

PV Wires

Photovoltaic Wires Catalogue



EN H1Z2Z2-K

EN H1Z2Z2-K



Approvals

EN 50618 H1Z2Z2-K 1X1.5mm²~ 35mm²(Multiple color)

Cable Structure

Conductor: Annealed soft tin copper
Insulation: Electron-beam cross-linked polyolefin
Jacket: Electron-beam cross-linked polyolefin

Technical data

Rated voltage: AC U₀/U=1000/1000VAC,1500VDC
Voltage test on completed cable: 6.5kV AC,15kV DC,5min
Ambient temperature:-40°C up to +90°C
Max.Temperature at conductor:+120°C
Service life: 25years(-40°C up to+90°C)
The permitted short-circuit-temperature refer to a period of 5s is+200°C
Bending radius: $\geq 4 \times \Phi$ (D<8mm)
 $\geq 6 \times \Phi$ (D $\geq$ 8mm)
Test on acid and alkali resistance: EN60811-2-1
Cold bending test:EN60811-1-4
Damp heat test: EN60068-2-78
Sunlight resistance: EN60811-501, EN50289-4-17
O-zone resistance test of finished cable: EN50396
Flame test: IEC60332-1-2
Smoke density: IEC61034,EN50268-2
Halogen acid release: IEC670754-1 EN50267-2-1

The Structure of Cable

Refer to: EN50618

Cross section (mm ²)	Conductor construction (No./mm)	Conductor Stranded OD.max(mm)	Cable OD. (mm)	Max Cond Resistance (Ω/km,20°C)	Current carrying Capacity ** AT 60°C (A)
1.5	30/0.25	1.58	4.90	13.7	30
2.5	49/0.25	2.02	5.40	8.21	41
4.0	56/0.285	2.50	6.00	5.09	55
6.0	84/0.285	3.17	6.50	3.39	70
10	84/0.4	4.56	8.00	1.95	98
16	128/0.4	5.6	9.60	1.24	132
25	192/0.4	6.95	11.40	0.795	176
35	276/0.4	8.74	13.30	0.565	218

** The current-carrying capacity is under the situation of laying the single cable in air

TUV PV1-F



TUV PV1-F Double parallel SOLAR cable



Approvals

TÜV Rheinland 2pfg 1169 PV1-F 2X 1.5mm² ~ 16mm² (Multiple color)

Cable Structure

Conductor: Annealed soft tin copper

Insulation: Electron-beam cross-linked polyolefin

Jacket: Electron-beam cross-linked polyolefin

Technical data

Conductor: Tinned copper, according to VDE0295/IEC60228, class 5

Insulation: Polyolefin copolymer electron-beam cross-linked

Outer sheath: Polyolefin copolymer electron-beam cross-linked

Rated voltage: AC U₀/U=1000/1000VAC, ISOVDC

Voltage test on finished cable :6.5kV AC, 15kV DC, 5min

Ambient temperature:-40°C up to +90°C

Conductor maximum temperature:+ 120°C

Service life: >25years(-40°C up to+90°C

The permitted short-circuit-temperature refer to a period of 5s is+200°C

Bending radius: ≥ 4xΦ (D<8mm)

≥6xΦ (D≥8mm)

Acid and alkali resistance test: EN60811-2-1

Cold bending test: EN60811-1-4

Damp heat test: EN60068-2-78

Sunlight resistance:EN60811-501,EN50289-4-17

O-zone resistance test of finished cable:EN50396

Fire test:EN60332-1-2

Smoke density:IEC61034,EN50268-2

Assessment of halogens for all non-metallic material:

IEC670754-1 EN50267-2-1

The Structure of Cable

Refer to: EN50618

Core*Cross section(mm ²)	Conductor construction (No./mm)	Insulation Ave.Thic.(mm)	Sheath Ave.Thic.(mm)	Cable outside diameter minimum outer diameter(mm)	Max Cond Resistance (Ω/km,20°C)	** Current carrying Capacity AT 60°C (A)
2*1.5	30/0.25	0.70	0.80	5.00*10.30	13.7	30
2*2.5	49/0.25	0.70	0.80	5.20*10.80	8.21	41
2*4.0	56/0.285	0.70	0.80	5.50*11.20	5.09	55
2*6.0	84/0.285	0.70	0.80	6.20*12.60	3.39	70
2*10	84/0.4	0.70	0.80	7.50*15.20	1.95	98
2*16	128/0.4	0.70	0.80	9.60*19.70	1.24	132

