



传 世 界 创 未 来

TRANSMISSION TO WORLD AND CREATE THE FUTURE

PV SOLAR CABLE & ACCESSORIES
BROCHURE

玖开特种线缆(上海)有限公司

Jiukai Special Cable (Shanghai) Co., Ltd

Company Profile

JOCA Holding Group is a synthetic holding corporation, registered total capital 2500 million dollars, area 18,0000 square meters, owned more than 100 subsidiary companies and branch offices and annual output 3 billion dollars. We do our best to create the first domestic integrated cable supplier covering HV&LV cable, special cable, low voltage intelligent security cable, optical cable, telecom cable and all ranges. Our group includes following subsidiary companies:

- 1) Wuxi City Qunxing Wire & Cable Co., Ltd
- 2) Jiukai Special Cable (Shanghai) Co., Ltd
- 3) JOCA (Jiangsu) Intelligent Power Technology Co., Ltd.

Jiukai Special Cable (Shanghai) Co., Ltd mainly produces highly flexible towline cables, industrial automation and control cables, new energy photovoltaic cables, new energy electric vehicle charging piles and high-voltage cables in vehicles and weak current intelligent security cables. The company's products have successively passed UL、CE、EN、TUV、S-JET and DEKRA certification. It exported to more than fifty countries and regions such as America, Europe, East Asia, Southeast Asia, Middle East, Oceania, Africa, etc.

Wuxi City Qunxing Wire & Cable Co., Ltd mainly produces 35kV below HV&LV power cable, new type super flexible mineral insulated fire-proof cable, energy-saving aluminum alloy cable, H&LV aerial conductor, control cable, Shielded cable, rubber cable and installation cable.

JOCA (Jiangsu) Intelligent Power Technology Co., Ltd mainly produces various cable accessories of 220kV and below, passed the KEMA certification.

Jiukai group takes orders of core value "struggle, innovation, persistence, and progressive", bears in mind of "Weaving trust and passing love".

"Transmission to world and create the future". Jiukai is willing to collaborate with you and create the future together.

Qualifications and honors



認 証 書
CERTIFICATE

JET認証業務規程に基づく検査の結果、認証の要件に適合しているものと認められますので認証します。
We verify that the product specified below conforms to the requirements of the standards according the regulations for JET certification.

認証の種類: S-JET 認証
Contents of certificate: S-JET Certificate
認証番号: 1891-12024-001
Certificate No.: 1891-12024-001
認証年月日: 2023-01-17
Date of issue: 2023-01-17
認証取得者(名称及び住所):
Name and address of the Applicant:
JIUKAI SPECIAL CABLE (SHANGHAI) CO., LTD
NO.875, PUWEI ROAD, ZHUANGHANG TOWN, FENGPAN DISTRICT, SHANGHAI, CHINA
製品名:
Product of name:
DC 1500V Cables For Photovoltaic Power Generation System
製品の型番及び規格: 付属書ののとおり
Model No. and Rating of Product: See attached sheets
製造工場(名称及び住所): 付属書ののとおり
Name and address of the Factory: See attached sheets
試験基準: JET-ST-CABL-001-1 (H25-10)
Test standards:

一般財団法人 電気安全環境研究所
Japan Electrical Safety & Environment Technology Laboratories
5-14-12 Yonoi, Shibuya-ku, Tokyo, 151-8545 JAPAN
理事長 藤田 康夫
PRESIDENT: YASUHI TSUBOMODA



Zertifikat Certificate

Zertifikat No. / Certificate No. R 50540699 Blatt / Sheet 0001

Hersteller / Client Reference: User Zertifikat / Our Reference: Anstellungsdatum / Date of Issue: 01-WPV-CN227000 001 13.05.2022 (day/month)

Gemeinschaftlicher Lizenznehmer / License Holder: Jiukai Special Cable (Shanghai) Co., Ltd, No. 875, Puwei Road, Zhuanghang Town, Fengpan District, Shanghai, P. R. China

Fertigungsstätte / Manufacturing Plant: Jiukai Special Cable (Shanghai) Co., Ltd, No. 875, Puwei Road, Zhuanghang Town, Fengpan District, Shanghai, P. R. China

Prüfzeichen / Test Mark: TÜV Rheinland

Geprüft nach / Tested acc. to: 2 PFG 2642/01.22

Zertifiziertes Produkt (Zertifikationsnummer) / Certified Product (Product Identification): Cable / PV Aluminum alloy cable

Lizenznummer - Einheit / License No. - Unit: 18

Type Designation: 1) 2062807-AL single, 2) 2062807-AL double, 3) 19151000-AL-R, 4) 19151000-AL-R

Rated diameter: 1) 18.1, 2) 18.0, 3) 22.2, 4) 24.0

Additional Marking: HALOGEN FREE LOW SMOKE

Rating: 1) DC 1.5kV, TI 120°C (20-000), Class 5 conductor, 2) DC 1.5kV, TI 120°C (20-000), Class 5 conductor

Max. Storage Temperature: +45°C
Min. Temperature for Installation and Handling: -25°C

Remark: For connections, suitable aluminum-copper connectors shall be used.

