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Photovoltaic Cables

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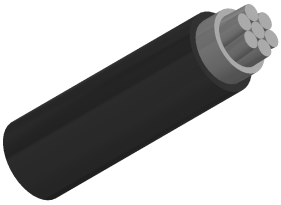
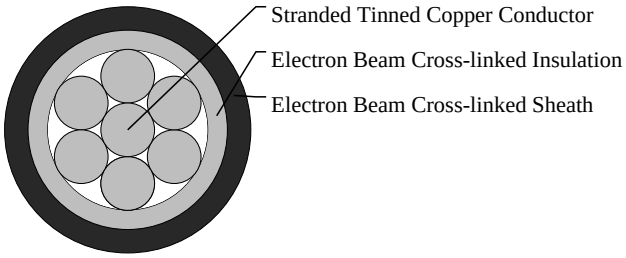
H1Z2Z2-K Photovoltaic Cables

PHOTOFLEX Photovoltaic Cable H1Z2Z2-K 1C35





APPLICATIONS

These cables are designed for connecting photovoltaic system components inside and outside of buildings and equipment with high mechanical requirements and extreme weather conditions.

STANDARDS

DIN EN 50618 (H1Z2Z2-K) (formerly PV-1F according to 2PfG 1169/08.2007)
Flame retardant according to EN 50265-2-1, IEC 60332-1, VDE 0482-332-1-2, DIN EN 60332-1-2
Low smoke emission according to EN 61034-2 (Light Transmittance ≥60%)
Halogen free according to EN 50525-1, Annex B
Low corrosivity of gases according to EN 50267-2-2, IEC 60754-2

APPROVALS

TUV Certification (B 18 01 98200 015)

CABLE CONSTRUCTION

Conductor: Stranded tinned copper conductor per DIN VDE 0295 and IEC 60228 Class 5.
Insulation: Electron beam cross-linked, halogen free and flame retardant compound.
Sheath: Electron beam cross-linked, LSZH and flame retardant compound, Black.

PHYSICAL AND THERMAL PROPERTIES

Thermal Properties
Maximum Voltage: 1.2KV (AC), 1.8KV (DC)
Ambient Temperature: -40℃ ~ +90℃
Maximum Temperature At Conductor: 120℃ (20000h) according to IEC/EN 60216-1
Short Circuit Temperature: 250℃/5 sec
Thermal Endurance Test: According to EN 60216-2 (temperature index +120° C)
Damp-Heat Resistance: According to EN 50618, Table 2with 85% humidity(test acc. to EN 60068-2-78)

Electrical Properties

Rated Voltage U0/U: 1/1 kV AC; 1.5/1.5 kV DC
Maximum Permitted DC Voltage: 1.8 kV DC (conductor/conductor, non earthed system, circuit not under load)
Insulation Resistance: 1000 MΩ-km

Spark Test: 6000 Vac (8400 Vdc)
Voltage Withstand: 6500 Vac for 5 min

MECHANICAL PROPERTIES

Minimum Bending Radius: 4×OD (fixed), 5×OD (flexing)
Dynamic Penetration: According to Acc. to EN 50618, Annex D,Meets requirements of EN 50618.
Tensile Strength And Elongation Of Insulation And Jacket: 250℃
Anticipated Period Of Use: 25 years
Ovality:≤15%

Chemical Properties
Ozone Resistance: According to EN 60811-403(25℃,24h,(250 to 300) × 10−4%) ;Method B: EN 50396(40℃,72h,55%RH, (200 × 10−6%)
Weathering- UV Resistance(Resistance on sheath): tensile strength and elongation at break after 720h (360 Cycles) of exposure to UV lights (acc. to EN 50289-4-17, Method A According to HD 605/A1)
Ammoniac resistant
Very good resistance to oils and chemicals
High wear and robust, abrasion resistant

DIMENSION AND PARAMETERS

No. of Cores × Cross-sectional Area	AWG Size	Conductor Stranding	Conductor Diameter	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight	Max. Conductor Resistance at 20 °C	Max. Insulation Resistance at 20 °C	Max. Insulation Resistance at 90 °C	Current Carrying Capacity (Single cable free in air)	Current Carrying Capacity (Single cable on surfaces	Current Carrying Capacity (2 loaded cables adjacent on surfaces)
No.×mm²			mm	mm	mm	mm	kg/km	MΩ × km	MΩ × km	MΩ × km	A	A	A
1 x 35	2	279/0.4	7.71	0.9	1.1	14	400	0.565	287	0.287	218	207	176