts to various connectors
- Pre-assembled products without crimping tools
- 100% electrical conductivity test
- Reduce manpower cost for site installation
- Improve installation efficiency

ACCEPT CUSTOMIZATION

WATERPROOF IP68

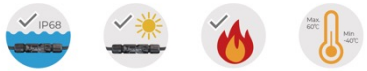
LONG SERVICE LIFE



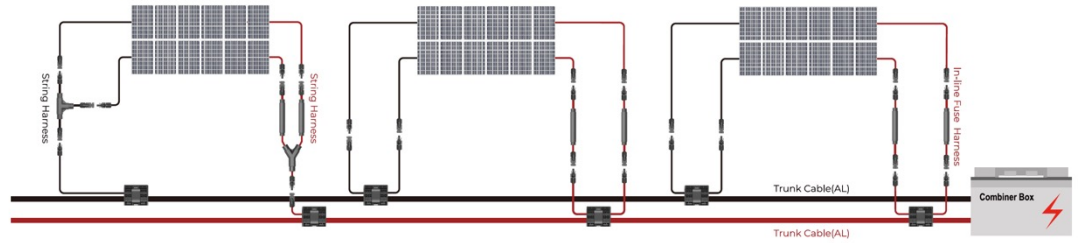
SUNKEAN

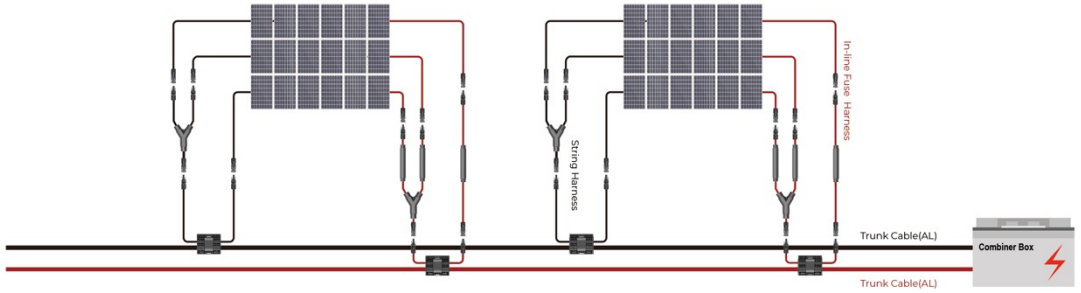
Wiring Harness Products

We offer individual cable solutions for professional and safe cabling. Pre-assembled solutions ensure consistently high levels of quality and speed up assembly.



Intertek



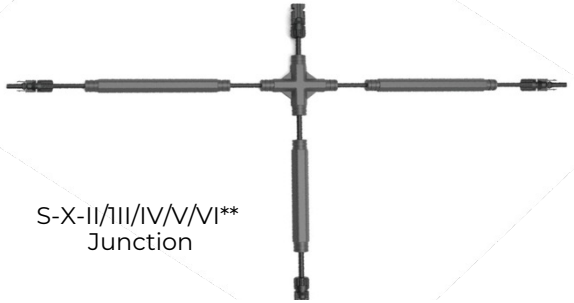


S-Y Junction

S-3 to 1 Junction

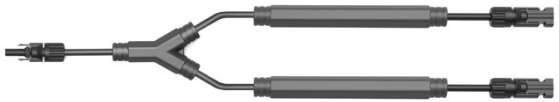
S-X Junction

S-T Junction



S-X-II/III/IV/V/VI** Junction

S-T-II/III/IV/V/VI** Junction



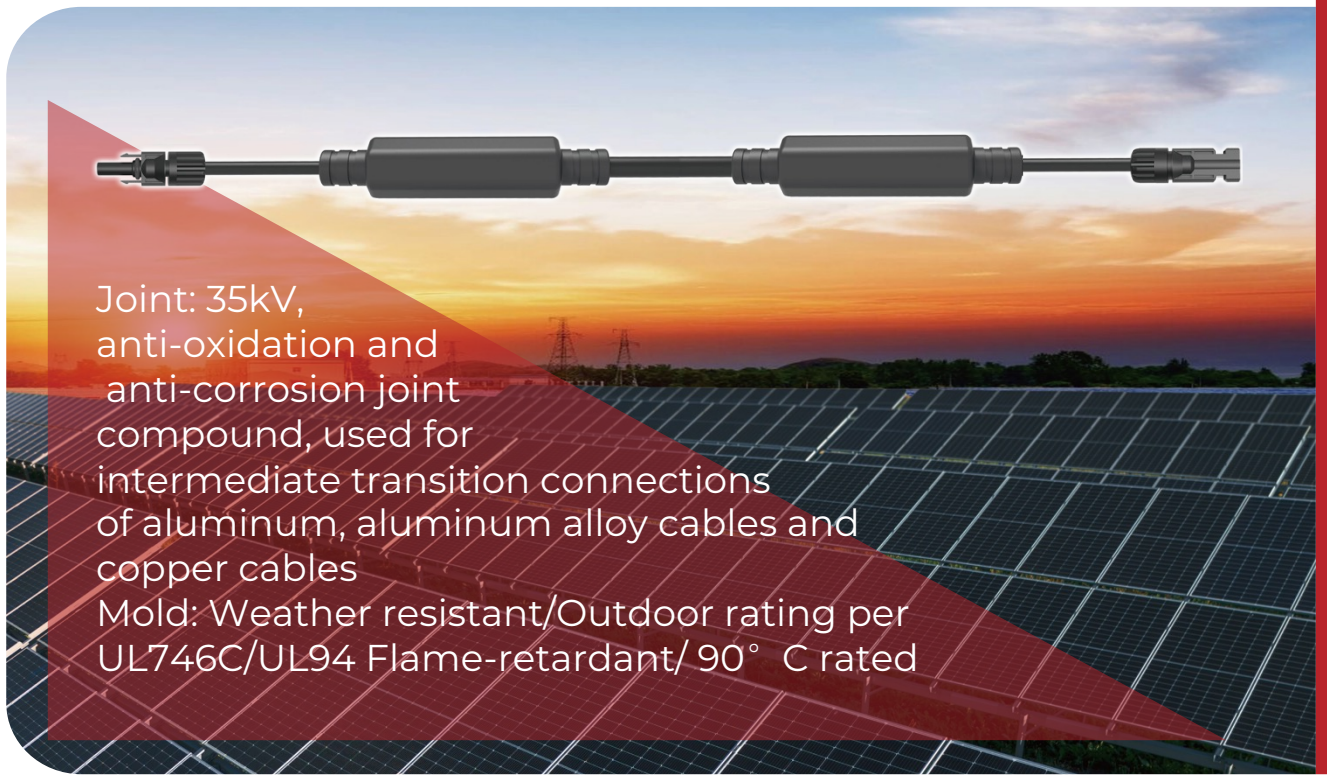
S-Y-II/III/IV/V/VI** Junction

Features

- Pre-assembly, combine multiple wires without installation
- Reduce the amount of wire and number of combiner boxes
- More stable power lines and long-service time than connector connection
- Optional style: X/T/Y/R

AL Replaces Solution

CU-AL Junction Cable

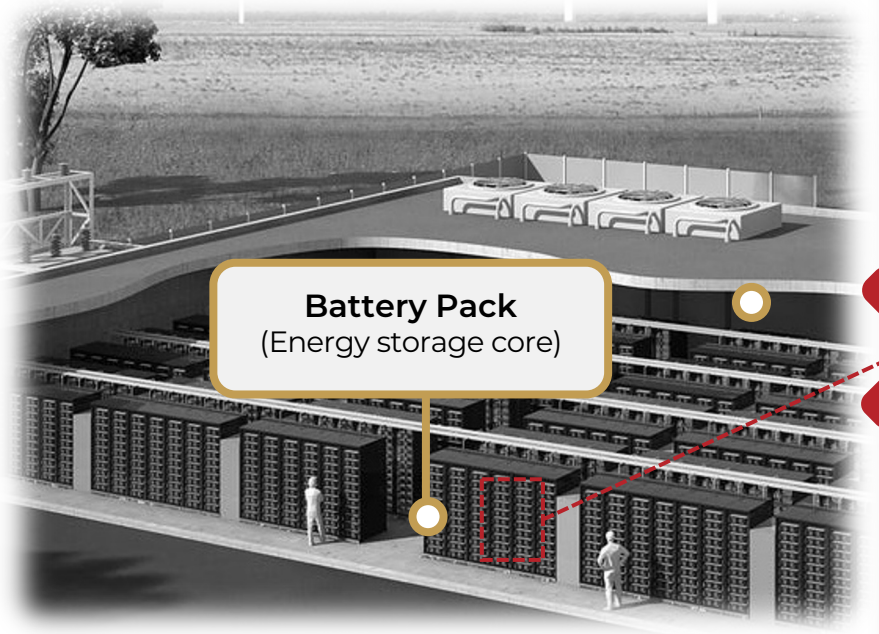


Our innovative CU-AL Junction Cable, an exceptional tool designed for seamlessly connecting string harnesses to combiner boxes or string inverters. This cutting-edge Electrical Balance of System (EBOS) solution is compatible with the Trunk connector, enhancing efficiency and reliability in your solar energy system.