ANLAGE (Appendix): 1.0

Das Zertifikat bescheinigt Prüf- und Zertifizierungsergebnisse gemäß der in den Anlagen festgelegten Produktdaten und Prüfbedingungen. Die Herstellung und die Prüfung des Produkts sind in Übereinstimmung mit den geltenden Standards zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg
Tel: +49 221 906-3000 | Email: service@tuev.com
Fax: +49 221 906-3033

Zertifizierungsstelle
Bo Liu



Zertifikat Certificate

Zertifikat No. / Certificate No. J 50459313 Blatt / Sheet 0001

Hersteller / Client Reference: User Zertifikat / Our Reference: Anstellungsdatum / Date of Issue: 01-WSN-15093774 004 19.02.2020 (day/month)

Gemeinschaftlicher Lizenznehmer / License Holder: Shanghai Jiukai Wire & Cable Co., Ltd., No. 875, Puwei Highway, Fengpan District, Shanghai, P. R. China

Fertigungsstätte / Manufacturing Plant: Shanghai Jiukai Wire & Cable Co., Ltd., No. 875, Puwei Highway, Fengpan District, Shanghai, P. R. China

Prüfzeichen / Test Mark: TÜV Rheinland

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

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

Lizenznummer - Einheit / License No. - Unit: 13

Type Designation: 1) H1Z2E-H 2X1.5...10mm² Shanghai Jiukai Wire & Cable Co., Ltd.

Rated Voltage: DC 1.5kV, AC 1.0/1.0kV

Ambient Temperature: +40°C to +90°C
Max. Temperature at Conductor: +120°C

Remark: The two-core cables have parallel cores, which are connected depending on the outer surface of the sheath.

ANLAGE (Appendix): 1.0

Das Zertifikat bescheinigt Prüf- und Zertifizierungsergebnisse gemäß der in den Anlagen festgelegten Produktdaten und Prüfbedingungen. Die Herstellung und die Prüfung des Produkts sind in Übereinstimmung mit den geltenden Standards zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen.

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Zertifizierungsstelle
Bo Liu



Zertifikat Certificate

Zertifikat No. / Certificate No. R 50459276 Blatt / Sheet 0001

Hersteller / Client Reference: User Zertifikat / Our Reference: Anstellungsdatum / Date of Issue: 01-WSN-50344291 001 19.02.2020 (day/month)

Gemeinschaftlicher Lizenznehmer / License Holder: Shanghai Jiukai Wire & Cable Co., Ltd., No. 875, Puwei Highway, Fengpan District, Shanghai, P. R. China

Fertigungsstätte / Manufacturing Plant: Shanghai Jiukai Wire & Cable Co., Ltd., No. 875, Puwei Highway, Fengpan District, Shanghai, P. R. China

Prüfzeichen / Test Mark: TÜV Rheinland

Geprüft nach / Tested acc. to: IEC 62930:2017, EN 50618:2014

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

Lizenznummer - Einheit / License No. - Unit: 13

Type Designation: 448957

Type Designation: 1) 62930 IEC 131 or H1Z2E-R, 2) 62930 IEC 131 or H1Z2E-R, Shanghai Jiukai Wire & Cable Co., Ltd.

Scope of Sizes: 1) 1X1.5...10mm²

Rated Voltage: DC 1.5kV

Max. Storage Temperature: +45°C
Min. Temperature for Installation and Handling: -25°C
Max. Temperature at Conductor: +120°C

ANLAGE (Appendix): 1.0

Das Zertifikat bescheinigt Prüf- und Zertifizierungsergebnisse gemäß der in den Anlagen festgelegten Produktdaten und Prüfbedingungen. Die Herstellung und die Prüfung des Produkts sind in Übereinstimmung mit den geltenden Standards zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen.

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Zertifizierungsstelle
Bo Liu



Certificate

Certificate no. T 50390057 01

Lizenznehmer / License Holder: Shanghai Jiukai Wire & Cable Co., Ltd., No. 875, Puwei Highway, Fengpan District, Shanghai, P. R. China

Hersteller / Client Reference: User Zertifikat / Our Reference: Anstellungsdatum / Date of Issue: 01-WSN-50344291 002 19.02.2020 (day/month)

Gemeinschaftlicher Lizenznehmer / License Holder: Shanghai Jiukai Wire & Cable Co., Ltd., No. 875, Puwei Highway, Fengpan District, Shanghai, P. R. China

Fertigungsstätte / Manufacturing Plant: Shanghai Jiukai Wire & Cable Co., Ltd., No. 875, Puwei Highway, Fengpan District, Shanghai, P. R. China

Prüfzeichen / Test Mark: TÜV Rheinland

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

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

Lizenznummer - Einheit / License No. - Unit: 13

Type Designation: 1) 62930 IEC 131, 2) 62930 IEC 131, Shanghai Jiukai Wire & Cable Co., Ltd.

