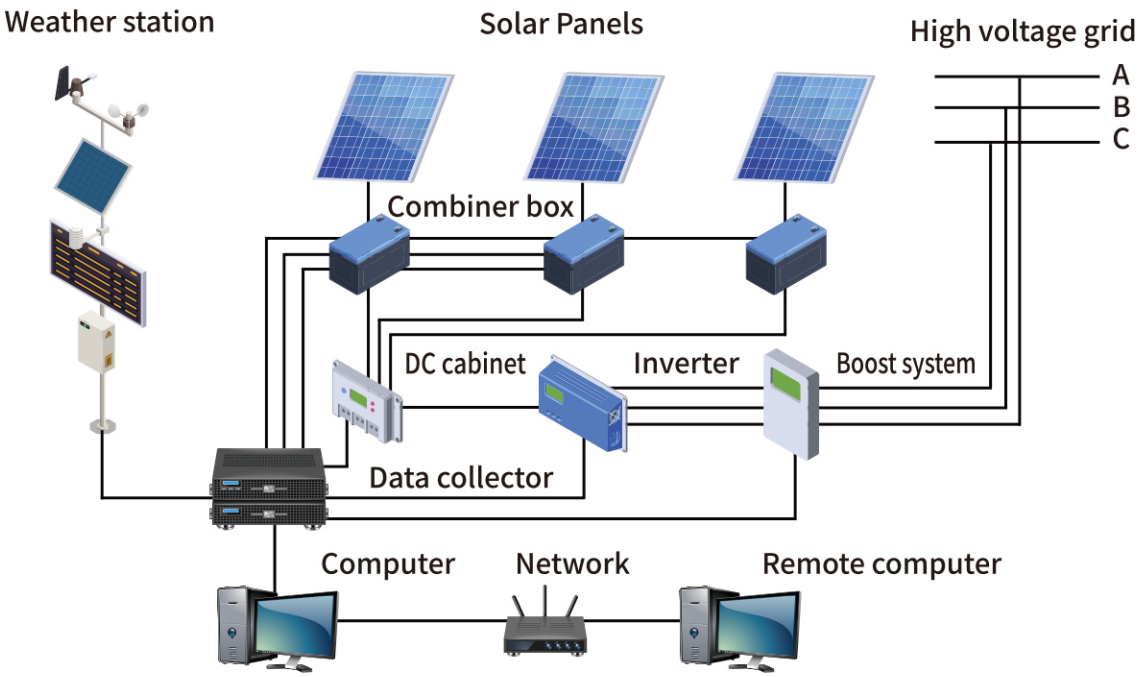
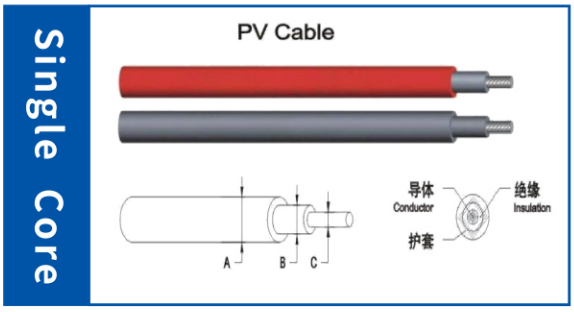
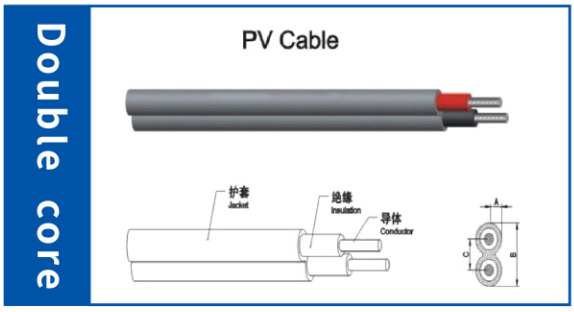
Photovoltaic Power System



Single Core



Double core



CONNECTOR

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	
Copper conductor	Laying in the air	Ambient temperature °C	Conversion factor
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