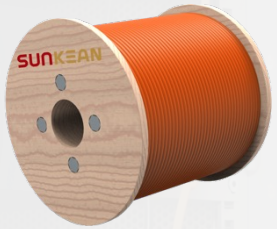
- ◆ Customized design to accommodate site layouts
- ◆ Significantly reduce the overall project budget
- ◆ Prevents increased oxidation from dissimilar metal surface contacts
- ◆ Minimizes copper usage by utilizing cost-efficient aluminum materials
- ◆ IP68 overmold protects components from environmental damage

Energy Storage Connection Solution

SUNKEAN provides one-stop solutions for customer needs, simplifying the installation process, improving installation efficiency, and saving labor costs.



Energy Storage Cable



Specially designed for energy storage power generation systems.

- Pure copper conductors.
- High stability.
- High flexibility, optional terminals.

Energy Storage Harness

The Energy Storage Harness enables efficient power transfer, enhances system stability, and ensures reliable operation of energy storage systems in renewable energy applications.

- Strict quality control and high quality standard
- Low price and good value for money
- High quality-price ratio

Energy Storage Cable

UL10269

Voltage:
1000V
Conductor:
Tinned copper or Copper (24AWG~4/0AWG)
According to:
UL758, UL1581

UL11627

Voltage:
2000V
Conductor:
Tinned copper or Copper (24AWG~4/0AWG)
According to:
UL758, UL1581

UL3817

Voltage:
3000V
Conductor:
Tinned copper or Copper (24AWG~4/0AWG)
According to:
UL758, UL1581

UL3932

Voltage:
2000V
Conductor:
Tinned copper or Copper (24AWG~4/0AWG)
According to:
UL758, UL1581

SUNKEAN Achieves Full-Series Certifications for Energy Storage Solutions. Models Include: UL1015,UL1283, UL1284, UL10070, UL10269, UL11627, UL3173, UL3266, UL3271, UL3266, UL3271, UL3289, UL3321, UL3666, UL3816, UL3817, UL3820, UL3932, UL3994

Energy Storage Cable

ESL10Z3-K/H

Voltage:
U_0/U(Um) 1.0 / 1.0(1.2) k V
Conductor:
Tinned copper or Copper (4mm^2~240mm^2)
According to:
TÜV 2PfG 2963

ESP/L10Z3Z3-K/H SM-R DH-R

Voltage:
2000V
Conductor:
Tinned copper or Copper (4mm^2~240mm^2)
According to:
TÜV 2PfG 2963

ESL15Z3-K/H

Voltage:
U_0/U(Um) 1.5 / 1.5(1.8) k V
Conductor:
Tinned copper or Copper (4mm^2~240mm^2)
According to:
TÜV 2PfG 2963

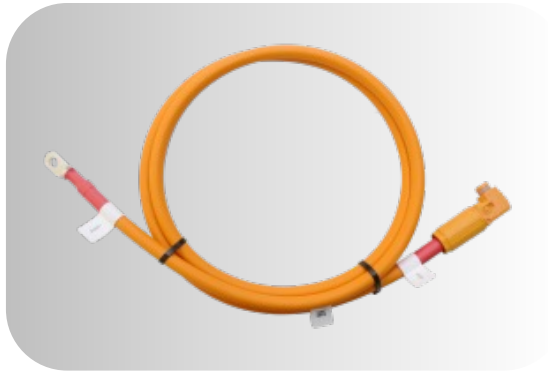
ESP/L15Z3Z3-K/H SM-R DH-R

Voltage:
U_0/U(Um) 1.5 / 1.5(1.8) k V
Conductor:
Tinned copper or Copper (4mm^2~240mm^2)
According to:
TÜV 2PfG 2963

Energy Storage Harness








Cable Size	Connector	System Voltage	Operating Temperature	Flame test
$4mm^2$~$150mm^2$ (24AWG~4/0AWG)	Amphenol	L: 300V H: 3000V	-40℃~ +125℃	VW-1/ FT 1/ FT 2

Harness Packing Procedure

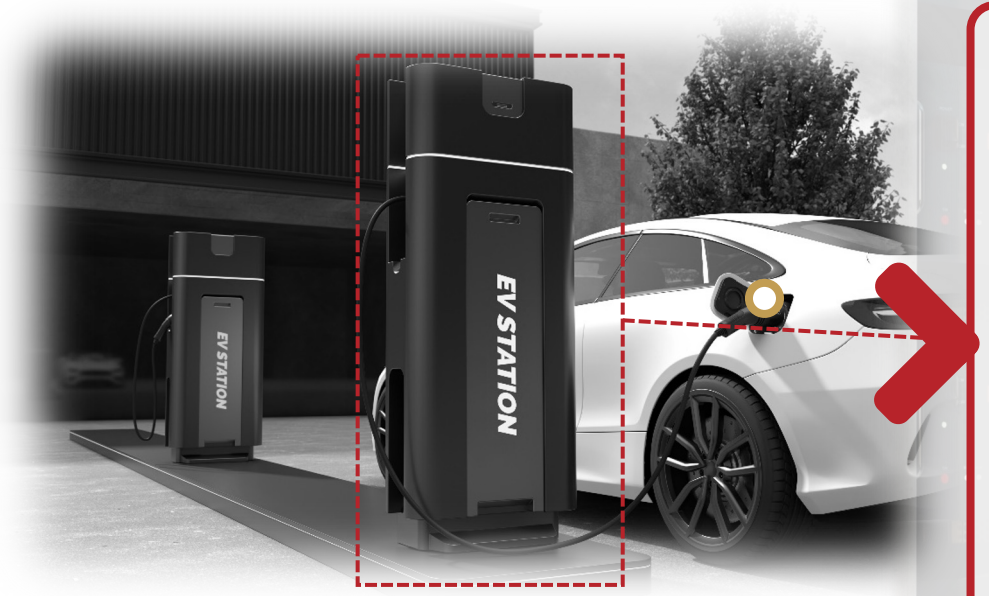
Corner protection

All-around protective straps

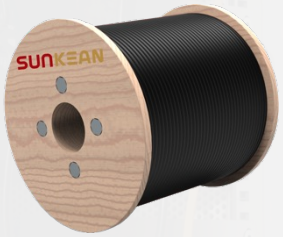
Plank protection for heavy load

Charging Connection Solution

In addition to specializing in the research and development of photovoltaic and energy storage cables, SUNKEAN has never stopped pioneering and innovating in the field of charging cables.



Charging Cable

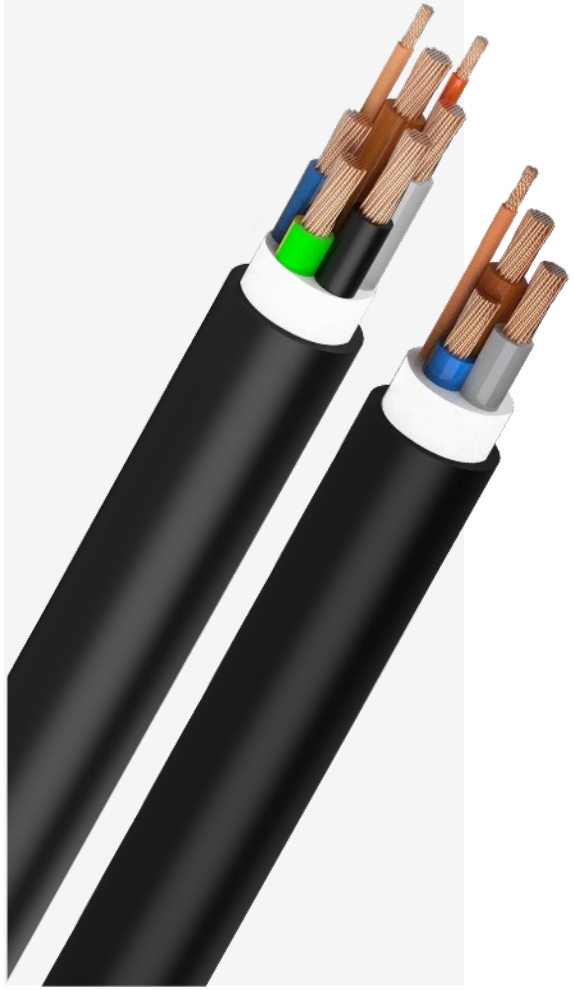


- Strict quality control and high quality standard
- High stability
- High quality-price ratio

EV CHARGER

- Rapid Installation
- Dynamic Load Balancing

EV Charing Cable



62893 IEC 121 / EVC H05Z5-F

Voltage:
AC U_0/U 300 / 500 V
Conductor:
Copper (3x1.5~2.5mm^2+1~2x0.5)
According to:
IEC 62893 / EN 50620

62893 IEC 121 / EVC H07Z5-F

Voltage:
AC U_0/U 450/750 V
Conductor:
Copper (3~5x1.5~35mm^2+1~2x0.5)
According to:
IEC 62893 / EN 50620

GB/T33594 EV-EYU

Voltage:
AC U_0/U 450/750 V
Conductor:
Tinned copper or Copper
(3x1.5~16mm^2+1~10x0.5~1.0,
5x2.5~35mm^2+1~10x0.5~1.0)
According to:
GB/T33594

GB/T33594 EV-EYS90

Voltage:
AC U_0/U 450/750 V
Conductor:
Tinned copper or Copper
(3x1.5~16mm^2+1~10x0.5~1.0,
5x2.5~35mm^2+1~10x0.5~1.0)
According to:
GB/T33594

Enduring Reliability & Quality Guaranteed

Protect the rights and interests of customers.