Scope of Sizes: 1) 2X1.5...10mm²

Rated Voltage: DC 1.5kV

Max. Storage Temperature: +45°C
Min. Temperature for Installation and Handling: -25°C

ANLAGE (Appendix): 1.0

Das Zertifikat bescheinigt Prüf- und Zertifizierungsergebnisse gemäß der in den Anlagen festgelegten Produktdaten und Prüfbedingungen. Die Herstellung und die Prüfung des Produkts sind in Übereinstimmung mit den geltenden Standards zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen.

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Zertifizierungsstelle
Bo Liu



Zertifikat Certificate

Zertifikat No. / Certificate No. 07 50459277 Blatt / Sheet 0001

Hersteller / Client Reference: User Zertifikat / Our Reference: Anstellungsdatum / Date of Issue: 01-MSW-50344291 002 19.02.2020 (day/month)

Gemeinschaftlicher Lizenznehmer / License Holder: Shanghai Jiukai Wire & Cable Co., Ltd., No. 875, Puwei Highway, Fengpan District, Shanghai, P. R. China

Fertigungsstätte / Manufacturing Plant: Shanghai Jiukai Wire & Cable Co., Ltd., No. 875, Puwei Highway, Fengpan District, Shanghai, P. R. China

Prüfzeichen / Test Mark: TÜV Rheinland

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

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

Lizenznummer - Einheit / License No. - Unit: 13

Type Designation: 1) 62930 IEC 131, 2) 62930 IEC 131, Shanghai Jiukai Wire & Cable Co., Ltd.

Scope of Sizes: 1) 2X1.5...10mm²

Rated Voltage: DC 1.5kV

Max. Storage Temperature: +45°C
Min. Temperature for Installation and Handling: -25°C

ANLAGE (Appendix): 1.0

Das Zertifikat bescheinigt Prüf- und Zertifizierungsergebnisse gemäß der in den Anlagen festgelegten Produktdaten und Prüfbedingungen. Die Herstellung und die Prüfung des Produkts sind in Übereinstimmung mit den geltenden Standards zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen. Die Konformität ist auf der Grundlage der Prüfungsergebnisse und unter Berücksichtigung der Angaben der Hersteller zu beurteilen.

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Zertifizierungsstelle
Bo Liu



Company equipment



Laboratory



Group office

EQUIPMENT

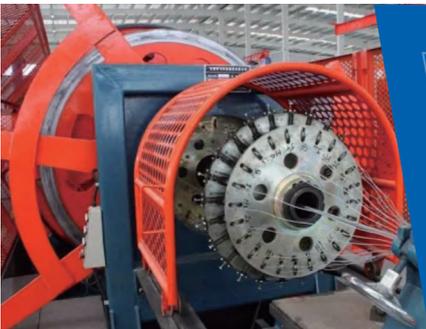


Double layer extruder



Drawing-Machine

EQUIPMENT



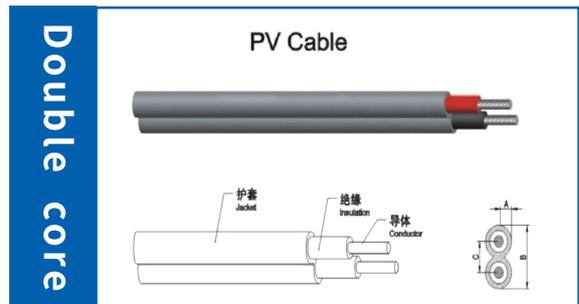
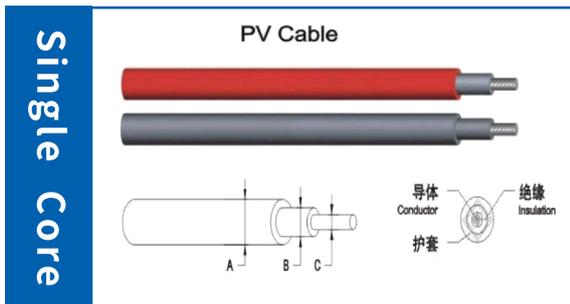
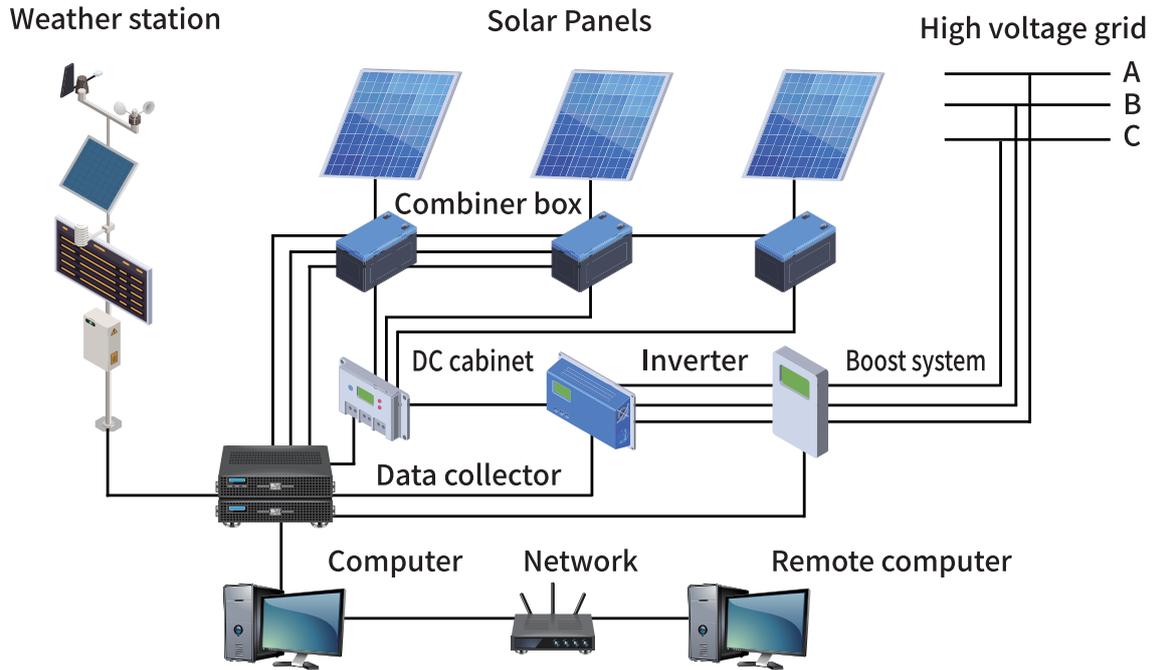
Stranding Equipment