** The current-carrying capacity is under the situation of laying the single cable in air

UL 4703 PV

UL 4703 PV Wire



Approvals

UL Approvals UL 4703 600V

Cable Structure

Conductor: Annealed soft tin copper
Insulation: Electron-beam cross-linked material
Jacket: Electron-beam cross-linked material

Technical data

Nominal voltage: 600V AC
Voltage test on completed cable: 3.0kVAC, 1min
Ambient temperature: -40°C up to +90°C
Max. Temperature at conductor: +120°C
The expected period of use is 25 years (Ambient temperature: -40 °C up to +90°C)

The permitted short-circuit-temperature refer to a period of 5s is +200°C
Bending radius: $\geq 4 \times \Phi$ ($D < 8\text{mm}$)
 $\geq 6 \times \Phi$ ($D \geq 8\text{mm}$)

Relative permittivity: UL854
Cold bending test: UL854
Weathering/UV-resistance: UL2556
Fire test: UL1581VW-1
Heat distortion test:
UL1581-560 ($121 \pm 2^\circ\text{C}$) $\times 1\text{h}$, 2000g, $\leq 50\%$

The Structure of Cable

Refer to: UL4703

Cross section (mm ²)	Conductor construction (No./mm)	Conductor Stranded OD.max(mm)	Cable OD (mm)	Max Cond Resistance (Ω/km, 20°C)	** Current carrying Capacity AT 60°C (A)
0.823	16/0.254	1.18	4.25	23.20	16
1.31	26/0.254	1.49	4.55	14.60	26
2.08	41/0.254	1.88	4.95	8.96	34
3.31	65/0.254	2.36	5.40	5.64	46
5.26	105/0.254	3.00	6.20	3.546	61
8.37	168/0.254	4.10	7.90	2.23	82
13.3	266/0.254	5.20	9.80	1.403	110
21.1	420/0.254	6.50	11.50	0.882	149
33.6	665/0.254	8.25	13.30	0.5548	209

** The current-carrying capacity is under the situation of laying the single cable in air

UL 4703 PV

UL 4703 PV Wire



Approvals

UL Approvals UL4703 1000V

Cable Structure

Conductor: Annealed soft tin copper
Insulation: Electron-beam cross-linked material
Jacket: Electron-beam cross-linked material

Technical data

Nominal voltage: 1000V AC
Voltage test on completed cable: 6.0kV AC, 1min
Ambient temperature: -40°C up to +90°C
Max. Temperature at conductor: +120°C
The expected period of use is 25 years (Ambient temperature: -40°C up to +90°C)
The permitted short-circuit temperature refer to a period of 5s is +200°C
Bending radius: $\geq 4 \times \Phi$ ($D < 8\text{mm}$)
 $\geq 6 \times \Phi$ ($D \geq 8\text{mm}$)
Relative permittivity: UL854
Cold bending test: UL854
Weathering/UV-resistance: UL2556
Fire test: UL1581 VW-1
Heat distortion test:
UL1581-560 ($121 \pm 2^\circ\text{C}$) $\times 1\text{h}$, 2000g, $\leq 50\%$

The Structure of Cable

Refer to: UL4703

Cross section (mm ²)	Conductor construction (No./mm)	Conductor Stranded OD.max (mm)	Cable OD. (mm)	Max Cond Resistance (Ω/km , 20°C)	** Current carrying Capacity AT 60°C (A)
0.823	16/0.254	1.18	5.00	23.20	16
1.31	26/0.254	1.49	5.30	14.60	26
2.08	41/0.254	1.88	5.70	8.96	34
3.31	65/0.254	2.36	6.20	5.64	46
5.26	105/0.254	3.00	6.90	3.546	61
8.37	168/0.254	4.10	8.40	2.23	82
13.3	266/0.254	5.20	10.30	1.403	110
21.1	420/0.254	6.50	11.70	0.882	149
33.6	665/0.254	8.25	13.50	0.5548	209

** The current-carrying capacity is under the situation of laying the single cable in air