All products insured by Top insurance company

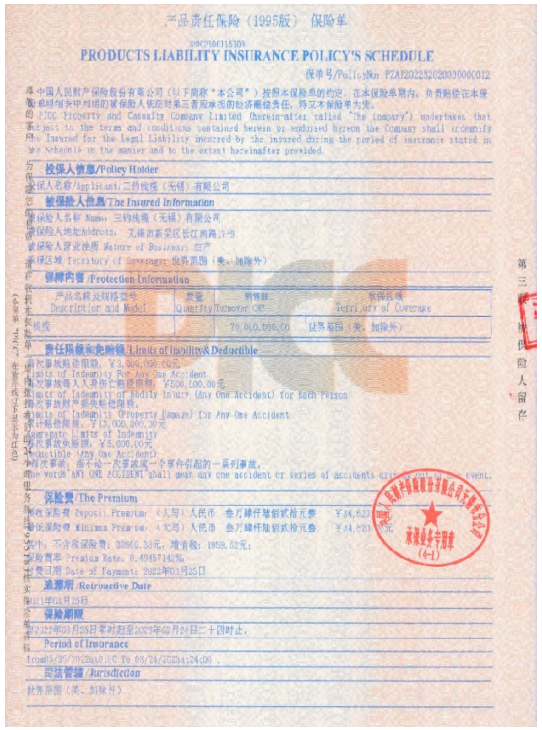
PICC

中国人民保险

The People's Insurance Company (Group)of China Limited

- Body injury
- Property damage
- Freight transport

……



产品责任保险（1995版） 保险单

PRODUCTS LIABILITY INSURANCE POLICY'S SCHEDULE

保单号/Policy No: PZA202232020030000012

中国人民财产保险股份有限公司（以下简称"本公司"）按照本保险单的约定，在本保险单期内，负责赔偿在本保险单明细表中列明的被保险人依法对第三者应承担的经济赔偿责任，特立本保险单为凭。

PICC Property and Casualty Company Limited thereinafter called "The Company") undertakes that subject to the terms and conditions contained herein or endorsed hereon the Company shall indemnify the Insured for the legal liability incurred by the insured during the period of insurance stated in the Schedule in the manner and to the extent hereinafter provided.

投保人信息/Policy Holder

被保险人名称/Applicant: 三特线缆（无锡）有限公司

被保险人信息/The Insured Information

被保险人名称 Name: 三特线缆（无锡）有限公司

被保险人地址/Address: 无锡滨新吴区长江南路29号

被保险人营业性质 Nature of Business: 生产

承保区域 Territory of Coverage: 世界范围（美、加除外）

保障内容 /Protection Information

产品名称及规格型号 Description and Model	数量 Quantity/Turnover	所售国家 Territory of Coverage
线缆	70,000,000.00	世界范围（美、加除外）

责任限额和免赔额 Limits of Liability & Deductible

每次事故赔偿限额 ¥2,000,000.00元

Limit of Indemnity For Any One Accident

每次事故每人人身伤亡赔偿限额 ¥500,000.00元

Limit of Indemnity of Bodily Injury (Any One Accident) for Each Person

每次事故财产损失赔偿限额

Limit of Indemnity (Property Damage) for Any One Accident

累计赔偿限额 ¥13,000,000.00元

Aggregate Limit of Indemnity

每次事故免赔额 ¥5,000.00元

Deductible (Any One Accident)

同次事故：指一个或一次事故或一个事件引起的一系列事故。

The word ONE ACCIDENT shall mean any one accident or series of accidents arising out of one event.

保险费/The Premium

预收保险费 Deposit Premium （大写）人民币 叁万肆仟陆佰贰拾元整 ¥34,620

最低保险费 Minimum Premium （大写）人民币 叁万肆仟陆佰贰拾元整 ¥34,620

其中，不含税保费：32860.38元，增值税：1759.62元；

费率 Premium Rate: 0.49457142%

签单日期 Date of Payment: 2022年03月25日

追溯期 /Retroactive Date

2022年03月25日

保险期限

2022年03月25日零时起至2023年03月24日二十四时止。

Period of Insurance

From 00:00/03/25/2022 to 24:00/03/24/2023

司法管辖 /Jurisdiction

世界范围（美、加除外）

25 Years Lifetime warranty (PV Cable)

solar SUNKEAN

WUXI SUN KING ENERGY TECHNOLOGY CO.,LTD.

SUNKEAN CABLE CO.,LTD

Add: NO.17-9,SOUTH CHANGJIANG ROAD XINWU DISTRICT,WUXI,CHINA

Tel : 0510-81083036 Fax: 0510-81083036

Website: www.sunkean.com

Warranty Certificate

This certificate guarantees 25 years warranty, of the solar cable & assembly cable sold by Wuxi Sun King Energy Technology Co.Ltd. Or SUNKEAN Cable Co.,Ltd. (hereinafter referred to as "SUNKEAN") will not have quality problems such as surface aging, cracking, disconnection. The warranty is valid for all customers from the date of delivery.

During the warranty period, if there's any damage or malfunction other than the above described, after determined by a third party inspection organization as quality problem ,SUNKEAN will replace the product for customers. The certificate states that under any circumstances, SUNKEAN only guarantee on the product itself. If a replacement occurs during the warranty period, the warranty terms will be automatically transferred to the new product, However, the 25-year warranty is still valid from the initial delivery date.

This warranty does not apply to the product is damaged due to the following direct or indirect causes described below, even within the warranty period.

1. Due to improper installation or maintenance methods.

2. Improper use, improper storage or accidental damage.

3. It is caused by the change or displacement of the building or the ground itself, or by condensation or corrosion of underground materials.

4. Breakdowns and damage caused by wars, riots, natural disasters (lightning strikes, freezing, snow, etc.) .

5. Caused by pollution.

6. Damaged due to extreme weather and other natural disasters, such as power failure, abnormal voltage, lightning strike, fire, earthquake, explosion, flood, etc.

This warranty is only valid for customers who have purchased solar cables from our company.

This warranty cannot be transferred to anyone other than the owner.

After the expiration of the warranty period, it will be deemed invalid.

In addition, in any case, SUNKEAN is only responsible for and compensates for the product itself. However, the upper limit of the compensation amount is the total amount at the time of product purchase. Please note that we are not responsible for any direct or indirect damage caused by usage.

WUXI SUN KING ENERGY TECHNOLOGY CO.,LTD.

SUNKEAN CABLE CO.,LTD.

Projects

SUNKEAN connects reliable future

04.

Roof Ground

Projects Display

So far, SUNKEAN has participated in over 1500 overseas projects, spanning 50+ countries, with a total capacity exceeding 50 GW.

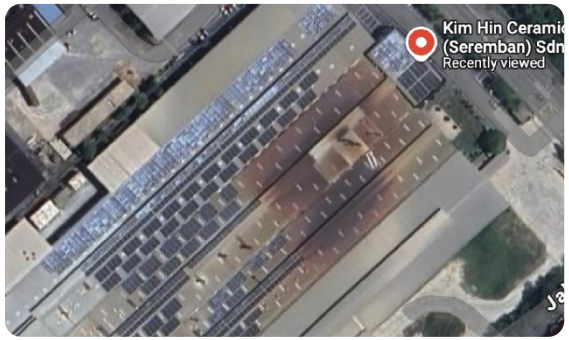
700kW, Eastern Madagascar
Solar cable

23MW, Malaysia
Scientex Great Wall Ipoh
Solar cable

3MW, Malaysia
AEON cheras selatan
Solar cable

1.75MW, Malaysia
Menicon
Solar cable

4.2MW, Malaysia
KJM Aluminium
Solar cable



3.14MW, Malaysia
Kim Hin Seremban
Solar cable

13MW, Japan
Chiba
Solar cable

4.49MW, Japan
Kanagawa
Solar cable

SUNKEAN

Roof Ground

Projects Display

95.2MW, Chile
Valparaiso Region
Solar cable

72.4MW, Japan
Himeji Hyougo
Solar cable

41MW, Japan
Miyahi
Solar cable

42.3MW, Japan
Fukushima
Solar cable

147MW, Japan
Onikobe Miyagi
Solar cable

7.6MW, South Auckland
DC Solar cable

13MW, Malaysia
Beaufort
Solar cable

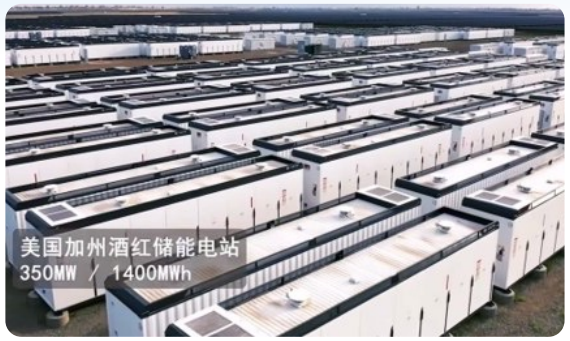
13MW, Chile
Borough of Maria Pinto
Solar cable

SUNKEAN

Projects Display

1200MW, USA
Papago
Energy storage cable & Connector

800MW, China
Qingdao
Energy storage cable & Connector



350MW, USA
Crimson
Energy storage cable & Connector

200MW, China
Ningxia
Energy storage cable & Connector

250MW, USA
Borden county
Energy storage cable & Connector

480MW, Australia
Summerfield
Energy storage cable & Connector

SUNKEAN

KEEP IN TOUCH

LANDLINE

0510-81083036

EMAIL ADDRESS

sales@sunkean.com

WEBSITE

www.sunkean.com

COMPANY LOCATION

No.17-9 SOUTH CHANGJIANG ROAD XINWU DISTRICT
WUXI, JIANGSU,CHINA

THANK YOU !