Assembling Machine

EQUIPMENT

Photovoltaic Power System



2PFG1169/08.07 PV1-F Solar Cable

APPLICATION

Flexible cables suitable for PV solar DC current systems. The max allowable DC voltage 1.8 kV (Conductor to conductor, system without earth). Used at security level II location. These cables are allowed to be connected in a multi-structural manner. The cable is designed for operation at temperature up to 90°C.

TECHNICAL INDICATORS

Nominal voltage: U0/U 0.6/1KV(AC) 1800DC(non-load)
 Test voltage: AC6.5KV/5min(20°C±0.5)
 or DC15KV/5min (20°C±0.5) without breakdown
 Ambient temperature: -40°C~+90°C
 Conductor maximum temperature: 120°C
 Maximum short circuit temperature: ≤250°C/5S
 Expected service life: 25 years
 Bending radius: ≥4D

STRUCTURE

Conductor: Tinned copper flexible conductor of Class 5 in 2Pfg1169
 Insulation: LSZH electron-beam cross-linked Polyolefin (125°C)
 Sheath: LSZH electron-beam cross-linked Polyolefin (125°C)
 Color: red or black

CHARACTERISTICS COMPLIANCE

Fire-resistance: EN 60332-1-2
 Acid and alkali solution: EN 60811-2-1
 Halogen determination: EN 50267/EN 60684
 Weather resistance/UV resistance: HD 605/A1
 Compliance certification: ROHS TUV
 Executive standard: 2 Pfg 1169/08.2007

Structural dimensions and parameters

Model	Specification (mm ²)	Insulation Nominal Thickness (mm)	Sheath Nominal Thickness (mm)	Approximate outer diameter (mm)	Maximum DC resistance of conductor at 20°C (Ω/km)	Minimum insulation resistance at 90°C (mΩ/km)
PV1-F	2.5	≥0.5	≥0.5	4.2	8.21	0.69
PV1-F	4.0	≥0.5	≥0.5	5.9	5.09	0.58
PV1-F	4.0	≥0.5	≥0.5	4.65	5.09	0.58
PV1-F	4.0	≥0.5	≥0.5	5.5	5.09	0.58
PV1-F	6.0	≥0.5	≥0.5	6.2	3.39	0.50
PV1-F	6.0	≥0.5	≥0.5	5.35	3.39	0.50
PV1-F	10	≥0.5	≥0.5	7.3	1.95	0.42
PV1-F	16	≥0.5	≥0.5	8.5	1.24	0.34
PV1-F	2×2.5	≥0.5	≥0.5	5.2×10.9	8.21	0.69
PV1-F	2×4.0	≥0.5	≥0.5	5.9×12.2	5.09	0.58
PV1-F	2×4.0	≥0.5	≥0.5	5.5×11.4	5.09	0.58
PV1-F	2×4.0	≥0.5	≥0.5	4.85×10	5.09	0.58
PV1-F	2×6.0	≥0.5	≥0.5	6.2×12.9	3.39	0.50
PV1-F	2×6.0	≥0.5	≥0.5	5.35×11.2	3.39	0.50
PV1-F	2×10	≥0.5	≥0.5	7.3×15.1	1.95	0.42

Reference table for quick selection of carrying capacity

Cross-sectional area	Recommended value of ampacity (A)	Download traffic conversion factor for different ambient temperatures	
Copper conductor	Laying in the air	Ambient temperature °C	Conversion factor
2.5	41	10	1.15
4	55	20	1.08
6	70	30	1.0
10	98	40	0.91
16	132	50	0.82
2×2.5	33	60	0.71
2×4	44	70	0.58
2×6	57	80	0.41
2×10	79		
2×16	107		

Note: Ambient temperature is 30°C; conductor maximum temperature is 90°C

PRODUCT CHARACTERISTICS

- UV and ozone resistant, hydrolysis resistant
- High temperature resistance, service life of more than 25 years
- Good flexibility, easy installation and laying
- Halogen-free and low-smoke material, in line with environmental protection requirements
- Compatible with all common connectors

EN50618/IEC62930 H1Z2Z2-K Solar Cable

APPLICATION

Suitable for the DC side of photovoltaic systems, the DC voltage between the conductor and the ground is 1.5kV, suitable for use with Class II equipment, low-smoke zero-halogen, flexible cable with cross-linked insulation and sheath.

