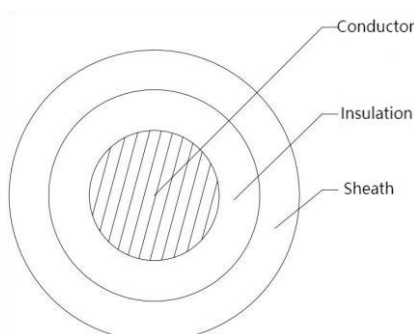


Cables for photovoltaic systems

- **Product Structure Diagram:**



- **Product Standards:**

2Pfg1169/08:2007 Cables for photovoltaic systems

EN 50618:2014 Cables for photovoltaic systems

- **Usage Characteristics:**

Operating temperature range: -40°C to 90°C;

Maximum operating temperature of the conductor during normal operation: 120°C;

Maximum temperature of the conductor during a short circuit: 200°C, with a maximum duration of 5 seconds; The ambient temperature during cable installation should not be lower than 0°C;

Cable bending radius: not less than 6 times the outer diameter of the cable.

- **Model Specifications:**

Model	Number of cores	Nominal Cross Section mm ²
PV1-F	1	1.5~35
H1Z2Z2-K	1	1.5~240

- **Rated Voltage:**

Model	AC U ₀ /U	DC
PV1-F	0.6/1kV	1.8 kV (between conductors, system not grounded, circuit unloaded)
H1Z2Z2-K	1.0/1.0kV	DC 1.5kV (between conductors, system not grounded, circuit unloaded)

If the cable is used in a DC system, the rated voltage between two conductors shall not exceed 1.5 times the rated voltage U. In a single-phase grounded DC system, this value shall be multiplied by 0.5.

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● **PV1-F Solar Cable Construction Specification**

Spec	Max. single wire diameter inside the conductor mm	Min. thickness of insulation mm	Min. thickness of jacket mm	Nominal overall diameter mm	Nominal weight Kg/km
1×1.5	≤0.26	≥0.5	≥0.5	4.5	37.5
1×2.5	≤0.26	≥0.5	≥0.5	5.0	51.3
1×4	≤0.31	≥0.5	≥0.5	5.5	67.2
1×6	≤0.31	≥0.5	≥0.5	6.1	91.8
1×10	≤0.41	≥0.5	≥0.5	7.5	144.2
1×16	≤0.41	≥0.5	≥0.5	8.8	211.8
1×25	≤0.41	≥0.5	≥0.5	10.6	315.8
1×35	≤0.41	≥0.5	≥0.5	12.1	426.4

● **H1Z2Z2-K Photovoltaic Cable Structural Parameters**

Spec	Max. single wire diameter inside the conductor mm	Min. thickness of insulation mm	Min. thickness of jacket mm	Nominal overall diameter mm	Nominal weight Kg/km
1×1.5	≤0.26	≥0.53	≥0.58	≤5.4	39.8
1×2.5	≤0.26	≥0.53	≥0.58	≤5.9	53.9
1×4	≤0.31	≥0.53	≥0.58	≤6.6	70.0
1×6	≤0.31	≥0.53	≥0.58	≤7.4	95.0
1×10	≤0.41	≥0.53	≥0.58	≤8.8	148.0
1×16	≤0.41	≥0.53	≥0.67	≤10.1	220.8
1×25	≤0.41	≥0.71	≥0.75	≤12.5	334.2
1×35	≤0.41	≥0.71	≥0.86	≤14.0	455.5
1×50	≤0.41	≥0.80	≥0.92	≤16.3	601.6
1×70	≤0.51	≥0.89	≥0.92	≤18.7	835.8
1×95	≤0.51	≥0.89	≥1.01	≤20.8	1110.6
1×120	≤0.51	≥0.98	≥1.01	≤22.8	1369.5

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1×150	≤0.51	≥1.16	≥1.09	≤25.5	1676.1
1×185	≤0.51	≥1.34	≥1.26	≤28.5	2092.5
1×240	≤0.51	≥1.43	≥1.35	≤32.1	2685.9

● **PV1-F Electrical Parameters**

Specification	Maximum DC Resistance of Conductor at 20°C (Ω/km)	Reference Current-Carrying Capacity (A)		
		In Air	On Ground	On Ground with Other Adjacent Cables
1×1.5	≤13.7	30	29	24
1×2.5	≤8.21	41	39	33
1×4	≤5.09	55	52	44
1×6	≤3.39	70	67	57
1×10	≤1.95	98	93	79
1×16	≤1.24	132	125	107
1×25	≤0.795	176	167	142
1×35	≤0.565	218	207	176

● **H1Z2Z2-K Photovoltaic Cable Electrical Parameters**

Specification	Maximum DC Resistance of Conductor at 20°C (Ω/km)	Reference Current-Carrying Capacity (A)		
		In Air	On Ground	On Ground with Other Adjacent Cables
1×1.5	≤13.7	30	29	24
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1×10	≤1.95	98	93	79
1×16	≤1.24	132	125	107
1×25	≤0.795	176	167	142
1×35	≤0.565	218	207	176
1×50	≤0.393	276	262	221
1×70	≤0.277	347	330	278
1×95	≤0.210	416	395	333
1×120	≤0.164	488	464	390

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1×150	≤0.132	566	538	453
1×185	≤0.108	644	612	515
1×240	≤0.0817	775	736	620

● **Insulation and Sheathing Performance Requirements**

Sequence Number	Test Item	Unit	Insulation		Sheath	
			PV1-F	H1Z2Z2-K	PV1-F	H1Z2Z2-K
1	Mechanical Properties					
1.1	Original Properties					
	--Tensile Strength, Minimum Median Value	N/m m ²	6.5	8.0	8.0	8.0
	--Elongation at Break, Minimum Median Value	%	125	125	125	125
1.2	Mechanical Properties After Aging					
	--Tensile Strength, Rate of Change	%	-30 ^a	-30 ^a	-30 ^a	-30 ^a
	--Elongation at Break, Rate of Change	%	-30 ^a	-30 ^a	-30 ^a	-30 ^a
1.3	Thermal Extension					
	--Maximum Elongation Under Load	%	100	100	100	100
	--Maximum Permanent Elongation After Cooling	%	25	25	25	25
a) Positive rate of change is not specified.						



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