SUNKEAN

SUNKEAN

PRODUCTS CATALOGUE

SUNKEAN.com

About Us

SUNKEAN

Founded in 2013 and headquartered in Wuxi, Jiangsu, SUNKEAN specializes in providing sustainable energy connection solutions to global customers. Expanding to international markets in 2015, the SUNKEAN brand has gained widespread recognition in Japan, Australia, Europe, and the United States. In 2017, SUNKEAN began mass production of cables and established a branch office in Tokyo in 2018. Additionally, we have built warehouses and distribution networks in Australia, Southeast Asia, Europe, and the United States, achieving a complete cycle of product development, production, sales, and localized after-sales service.

As of 2024, SUNKEAN employs over 200 people and operates a production facility covering nearly 20,000 square meters. Recognized as a National High-Tech Enterprise and a Specialized and New Enterprise in Jiangsu Province, our factory is equipped with advanced integrated production lines and comprehensive testing equipment. Our main products include cables, wire harnesses, and related connectors for the photovoltaic, energy storage, and charging sectors. Our monthly production capacity reaches 20,000 kilometers of cables and 200,000 sets of wire harnesses. We have obtained certifications such as UL, ETL, cUL, TUV, S-JET, PSE, CCC, CPR, CE, RETIE, and RoHS, and have passed quality management system certifications like ISO9001, ISO14001, and IATF16949. Furthermore, we have implemented visual management of production data, strictly adhering to industry standards while setting higher SUNKEAN quality benchmarks.

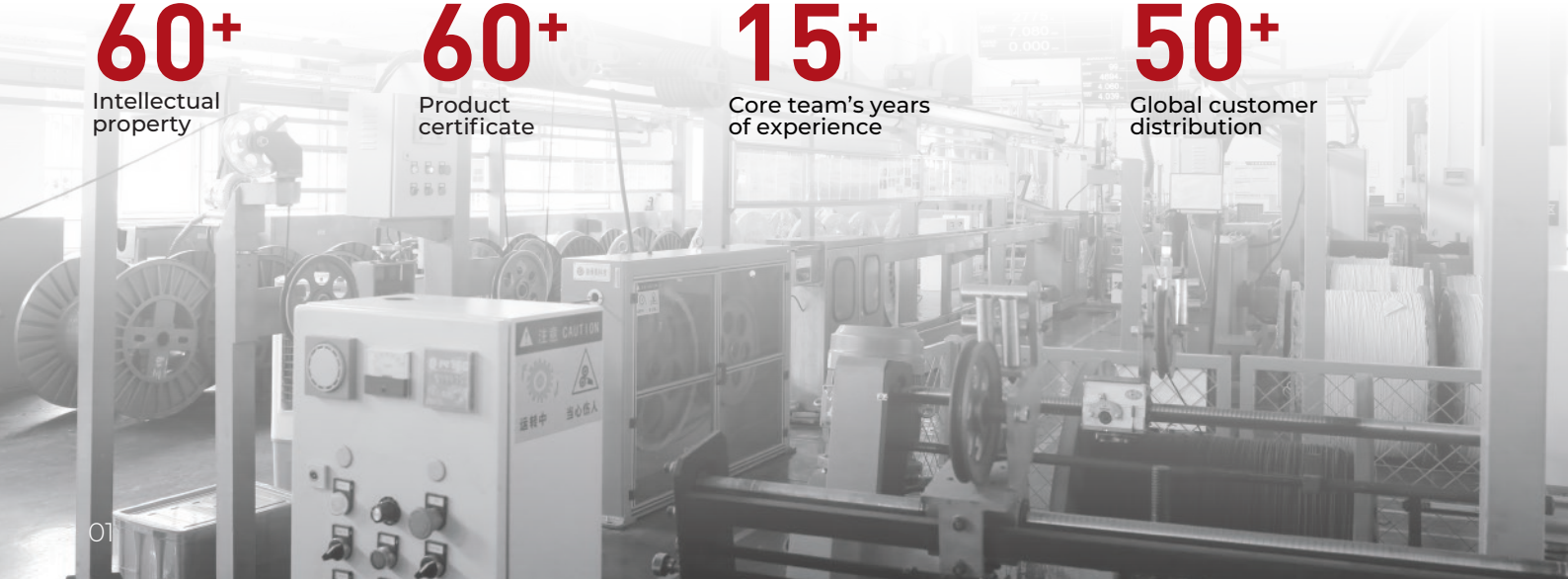
Looking ahead, SUNKEAN will continue to focus on customer needs, increasing investment in R&D and expanding production capacity. We are committed to providing safer, greener, more efficient, and more economical energy connection solutions, leading industry innovation and development. We look forward to partnering with you to create a sustainable energy future together!

60+
Intellectual property

60+
Product certificate

15+
Core team's years of experience

50+
Global customer distribution

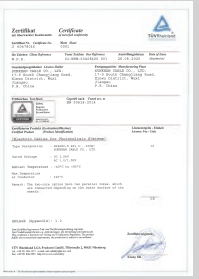


Product Certificate

SUNKEAN

TÜV EN50618
single core cable

IEC62930
single core cable



TÜV EN50618
twin core cable

IEC62930
twin core cable

CPR certified
H1Z2Z2-K cable

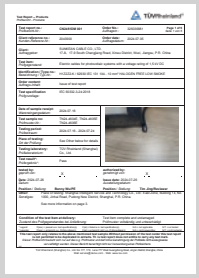
TÜV 2PfG 2642 cable

H05V-K/H07V-K

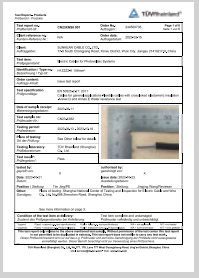
NYY cable

CE certified
H1Z2Z2-K single
core cable

UL4703



IEC60332-3 Test Report



AD8 Test Report

ETL

TÜV 2PfG 2693

UL758

62930 IEC131/H1Z2Z2-K (Single Core)

SUNKEAN

UV resistance

Ozone resistance

Flame test IEC 60332-1-2

Characteristics

Conductor: Tinned stranded copper
Insulation: XLPO, Optional color
Jacket: XLPO, Optional color
Voltage Rating: DC 1500V
Test Voltage: 6500V AC
Reference Standard:
EN50618 & IEC62930

Temperature Rating:
Rated: -40°C to +90°C
Max.conductor temp: +90°C (Max. of 20000 hours at +120°C)
Min. Bending Radius:
Fixed installation 5x cable Ø

Cross Section (mm²)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
1.5	1.6	0.7	0.8	4.60±0.15	13.7
2.5	2.0	0.7	0.8	5.10±0.15	8.21
4	2.4	0.7	0.8	5.50±0.15	5.09
6	3.0	0.7	0.8	6.10±0.15	3.39
10	4.0	0.7	0.8	7.20±0.20	1.95
16	5.5	0.7	0.9	8.80±0.20	1.24
25	6.8	0.9	1.0	10.80±0.30	0.795
35	8.1	0.9	1.1	12.40±0.50	0.565
50	9.8	1.0	1.2	14.20±0.50	0.393
70	11.6	1.1	1.2	16.40±0.80	0.277
95	13.3	1.1	1.3	18.50±0.80	0.210
120	15.2	1.2	1.3	20.60±1.00	0.164
150	16.8	1.4	1.4	23.10±1.00	0.132
185	18.9	1.6	1.6	25.40±1.20	0.108
240	21.6	1.7	1.7	28.30±1.20	0.0817

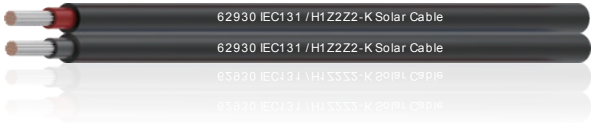
62930 IEC131/H1Z2Z2-K (Twin Core)

SUNKEAN

UV resistance

Ozone resistance

Flame test IEC 60332-1-2



Characteristics

Conductor: Tinned stranded copper
Insulation: XLPO, Optional color
Jacket: XLPO, Optional color
Voltage Rating: DC 1500V
Test Voltage: 6500V AC
Reference Standard:
EN50618 & IEC62930