TECHNICAL INDICATORS

Nominal voltage: U0/U 1.0/1.0KV(AC) 1500V(DC)
 Test voltage: AC6.5KV/5min(20°C±0.5) or DC15KV/5min(20°C±0.5) without breakdown
 Ambient temperature: -40°C~+90°C
 Conductor maximum temperature: 120°C
 Expected service life: 25 years
 Bending radius: ≥4D

STRUCTURE

Conductor: Tinned copper flexible conductor of Class 5 in EN 50618
 Insulation: LSZH electron-beam cross-linked Polyolefin (125°C)
 Sheath: LSZH electron-beam cross-linked Polyolefin (125°C)
 Color: red or black

CHARACTERISTICS COMPLIANCE

Fire resistance: EN 60332-1-2
 Weather resistance/UV resistance: EN 50289-4-17/ENISO4892
 Halogen determination: EN 50525
 Salt spray emission: IEC 61034
 Compliance certification: ROHS TUV
 Executive standard: EN 50618:2014/IEC 62930:2017

Structural dimensions and parameters

Model	Specification (mm ²)	Insulation Nominal Thickness (mm)	Sheath Nominal Thickness (mm)	Approximate outer diameter (mm)	Maximum DC resistance of conductor at 20°C (Ω/km)	Minimum insulation resistance at 90°C (MΩ/km)
H1Z2Z2-K	1.5	0.7	0.8	4.6	13.7	0.86
H1Z2Z2-K	2.5	0.7	0.8	5.0	8.21	0.69
H1Z2Z2-K	4.0	0.7	0.8	5.55	5.09	0.58
H1Z2Z2-K	6.0	0.7	0.8	6.15	3.39	0.50
H1Z2Z2-K	10	0.7	0.8	7.4	1.95	0.42
H1Z2Z2-K	16	0.7	0.9	8.52	1.24	0.34
H1Z2Z2-K	25	0.9	1.0	10.6	0.795	0.34
H1Z2Z2-K	35	0.9	1.1	12.5	0.565	0.29
H1Z2Z2-K	50	1.0	1.2	14.2	0.393	0.27
H1Z2Z2-K	2×1.5	0.7	0.8	4.6×9.7	13.7	0.86
H1Z2Z2-K	2×2.5	0.7	0.8	5.0×10.5	8.21	0.69
H1Z2Z2-K	2×4.0	0.7	0.8	5.55×11.6	5.09	0.58
H1Z2Z2-K	2×6.0	0.7	0.8	6.15×12.8	3.39	0.50
H1Z2Z2-K	2×10	0.7	0.8	7.4×15.3	1.95	0.42

Reference table for quick selection of carrying capacity

Cross-sectional area	Recommended value of ampacity (A)	Download traffic conversion factor for different ambient temperatures	
		Ambient temperature °C	Conversion factor
Copper conductor	Laying in the air		
1.5	30	10	1.15
2.5	41	20	1.08
4	55	30	1.0
6	70	40	0.91
10	98	50	0.82
16	132	60	0.71
25	176	70	0.58
35	218	80	0.41
50	276		
2×1.5	24		
2×2.5	33		
2×4.0	44		
2×6.0	57		
2×10	79		

Note: Ambient temperature is 30°C; conductor maximum temperature is 90°C

PRODUCT CHARACTERISTICS

- UV and ozone resistant, hydrolysis resistant
- High temperature resistance, service life of more than 25 years
- Good flexibility, easy installation and laying
- Halogen-free and low-smoke material, in line with environmental protection requirements
- Compatible with all common connectors

American Standard UL Approved Solar Cable

APPLICATION

Mainly used in wiring of solar power system with earth or no earth

TECHNICAL INDICATORS

Nominal voltage: 600V(AC), 1000V(AC), 2000V(AC)
 Ambient temperature: -40°C~+90°C
 Conductor maximum temperature: 125°C
 Maximum short circuit temperature: ≤250°C/5S
 Expected service life: 25 years
 Bending radius: ≥4D

STRUCTURE

Conductor: Tinned copper soft conductor in UL4703
 Insulation:LSZH electron-beam cross-linked Polyolefin (125°C)
 Sheath: LSZH electron-beam cross-linked Polyolefin (125°C)
 Color: black or red

CHARACTERISTICS COMPLIANCE

Fire resistance: UL2556
 Weather resistance: UL2556
 Low temperature test: UL2556
 Compliance certification: ROHS UL
 Executive standard: UL4703