Temperature Rating:
Rated: -40°C to +90°C
Max.conductor temp: +90°C (Max. of 20000 hours at +120°C)
Min. Bending Radius:
Fixed installation 5x cable Ø

Cross Section (mm^2)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
1.5	1.6	0.7	0.8	4.7×9.6	13.7
2.5	2.0	0.7	0.8	5.1×10.4	8.21
4	2.4	0.7	0.8	5.5×11.2	5.09
6	3.0	0.7	0.8	6.1×12.4	3.39
10	4.0	0.7	0.8	7.1×14.4	1.95
16	5.5	0.7	0.9	8.8×17.8	1.24
25	6.8	0.9	1.0	10.7×21.6	0.795
35	8.1	0.9	1.1	12.2×24.6	0.565

62930 IEC131/H1Z2Z2-K (AD8)

SUNKEAN

UV resistance

AD8 Waterproof Standard

Ozone resistance

Flame test IEC 60332-1-2

Characteristics

Conductor: Tinned stranded copper
Insulation: XLPO, Optional color
Jacket: XLPO, Optional color
Voltage Rating: DC 1500V
Test Voltage: 6500V AC
Reference Standard:
EN50618 & IEC62930

Temperature Rating:
Rated: -40°C to +90°C
Max.conductor temp: +90°C (Max. of 20000 hours at +120°C)
Min. Bending Radius:
Fixed installation 5x cable Ø

Cross Section (mm^2)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
1.5	1.6	0.7	0.8	4.60±0.15	13.7
2.5	2.0	0.7	0.8	5.10±0.15	8.21
4	2.4	0.7	0.8	5.50±0.15	5.09
6	3.0	0.7	0.8	6.10±0.15	3.39
10	4.0	0.7	0.8	7.20±0.20	1.95
16	5.5	0.7	0.9	8.80±0.20	1.24
25	6.8	0.9	1.0	10.80±0.30	0.795
35	8.1	0.9	1.1	12.40±0.50	0.565
50	9.8	1.0	1.2	14.20±0.50	0.393
70	11.6	1.1	1.2	16.40±0.80	0.277
95	13.3	1.1	1.3	18.50±0.80	0.210
120	15.2	1.2	1.3	20.60±1.00	0.164
150	16.8	1.4	1.4	23.10±1.00	0.132
185	18.9	1.6	1.6	25.40±1.20	0.108
240	21.6	1.7	1.7	28.30±1.20	0.0817

62930 IEC131/H1Z2Z2-K (Cca)

SUNKEAN

UV resistance

CPR Cca certified

Ozone resistance

Flame test IEC 60332-3

Characteristics

Conductor: Tinned stranded copper
Insulation: XLPO, Optional color
Jacket: XLPO, Optional color
Voltage Rating: DC 1500V
Test Voltage: 6500V AC
Reference Standard:
EN50618 & IEC62930, IEC60332-3 & EN50575

Temperature Rating:
Rated: -40°C to +90°C
Max.conductor temp: +90°C (Max. of 20000 hours at +120°C)
Min. Bending Radius:
Fixed installation 5x cable Ø

Cross Section (mm^2)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
1.5	1.6	0.7	0.8	4.60±0.15	13.7
2.5	2.0	0.7	0.8	5.10±0.15	8.21
4	2.4	0.7	0.8	5.50±0.15	5.09
6	3.0	0.7	0.8	6.10±0.15	3.39
10	4.0	0.7	0.8	7.20±0.20	1.95
16	5.5	0.7	0.9	8.80±0.20	1.24
25	6.8	0.9	1.0	10.80±0.30	0.795
35	8.1	0.9	1.1	12.40±0.50	0.565
50	9.8	1.0	1.2	14.20±0.50	0.393
70	11.6	1.1	1.2	16.40±0.80	0.277
95	13.3	1.1	1.3	18.50±0.80	0.210
120	15.2	1.2	1.3	20.60±1.00	0.164
150	16.8	1.4	1.4	23.10±1.00	0.132
185	18.9	1.6	1.6	25.40±1.20	0.108
240	21.6	1.7	1.7	28.30±1.20	0.0817

62930 IEC131/H1Z2Z2-K (Anti-rodent / termite)

SUNKEAN

- UV resistance
- Anti-rodent / termite
- Ozone resistance
- Flame test IEC 60332-1-2

Characteristics

Conductor: Tinned stranded copper
Insulation: XLPO, Optional color
Jacket: XLPO, Optional color
Voltage Rating: DC 1500V
Test Voltage: 6500V AC

Temperature Rating:
Rated: -40°C to +90°C
Max.conductor temp: +90°C (Max. of 20000 hours at +120°C)
Min. Bending Radius:
Fixed installation 5x cable Ø

Protection Mode	Cross Section (mm²)	Conductor Stranded O.D.(mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. (mm)	Conductor Resistance Max(Ω/km, 20°C)
Chemical Additive	4	2.41	0.7	1.0	6.01	5.09
	6	2.96	0.7	1.0	6.56	3.39
	10	3.95	0.7	1.0	7.55	1.95

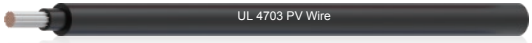
Protection Mode	Cross Section (mm²)	Conductor Stranded O.D.(mm)	Insulation Thickness (mm)	Nylon Thickness (mm)	Jacket Thickness (mm)	Cable O.D. (mm)	Conductor Resistance Max(Ω/km, 20°C)
Nylon Layer	4	2.41	0.7	0.35	0.8	6.31	5.09
	6	2.96	0.7	0.35	0.8	6.86	3.39
	10	3.95	0.7	0.35	0.8	7.85	1.95

Protection Mode	Cross Section (mm²)	Conductor Stranded O.D.(mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Stainless Steel Shield Braid Density (mm)	Cable O.D. (mm)	Conductor Resistance Max(Ω/km, 20°C)
Stainless Steel Shield Braid	4	2.41	0.7	0.8	80%	6.33	5.09
	6	2.96	0.7	0.8	80%	6.88	3.39
	10	3.95	0.7	0.8	80%	7.87	1.95

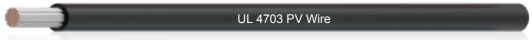
UL 4703 PV Wire

SUNKEAN

- UV resistant
- Rated for direct burial
- High flame retardant VW-1
- Low smoke halogen free
- Higher insulation resistance



Dual-layer



Single layer (Optional)

Characteristics

Conductor: Bare or tinned copper, Aluminum (Optional)
Inner Layer: XLPO, Black or white
Out Layer: XLPO, Black, red or other colors
Testing Standard:
Test under fire conditions: UL1581 VW-1
Sunlight resistance: UL2556
Cold bend test: UL854

Temperature Rating: -40°C ~ +90°C
Nominal Voltage: 1000V or 2000V
Voltage Test On Completed Cable:
U=1000V or 2000V
18~10AWG, 6KV/min
8~2AWG, 7.5KV/min
1~4/0AWG, 9KV/min

Cross Section (AWG)	Conductor Stranded O.D. (mm)	Inner Layer Thickness (mm)	Outer Layer Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
14	1.8	1.14	0.76	5.80±0.30	8.62
12	2.4	1.14	0.76	6.40±0.30	5.43
10	3.0	1.14	0.76	7.00±0.30	3.41
8	3.7	1.39	0.76	8.20±0.30	2.14
6	4.3	1.39	1.14	9.60±0.30	1.35
4	5.5	1.39	1.14	10.80±0.30	0.848
3	6.1	1.39	1.14	11.50±0.30	0.673
2	6.9	1.39	1.14	12.30±0.30	0.534
1	7.7	1.65	1.52	14.30±0.30	0.423
1/0	8.6	1.65	1.52	15.20±0.50	0.335
2/0	9.6	1.65	1.52	16.30±0.50	0.266
3/0	10.7	1.65	1.52	17.30±0.50	0.211
4/0	12.1	1.65	1.52	18.80±0.50	0.167

Remark: Above are copper conductor parameters

TÜV 2PfG 2750 PV1500-WR (Floating)

SUNKEAN

TÜVRheinland

- Higher UV-stability
- TÜV 2PfG 2750 floating PV certification
- Higher water resistance
- Higher mechanical stability
- Higher insulation resistance

Characteristics

Conductor: Tinned stranded copper
Insulation: XLPO, Black
Jacket: XLPO, Black
Rated Voltage: U=1500VDC
U_0/U=1000V/1000VAC

Max. Voltage: U_m=1800VDC
Test Voltage: 6.5KVAC / 5min
Ambient Temperature: -40°C ~ +90°C
Max. Short Circuit Temp.: 250°C / 5s

Cross Section (mm^2)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
2.5	2.0	0.7	0.8	5.10±0.15	8.21
4	2.5	0.7	0.8	5.50±0.15	5.09
6	3.0	0.7	0.8	6.10±0.15	3.39
10	4.0	0.8	0.8	7.20±0.20	1.95
16	5.5	0.9	0.9	9.10±0.30	1.24
25	6.8	1.0	1.0	10.80±0.50	0.795
35	8.1	1.1	1.1	12.50±0.50	0.565
50	9.8	1.2	1.2	14.60±0.50	0.393
70	11.6	1.2	1.2	16.40±0.50	0.277
95	13.3	1.3	1.3	18.50±0.80	0.210
120	15.2	1.3	1.3	20.40±0.80	0.164
150	16.8	1.4	1.4	22.40±0.80	0.132
185	18.9	1.6	1.6	25.30±1.20	0.108
240	21.6	1.7	1.7	28.40±1.20	0.0817
300	23.0	1.8	1.8	30.20±1.50	0.0654
400	26.8	2.0	2.0	34.80±1.50	0.0495

TÜV 2PfG 2962 PV1500-SWR (Offshore)

SUNKEAN

TÜVRheinland

- Higher UV-stability
- TÜV 2PfG 2962 floating PV certification
- Higher water resistance
- Salt mist resistant
- Mildew resistant
- Acid and alkali resistant

Characteristics

Conductor: Tinned stranded copper
Insulation: XLPO, Black
Jacket: XLPO, Black

Rated Voltage: 1500VDC
Ambient Temperature: -40°C ~ +90°C

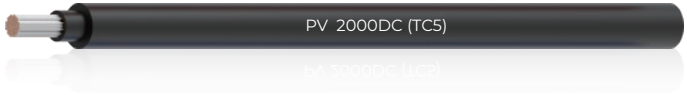
Cross Section (mm^2)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
2.5	2.0	0.8	0.8	5.20±0.15	8.21
4	2.5	0.8	0.8	5.60±0.15	5.09
6	3.0	0.8	0.8	6.20±0.15	3.39
10	4.0	0.8	0.8	7.20±0.20	2.00
16	5.5	0.9	0.9	9.10±0.30	1.24
25	6.8	1.0	1.0	10.80±0.50	0.795
35	8.1	1.1	1.1	12.50±0.50	0.565
50	9.8	1.2	1.2	14.60±0.50	0.393
70	11.6	1.2	1.2	16.40±0.50	0.277
95	13.3	1.3	1.3	18.50±0.80	0.210
120	15.2	1.3	1.3	20.40±0.80	0.164
150	16.8	1.4	1.4	22.40±0.80	0.132
185	18.9	1.6	1.6	25.30±1.20	0.108
240	21.6	1.7	1.7	28.40±1.20	0.0817
300	23.0	1.8	1.8	30.20±1.50	0.0654
400	26.8	2.0	2.0	34.80±1.50	0.0495

PV 2000DC(TC5) Solar Cable

SUNKEAN

Optional optimized conductor:

- Tinned copper
- Copper clad aluminum
- Aluminum



Characteristics

Conductor: Tinned copper
Insulation: XLPO
Jacket: XLPO
Nominal Voltage: 1500Vdc or 2000Vdc

Temperature Rating: -40°C ~ +90°C
Max.Temperature at Conductor: 120°C
Flame Test: IEC60332-1
Reference Standard: PPP 58209A: 09.22

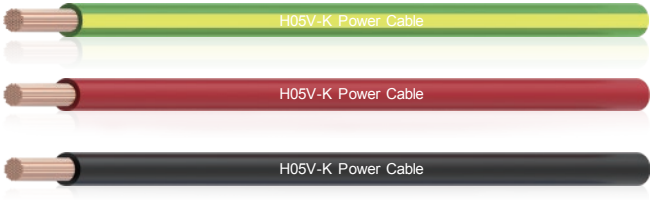
Cross Section (mm^2)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
2.5	2.0	1.1	0.8	5.80±0.20	8.21
4.0	2.4	1.1	0.8	6.30±0.20	5.09
6.0	3.0	1.1	0.8	6.80±0.20	3.39
10	4.0	1.1	0.8	7.80±0.20	1.95
16	5.5	1.1	0.9	9.50±0.30	1.24
25	6.8	1.15	1.0	11.10±0.30	0.795
35	8.1	1.15	1.1	12.60±0.50	0.565
50	9.8	1.25	1.2	14.70±0.50	0.393
70	11.6	1.35	1.2	16.70±0.80	0.277
95	13.3	1.35	1.3	18.60±0.80	0.210
120	15.2	1.45	1.3	20.70±1.00	0.164
150	16.8	1.65	1.4	22.90±1.00	0.132
185	18.9	1.85	1.6	25.80±1.20	0.108
240	21.6	1.95	1.7	28.90±1.20	0.0817

H07V-K Power Cable

SUNKEAN

TÜVRheinland

- Easy to peel
- Easy to cut
- High flexibility
- Flame test EN 60332-1-2



Characteristics

Conductor: Stranded ,tinned or bare copper conductor 0.5~1mm²
Insulation: PVC, Passed RoHS

Rated Temperature: 70°C
Rated Volatge: 450/750V
Standard: EN 50525-2-31

Cross Section (mm²)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
1.5	1.6	0.70	3.10±0.15	13.3
2.5	2.0	0.80	3.70±0.15	7.98
4	2.6	0.80	4.30±0.15	4.95
6	3.2	0.80	4.90±0.15	3.30
10	4.2	1.00	6.30±0.20	1.91
16	5.6	1.00	7.70±0.20	1.21
25	7.0	1.20	9.60±0.30	0.780
35	8.2	1.20	10.80±0.50	0.554
50	10.0	1.40	13.00±0.50	0.386
70	11.9	1.40	15.00±0.50	0.272
95	13.7	1.60	17.20±0.50	0.206
120	15.5	1.60	19.00±0.50	0.161

TÜV 2PfG 2642 Aluminum (Single Core)

SUNKEAN

TÜVRheinland

- UV resistance
- Ozone resistance
- Suitable for direct burial(Armored)
- More economical

Single core solar cable

Direct burial solar cable

Characteristics

Conductor Material: IEC 60228 Class 2 aluminium alloy wire
Insulation Material: XLPO
Cover: XLPO
Armour: Steel tapes
Jacket Material: XLPO

Rated voltage: AC U0/U 1.0/1.0 kV
DC U0/U(Um) 1.5/1.5(1.8) kV
Ambient temperature: -40°C ~ +90°C
Standard: 2PfG 2642 /01.22

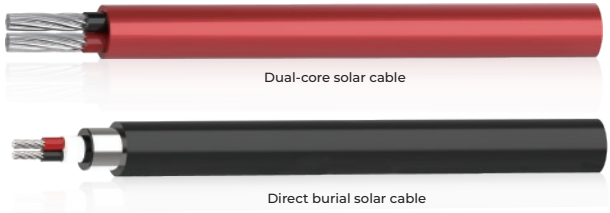
Cross Section (mm^2)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Cover Sheath Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
10	4.0	0.8	1.5	12.00±0.80	3.08
16	5.0	0.9	1.5	13.20±0.80	1.91
25	6.0	1.0	1.5	14.50±1.00	1.20
35	7.0	1.1	1.5	15.70±1.00	0.868
50	8.3	1.2	1.5	17.20±1.00	0.641
70	10.0	1.2	1.5	19.00±1.20	0.443
95	11.6	1.3	1.6	21.00±1.20	0.320
120	13.0	1.3	1.6	22.40±1.20	0.253
150	14.5	1.4	1.7	24.30±1.20	0.206
180	16.0	1.6	1.7	26.20±1.20	0.164
240	18.4	1.7	1.8	29.40±1.20	0.125
300	20.5	1.8	1.9	32.30±1.50	0.100
400	23.5	2.0	2.0	35.90±1.50	0.0778

Remark: Above are Class 2 conductor armored parameters

TÜV 2PfG 2642 Aluminum (Twin Core)

SUNKEAN

- UV resistance
- Ozone resistance
- Suitable for direct burial(Armored)
- More economical



Characteristics

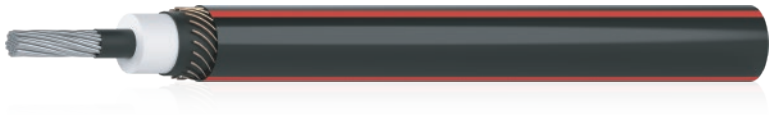
Conductor Material: IEC 60228 Class 2 aluminium alloy wire
Insulation Material: XLPO
Cover: XLPO
Armour: Steel tapes
Jacket Material: XLPO

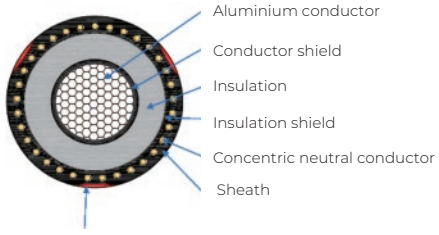
Rated voltage: AC U0/U 1.0/1.0 kV
DC U0/U(Um) 1.5/1.5(1.8) kV
Ambient temperature: -40°C ~ +90°C
Standard: 2PfG 2642 /01.22

Cross Section (mm^2)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Cover Sheath Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
10	4.0	0.8	1.8	18.80±1.00	3.08
16	5.0	0.9	1.8	21.20±1.00	1.91
25	6.0	1.0	1.8	23.60±1.00	1.20
35	7.0	1.1	1.8	26.00±1.20	0.868
50	8.3	1.2	1.8	29.00±1.20	0.641
70	10.0	1.2	1.9	33.20±1.50	0.443
95	11.6	1.3	2.0	38.70±1.50	0.320
120	13.0	1.3	2.2	42.30±1.50	0.253
150	14.5	1.4	2.3	45.90±1.50	0.206
180	16.0	1.6	2.5	50.50±1.50	0.164
240	18.4	1.7	2.6	56.50±1.80	0.125
300	20.5	1.8	2.8	61.50±2.50	0.100
400	23.5	2.0	3.1	69.20±2.50	0.0778