Structural dimensions and parameters

Model	Specification (AWG)	Insulation Nominal Thickness (mm)	Sheath Nominal Thickness(mm)	Approximate outer diameter(mm)	Maximum DC resistance of conductor at 20°C (Ω/km)
UL-PV-600V	1	1.4	1.52	15.31	0.44
UL-PV-600V	2	1.14	1.14	12.92	0.555
UL-PV-600V	4	1.14	1.14	11.15	0.882
UL-PV-600V	6	1.14	1.14	9.3	1.41
UL-PV-600V	8	1.14	0.76	7.57	2.23
UL-PV-600V	10	0.76	0.76	6.32	3.55
UL-PV-600V	12	0.76	0.76	5.4	5.75
UL-PV-600V	14	0.76	0.76	4.93	9.15
UL-PV-1000V	1	1.65	1.52	15.81	0.44
UL-PV-1000V	2	1.39	1.14	13.42	0.555
UL-PV-1000V	4	1.39	1.14	11.65	0.882
UL-PV-1000V	6	1.39	1.14	9.8	1.41
UL-PV-1000V	8	1.39	0.76	8.07	2.23
UL-PV-1000V	10	1.14	0.76	7.1	3.55
UL-PV-1000V	12	1.14	0.76	6.16	5.75
UL-PV-1000V	14	1.14	0.76	5.69	9.15
UL-PV-2000V	1	1.65	1.52	15.81	0.44

Model	Specification (AWG)	Insulation Nominal Thickness (mm)	Sheath Nominal Thickness(mm)	Approximate outer diameter(mm)	Maximum DC resistance of conductor at 20°C (Ω /km)
UL-PV-2000V	2	1.39	1.14	13.42	0.555
UL-PV-2000V	4	1.39	1.14	11.65	0.882
UL-PV-2000V	6	1.39	1.14	9.8	1.41
UL-PV-2000V	8	1.39	0.76	8.07	2.23
UL-PV-2000V	10	1.14	0.76	7.1	3.55
UL-PV-2000V	12	1.14	0.76	6.16	5.75
UL-PV-2000V	14	1.14	0.76	5.69	9.15

PRODUCT CHARACTERISTICS

Electron Beam Crosslinking Compounds
 UV and ozone resistant, hydrolysis resistant
 High temperature resistance, material will not melt or flow
 good cold flexibility
 Long service life, more than 25 years at 90°C
 Compatible with all common connectors

Aluminum Alloy Photovoltaic Wire Series



APPLICATION

Used for the series cable between photovoltaic modules and modules on the DC side of the photovoltaic power generation system, the parallel connection between the strings between the strings and the DC distribution box (combiner box), and the connection between the cable and the DC distribution box to the inverter. Cables for photovoltaic power generation systems with aluminum alloy conductors that meet the requirements of outdoor environments

TECHNICAL INDICATORS

Nominal voltage: DC1500V
 Test voltage: AC6.5kV/5min or DC15kV/5min without breakdown
 Conductor maximum working temperature when air laying: 120°C/2000h
 Conductor long-term working temperature: 90°C
 Ambient temperature: -40°C~+90°C
 Maximum short circuit temperature: ≤250°C/5S
 Expected service life: 25 years
 Bending radius: 6×D

STRUCTURE

Conductor: 2 PFG 2642 fifth aluminum alloy flexible conductor
 Insulation: LSZH cross-linked Polyolefin (120°C)
 Sheath: LSZH cross-linked Polyolefin (120°C)
 Color: red or black

CHARACTERISTICS COMPLIANCE

Fire performance: IEC 60332-1
 Salt spray emission: IEC 61034; EN 50268-2
 Low fire load: DIN 51900
 Product certification: TUV 2 PFG 2642/01.22

Structural dimensions and parameters

Model	Specification (mm ²)	Insulation Nominal Thickness (mm)	Sheath Nominal Thickness (mm)	Approximate outer diameter (mm)	Approximate weight (kg/km)	Maximum DC resistance of conductor at 20°C (Ω/km)	Minimum insulation resistance at 90°C (MΩ/km)
PV1500DC-AL-K	1×4	0.7	0.8	5.6	39.1	8.1	0.709
PV1500DC-AL-K	1×6	0.7	0.8	6.2	48.82	5.05	0.61
PV1500DC-AL-K	1×10	0.8	0.8	7.3	69.3	3.08	0.489
PV1500DC-AL-K	1×16	0.9	0.9	8.8	101.66	1.91	0.395
PV1500DC-AL-K	1×25	1	1	11.3	159.43	1.2	0.393
PV1500DC-AL-K	1×35	1.1	1.1	13	211.61	0.868	0.335
PV1500DC-AL-K	1×50	1.2	1.2	15.2	289.86	0.641	0.314
PV1500DC-AL-K	1×70	1.2	1.2	17.1	369.57	0.443	0.291
PV1500DC-AL-K	2×4	0.7	0.8	5.6×11.4	79.89	8.1	0.709
PV1500DC-AL-K	2×6	0.7	0.8	6.2×12.6	99.54	5.05	0.61
PV1500DC-AL-K	2×10	0.8	0.8	7.3×14.8	140.78	3.08	0.489