Remark: Above are Class 2 conductor armored parameters

35kV MV-90/105





Note: 3 red stripes on outer layer

Standard: ICEA S-94-649, UL 1072 MV-90

Characteristics

Rated Voltage:

35kV

Conductor Material:

Aluminium(Stranded water swellable fibre filling)

Insulation Material:

XLPE /TR-XLPE

Conductor and Insulating Shield Material :

Semi-conductive XLPO

Concentric Neutral Conductor Material:

Bare Copper Round Wire with Water Swellable

Sheath Material:

LLDPE

Maximum Conductor Temperature:

MV-90: 90°C, MV105: 105°C

Reference Standard:

UL 1072

100% Insulation Levels (345 mil)

Cross Section (AWG or kcmil)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
4/0	12.8	8.76	2.03	42.2	0.2743
500	19.6	8.76	2.79	52.1	0.1161
750	24.1	8.76	2.79	57.0	0.0773
1000	27.8	8.76	2.79	60.8	0.05804
1250	31.2	8.76	2.79	64.2	0.04643

TÜV 2PfG 1940 PV07AC-F

SUNKEAN

TÜVRheinland

UV resistance

Ozone resistance

Flame test IEC 60332-1-2

Characteristics

Conductor: Tinned copper
Insulation: XLPO, Black & red & yellow/green or other colors
Outer Sheath: XLPO, Black
Rated Voltage: 450/750V

Test Voltage: 6KVAC / 5min
Operating Temperature: -40°C ~ +90°C
Max. Conductor Temp: 120°C

Conductor No.	Cross Section (mm²)	Conductor O.D. (mm)	Insulation Thickness (mm)	Jacket Insulation (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
3	2.5	2.0	0.8	1.02	10.30±0.50	8.21
	4.0	2.5	0.8	1.16	11.70±0.50	5.09
	6.0	3.0	0.8	1.32	13.00±0.50	3.39
	10.0	4.0	0.8	1.60	15.80±0.50	1.95
4	2.5	2.0	0.8	1.15	11.50±0.50	8.21
	4.0	2.5	0.8	1.30	13.00±0.50	5.09
	6.0	3.0	0.8	1.48	14.60±0.50	3.39
	10.0	4.0	0.8	1.79	17.60±0.50	1.95
5	2.5	2.0	0.8	1.28	12.80±0.50	8.21
	4.0	2.5	0.8	1.46	14.50±0.50	5.09
	6.0	3.0	0.8	1.65	16.20±0.50	3.39
	10.0	4.0	0.8	2.00	19.60±0.50	1.95

TC TC-ER

SUNKEAN

- UV resistance
- Oil resistant
- Direct burial
- Flame test FT4, VW-1

Characteristics

Rated voltage: 600V
Conductor: Multiple strands soft annealed copper wire
Insulation Material: XLPE
Number of cores: ≥2
Jacket: XLPO
Maximum conductor temperature: -40°C ~ +90°C
Reference Standard: UL 1277 / UL 44

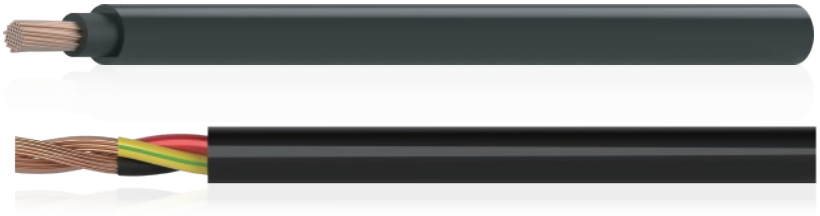
Conductor No.	Cross Section (AWG)	Conductor Stranded O.D.(mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
2	18	1.17	0.76	1.14	8.20±0.50	21.80
	16	1.50	0.76	1.14	8.80±0.50	13.70
	14	1.90	0.76	1.14	9.60±0.50	8.62
	12	2.36	0.76	1.14	10.60±0.50	5.43
	10	3.00	0.76	1.14	12.00±0.50	3.409
3	18	1.17	0.76	1.14	8.60±0.50	21.80
	16	1.50	0.76	1.14	9.30±0.50	13.70
	14	1.90	0.76	1.14	10.20±0.50	8.62
	12	2.36	0.76	1.14	11.20±0.50	5.43
	10	3.00	0.76	1.14	12.70±0.50	3.409
4	18	1.17	0.76	1.14	9.30±0.50	21.80
	16	1.50	0.76	1.14	10.20±0.50	13.70
	14	1.90	0.76	1.14	11.20±0.50	8.62
	12	2.36	0.76	1.14	12.30±0.50	5.43
	10	3.00	0.76	1.14	14.70±0.50	3.409
5	18	1.17	0.76	1.14	10.10±0.50	21.80
	16	1.50	0.76	1.14	11.00±0.50	13.70
	14	1.90	0.76	1.14	12.20±0.50	8.62
	12	2.36	0.76	1.14	13.40±0.50	5.43
	10	3.00	0.76	1.14	15.90±0.50	3.409

NYY-J, NYY-O

SUNKEAN

TÜVRheinland

- Easy to peel
- Easy to cut
- Direct-burial
- EN 60332-1-2



Characteristics

Conductor: Bare copper wire
Core Insulation: PVC
*Filling compound around stranded cores
Outer Sheath Material: PVC
Conductor stranding: Single or multi-wire
Core Identification Code:
≤ 5 cores: differentiated by color
≥ 6 cores: Black, numbered in white
Minimum Bending Radius:
Single-core: 15 x outer diameter
Multi-core: 12 x outer diameter

Nominal Voltage:
U_0/U: 0.6/1.0 kV
Test Voltage:
4000 V
Protective Conductor:
J = with GN-YE protective conductor
O = without protective conductor
Temperature Range:
During installation: -5°C to +50°C
Fixed installation: -40°C to +70°C

Conductor No.	Cross Section (mm^2)	Conductor O.D. (mm)	Insulation Thickness (mm)	Jacket Insulation (mm)	Cable O.D. Range (mm)	Conductor Resistance Max(Ω/km, 20°C)
1	25	7.0	1.2	1.4	12.60±0.50	0.780
	35	8.2	1.2	1.4	13.80±0.50	0.554
	50	10.0	1.4	1.5	16.20±0.50	0.386
	70	11.9	1.4	1.5	18.20±0.80	0.272
3	25	7.0	1.2	1.8	24.60±1.00	0.780
	35	8.2	1.2	1.83	27.30±1.20	0.554
	50	10.0	1.4	2.0	32.70±1.20	0.386
	70	11.9	1.4	2.14	37.00±1.50	0.272
5	25	7.0	1.2	1.92	30.00±1.00	0.780
	35	8.2	1.2	2.04	33.60±1.20	0.554
	50	10.0	1.4	2.25	40.00±1.20	0.386
	70	11.9	1.4	2.43	45.60±1.50	0.272

CU-AL Junction Cable

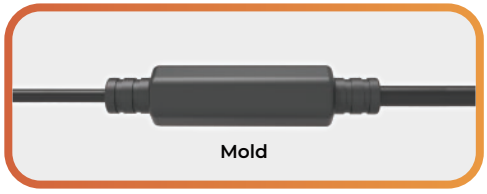
SUNKEAN

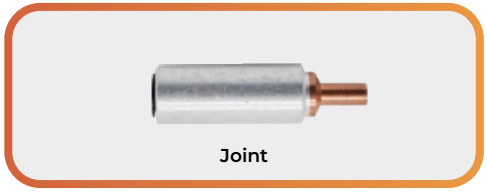
Intertek

Our innovative CU-AL Junction Cable, an exceptional tool designed for seamlessly connecting string harnesses to combiner boxes or string inverters. This cutting-edge Electrical Balance of System (EBOS) solution is compatible with the Trunk connector, enhancing efficiency and reliability in your solar energy system.

Advantage

- Extension connects harnesses to combiner boxes
- Customized design to accommodate site layouts
- Significantly reduce the overall project budget
- Prevents increased oxidation from dissimilar metal surface contacts
- Minimizes copper usage by utilizing cost-efficient aluminum materials
- IP68 overmold protects components from environmental damage





Construction

Joint: 35kV-rated with anti-oxidation and anti-corrosion joint compound

Mold: Weather resistant

Outdoor rating per UL746C

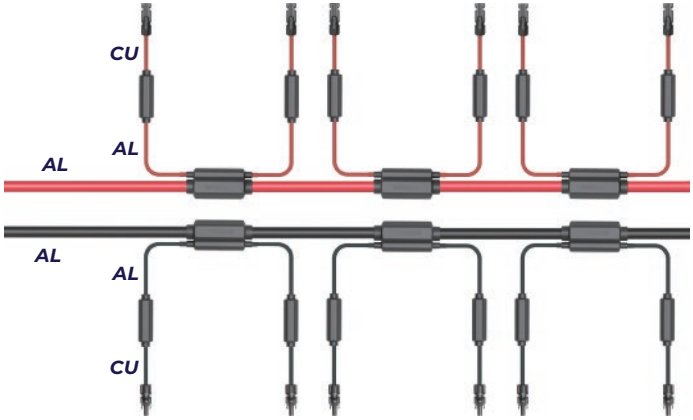
UL94 Flame-retardant

90°C rated

Copper AWG	#12	#10	#8	#10	#8	#6	#10	#8	#6
Aluminum AWG	#6	#6	#8	#4	#4	#4	#2	#2	#2

Trunk Connector

SUNKEAN



Intertek

It is an innovative all-in-one trunk bus system that provides stable power transmission from solar panels to the utility power collection system. It reduces the Capex and increases the ROI of a utility scale solar installation.