Reference table for quick selection of carrying capacity

Cross-sectional area		Recommended value of ampacity (A)		Download traffic conversion factor for different ambient temperatures	
Aluminum	Copper	Laying in the air	Buried laying	Ambient temperature °C	Conversion factor
1×2.5	1×1.5	31	43	0	1.22
1×4	1×2.5	42	59	10	1.15
1×6	1×4	57	80	20	1.08
1×10	1×6	72	106	30	1
1×16	1×10	98	139	40	0.91
1×25	1×16	132	178	50	0.82
1×35	1×25	183	213	60	0.71
1×50	1×35	227	251	70	0.58
1×70	1×50	287	308		
2×2.5	2×1.5	24	33		
2×4	2×2.5	33	46		
2×6	2×4	45	63		
2×10	2×6	58	85		
2×16	2×10	80	113		
2×25	2×16	107	144		
2×35	2×25	138	161		
2×50	2×35	171	189		
2×70	2×50	209	224		

Note: Ambient temperature is 30°C; conductor maximum temperature is 90°C

PRODUCT CHARACTERISTICS

reduce cable weight
 resistance to external environment such as ozone resistance, acid and alkali resistance and environmental climate resistance, and has a long service life of 25 years
 Reduce installation costs, can be directly buried, and can be used for series and parallel connection of multiple components
 Carrying capacity meets the requirements
 The mechanical properties of aluminum conductors meet the standards
 Copper-aluminum connection safety
 Copper-aluminum connectors and cable connections

Requirements for copper aluminum connectors

Use copper-aluminum connectors that meet the relevant requirements of EC62852, IEC61238 and 2pg standards. In view of the continuous technological progress of copper-aluminum connectors, there may be problems in the matching between cables and connectors of different brands. It is recommended that connectors of a specific brand and model need to be matched with aluminum alloy photovoltaic cables of a specific brand and model.

Matching Verification Requirements for Copper-Aluminum Connectors and Aluminum Alloy Photovoltaic Cables

Number	Experimental project	Performance requirements
1	Thermal cycle test (1000 times) thermal cycle	Initial dispersion: ≤ 0.3 Average dispersion: ≤ 0.3 Variation of resistance ratio: ≤ 0.15 Resistance ratio growth rate: ≤ 2.0 Maximum temperature: \leq reference conductor temperature
2	Short circuit test (6 times)	Only for type A connector
3	Mechanical property test	40XA*, up to 20000N. The joint bears the above tensile load and keeps it for 1min. No slippage at the crimp

Note: A* indicates the nominal cross-sectional area of aluminum or aluminum alloy conductor (mm²)

Japanese Standard S-JET Approved Solar Cable

APPLICATION

Solar photovoltaic power generation system used for DC wiring between solar cell modules with a system voltage below 1500V DC, between solar cell modules and junction boxes, and between junction boxes and power controllers

TECHNICAL INDICATORS

Rated voltage: 1500V(DC)
 Test voltage: AC6.5KV/5min(20°C±0.5) or
 DC15KV/5min(20°C±0.5) without breakdown
 Ambient temperature: -40°C~+90°C
 Conductor maximum temperature: 125°C
 Expected lifespan: 25years
 Bending radius: ≥4D

STRUCTURE

Conductor: bare copper conductor in JCS 4517
 Insulation: 125°C irradiation cross-linked low-smoke
 halogen-free flame-retardant polyolefin
 Sheath: 125°C radiation cross-linked low-smoke
 halogen-free flame-retardant polyolefin
 Color: red or black

CHARACTERISTICS COMPLIANCE

Fire resistance: JISC 3665-1-2
 anti-UV: JISK 7350
 Compliance with certification: ROHS S-JET
 Executive standard: JCS 4517

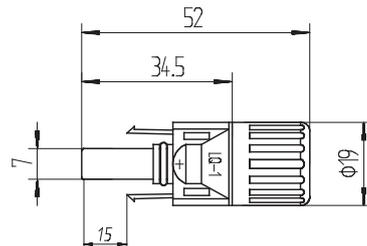
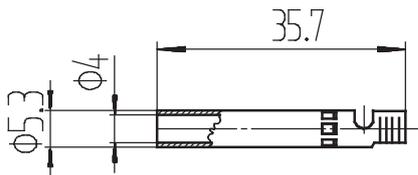
Structural dimensions and parameters

Model	Specification (mm ²)	Insulation Nominal Thickness (mm)	Sheath Nominal Thickness (mm)	Approximate outer diameter (mm)
PV-CQ-2	2.0	0.7	1.0	5.6
PV-CQ-4	3.5	0.7	1.1	6.2
PV-CQ-6	5.5	0.7	1.2	6.8
PV-CQ-8	8.0	0.7	1.2	7.4

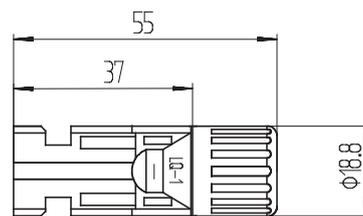
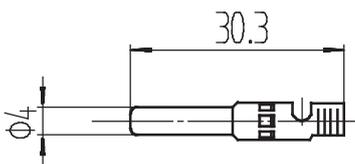
PRODUCT CHARACTERISTICS

Halogen-free and low-smoke material, in line with environmental protection requirements
 UV, ozone and weather resistance
 Flame retardant, cut resistance, penetration resistance
 Low temperature resistance, high temperature resistance, hydrolysis resistance
 Compatible with all common connectors

MC4 Solar PV Connector for Solar System



Male

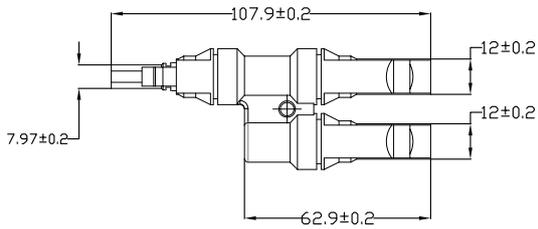


Female

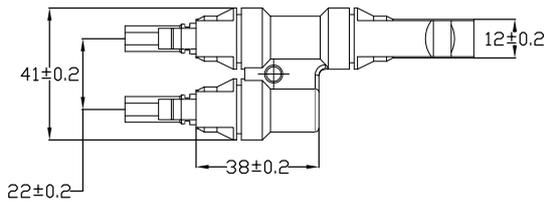
Product Standard: DIN V VDE V 0126-3/12.06, UL 6703 standard

Rated voltage	1000V
Rated Current	22A(2.5mm ²) /30A (4/6mm ²)
Contact resistance of plug connectors	≤ 0.5m
Dia. of pin or socket	4mm
Protection degree(Mated/unmated)	IP67/IP2X
Operating temperature	-40°C~+85°C
Insulation material	PC/PA/PPO/TPE
Contact material	Silver plated copper
Locking system	Snap in
Cable cross section on request	2..5/4.0/6.0mm ²

MC4 Solar PV T-branch Connector for Solar System



Male

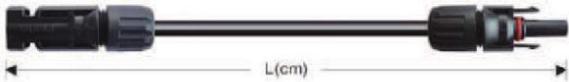


Female

Product Standard: DIN V VDE V 0126-3/12.06, UL 6703 standard

Rated voltage	1000V
Rated Current	22A(2.5mm ²)/30A(4/6mm ²)
Contact resistance of plug connectors	≤ 0.5m
Dia. of pin or socket	4mm
Protection degree(Mated/unmated)	IP67/IP2X
Operating temperature	-40°C~+85°C
Insulation material	PC/PA/PPO/TPE
Contact material	Silver plated copper
Locking system	Snap in
Cable cross section on request	MC4

10 Assembly Types for MC4/MC3 Solar PV Cables



Assembly type No.1



Assembly type No.2



Assembly type No.3



Assembly type No.4



Assembly type No.5



Assembly type No.6



Assembly type No.7



Assembly type No.8



Assembly type No.9



Assembly type No.10

Product Standard: DIN V VDE V 0126-3/12.06, UL 6703 standard

Rated voltage	1000V
Rated Current	22A(2.5mm ²)/30A(4/6mm ²)
Contact resistance of plug connectors	≤ 0.5m
Dia. of pin or socket	MC4 4mm/MC3 3mm
Protection degree(Mated/unmated)	IP67/IP2X
Operating temperature	-40°C~+85°C
Insulation material	PC/PA/PPO/TPE
Contact material	Silver plated copper
Locking system	Snap in
Cable cross section on request	MC4 2.5/4.0/6.0mm ² /MC3 2.5/4.0mm ²

Photovoltaic Line Case



Queensland of Australia Solar Farm 352 MW



American 150MW Solar Farm



Chile 571MW Solar Farm



Latin America 254MW Solar Farm

TRANSMISSION TO WORLD



Germany 270 MW Solar Farm



Thailand 45MW Floating Solar Farm

- Xinyi Beihai West Field 300Wmp Fishing and Photovoltaic Complementary Project
- Kaiping Jinji 150Wmp parity photovoltaic power generation project
- Qingyang County Hewu New Energy Technology Co., Ltd. 70Wmp fishery-photovoltaic complementary photovoltaic project (phase I)
- 60Wmp Fishing and Photovoltaic Integrated Photovoltaic Parity Grid Project in Dougou Town, City
- Haikou Qiongsan Xinyi 300Wmp Agricultural (Fishing) Photovoltaic Complementary Tourism Park Project;
- Heshan City Shuanghe Town 50Wmp Agricultural Photovoltaic Power Generation Project
- Wuwei Rihaohe store 50Wmp fishery and photovoltaic complementary project
- Jinta Haoming 300Wmp photovoltaic power generation project
- Huozhou 100Wmp photovoltaic power generation project
- Sinopec Tianjin Branch 60Wmp distributed photovoltaic power generation project
- Luoyang Wutou Ground Photovoltaic Power Station 50Wmp

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