Advantages

- Hi-tech sealing technology
- Excellent waterproof performance
- Plug and play - easy to install
- Reduce material waste & labor cost
- IP68
- TPV material

Technical Data

Voltage Rating	1500V DC
Max Trunk Isc.	845A for 1000MCM
Strings Per Mold	Customized according to needs, usually 6 ~ 7 strings
Size Of String Wire	10AWG, 8AWG, 6AWG, 4AWG, 2AWG
Work Environment	Temperature range: -40℃~ +60℃, Humidity range: 5% ~ 95%
Max Ambient Temperature	50℃
Over Voltage Category/Pollution Degree	CATIII/3
Flame Rating	UL94-5VA
Safety Degree	II
Application	Outdoor use, UV Resistant(F1)

String Harness

SUNKEAN

Intertek

We offer individual cable solutions for professional and safe cabling.

Pre-assembled solutions ensure consistently high levels of quality and speed up assembly.

Advantages

- Hi-tech sealing technology
- Appearance patent
- TPV material
- IP68
- Easy to install
- Reduce material consumption & labor costs
- ETL certified to UL9703, cert.No.: 5024311

43% Lower Install Cost

20% Less Material

83% Fewer connections to inspect and maintain

Parameters Data

Product Type	Cable	Connector	Voltage	Fuse Rating
S-I: I junction S-T: T junction S-X: X junction S-Y: Y junction S-3 to 1: 3 to 1 junction S-4 to 1: 4 to 1 junction S-5 to 1: 5 to 1 junction S-6 to 1: 6 to 1 junction	2.5mm²/14AWG 4mm²/12AWG 6mm²/10AWG 10mm²/8AWG 16mm²/6AWG 25mm²/2AWG	TE PV4-S STAUBLI MC4 STAUBLI MC4-EVO2 AMPHENOL H4S QC4.10 Plus TLIAN T4 TRINA TS4 JINKO JK03M2 LONGI PV-LR5 TONGLIN TL-CABLE01S	L: 1000V H: 1500V	1A 2A 3A ... 25A ... max 80A

In-line Fuse Assembly 1500V DC

SUNKEAN

Intertek

SUNKEAN In-line Fuse Assembly is made of high-quality weather-resistant materials and mold-sealed manufacturing process to ensure long-term reliability. They can be installed on site. Low contact resistance and high current transfer capability ensure high production efficiency. With IP68 waterproof rating, it can be used in a wide operating temperature range.

Technical Data

Nominal Voltage	1500V DC
Interrupting Ratings	50kA
Fuse-link	Standard Ref. to: UL248-19, IEC 60269-6
Insulation Material	Special-Hotmelt, UV-stable, IP68 (please take note of connector's IP-protection)
Flame Class	Self-extinguishing UL94-5VA
Working Environment	Temperature range: -40℃~ +60℃, Humidity range: 5% ~ 95%
Over Voltage Category/Pollution Degree	CATIII/3
Safety Degree	II

Product Type	Fuse Voltage	Fuse Current	Cable Spec	Connector
S-I...VI: Fuse Holder	1000V DC	1-32A (10x85mm) 10-50A (14x85mm) 60A (24x65mm) 70A (24x65mm) 80A (24x65mm)	3.5mm² 5.5mm² 4mm²/12AWG 6mm²/10AWG 10mm²/8AWG 16mm²/6AWG	TE PV4-S STAUBLI MC4 STAUBLI MC4-EVO2 AMPHENOL H4S QC4.10 Plus TLIAN T4 TRINA TS4 JINKO JK03M2 LONGI PV-LR5 TONGLIN TL-CABLE01S

Jumper & Whip

SUNKEAN

Jumper

Whip

ACCEPT CUSTOMIZATION

WATERPROOF IP68

LONG SERVICE LIFE

Characteristics

Cable Insulation Material: Double XLPO
Cable Conductor: Bare or tinned copper, Aluminum (Optional)
Connector Material: PC/PA/PPE
Rated Current: TÜV 30A /UL 20A
Rated Voltage: 1000V ~ 1500V DC
Contact Resistance: ≤ 0.5mΩ
Ambient Temp: -40°C ~ +90°C

Plug Force: ≤50N
Withdraw Force: ≥50N
IP Level: IP68
Safety Class: II
Flame Class: UL94-V0
Cable Size: Solar cable 4mm²/12AWG, 6mm²/10AWG

Optional connector model

TE PV4-S	STAUBLI MC4-EVO2	QC4.10 Plus	TRINA TS4	LONGI PV-LR5
STAUBLI MC4	AMPHENOL H4S	TLIAN T4	JINKO JK03M2	TONGLIN TL-CABLE01S

Remark : Customized length is acceptable.

Battery Harness

SUNKEAN






Table of Recognized Styles	Connector Type	System Voltage	Operating Temperature	Flame Test
UL11627 UL10269 UL3932 UL3820 UL3817 UL3816 UL3666 TÜV 2PfG 2693	Amphenol®	L: 300V H: 3000V	-40°C ~ +125°C	VW-1/ FT 1/ FT 2

IEC62893/EN50620 EVC H07BZ5-F

SUNKEAN

- Oil resistant
- Acid and alkali resistant
- Hydrolysis resistance
- Flame test IEC 60332-1-2

Characteristics

Conductor: Copper
Insulation: EV1-2
Jacket: EVM-1

Rated Voltage: AC 450/700V
Operating Temperature: -40°C ~ +90°C
Flame Test: IEC/EN 60332-1-2

Cross Section (mm^2)	Conductor Stranded O.D. (mm)	Insulation Thickness (mm)	Jacket Thickness (mm)	Cable O.D. Ref. Range (mm)	Conductor Resistance Max. (Ω/km, 20°C)
3×1.5+1×0.5	1.6	0.7	1.0	9.20±0.60	13.3
3×1.5+2×0.5	1.6	0.7	1.0	9.20±0.60	13.3
3×2.5+1×0.5	2.0	0.7	1.0	10.00±0.60	7.98
3×2.5+2×0.5	2.0	0.7	1.0	10.00±0.60	7.98
3×4+1×0.5	2.6	0.7	1.1	11.50±0.60	4.95
3×4+2×0.5	2.6	0.7	1.1	11.50±0.60	4.95
3×6+1×0.5	3.2	0.7	1.2	13.00±0.80	3.30
3×6+2×0.5	3.2	0.7	1.2	13.00±0.80	3.30
3×10+1×0.5	4.5	0.7	1.4	16.20±0.80	1.91
3×10+2×0.5	4.5	0.7	1.4	16.20±0.80	1.91
3×16+1×0.5	5.5	0.7	1.5	18.60±0.80	1.21
3×16+2×0.5	5.5	0.7	1.5	18.60±0.80	1.21
5×1.5+1×0.5	1.6	0.7	1.2	11.20±0.80	13.3
5×1.5+2×0.5	1.6	0.7	1.2	11.20±0.80	13.3
5×2.5+1×0.5	2.0	0.7	1.2	12.30±0.80	7.98
5×2.5+2×0.5	2.0	0.7	1.2	12.30±0.80	7.98
5×4+1×0.5	2.6	0.7	1.3	14.10±0.80	4.95
5×4+2×0.5	2.6	0.7	1.3	14.10±0.80	4.95
5×6+1×0.5	3.2	0.7	1.4	16.00±1.00	3.30
5×6+2×0.5	3.2	0.7	1.4	16.00±1.00	3.30
5×10+1×0.5	4.5	0.7	1.5	19.60±1.00	1.91
5×10+2×0.5	4.5	0.7	1.5	19.60±1.00	1.91
5×16+1×0.5	5.5	0.7	1.7	22.80±1.20	1.21
5×16+2×0.5	5.5	0.7	1.7	22.80±1.20	1.21

Project Portfolio

SUNKEAN

System capacity: 60MW
Shimane, Japan

System capacity: 95.2MW
Chile

System capacity: 42.3MW
Japan

System capacity: 50MW
Japan

System capacity: 1200MW
USA

System capacity: 50MW
Japan

System capacity: 7MW
Beaufort, Sabah Malaysia

System capacity: 3MW
AEON carport, Malaysia

SUNKEAN CONNECTS RELIABLE FUTURE

SUNKEAN CABLE CO., LTD.

+86 510 8108 3036

sales @ sunkean.com

No.17-9, South Changjiang Road, Xinwu
District, Wuxi, Jiangsu, China.