



Nexans Ref.: 10287658

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CONTACT

Building Products Information
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Nexans PV H1Z2Z2-K SUN PLUS cables (1.5kV DC) are designed to comply with the international standards of the solar plants. They are dedicated to the photovoltaic system direct current (D.C.) side with a nominal D.C. voltage of 1.5 kV and a maximum D.C. voltage of 1.8 kV. These cables are suitable for permanent outdoor long-term use, under variable and harsh climate conditions. They are designed and tested to operate at a normal maximum conductor temperature of 90°C and for 20,000 hours up to 120°C. Therefore, the expected period use is 30 to 40 years under normal usage conditions (lifetime acc. to Arrhenius-Diagram).

STANDARDS

Product EN 50618; IEC 62930

Test EN 60332-1-2; EN 61034-2

APPLICATION

Nexans PV H1Z2Z2-K SUN PLUS Cable (1.5kV DC)



Conductor flexibility
Flexible class 5



Halogen free
IEC 60754-1; IEC 60754-2



Rated Voltage U₀/U_m
1.0/1.0 (1.2) kV AC
1.5/1.5 (1.8) kV DC



Mechanical
resistance to
impacts



Operating temp.
-40 ... 90 °C



Max. conductor
temp. in service
120 °C



Gases corrosivity
IEC 60754-2



Smoke density
IEC 61034-2

CHARACTERISTICS

Construction characteristics

Conductor material	Tin Coated Copper Class 5 acc. To EN 60228
Conductor flexibility	Flexible class 5
Insulation	Cross-linked halogen free rubber
Outer sheath	Cross-linked halogen free rubber
Sheath colour	Red
Colour	Red
Halogen free	IEC 60754-1; IEC 60754-2
Conductor shape	Circular

Dimensional characteristics

Number of cores	1
Conductor cross-section	4 mm ²
Nominal outer diameter	5.6 mm
Approximate net weight	60 kg/km
Minimum outer diameter	5.2 mm
Maximum outer diameter	6.0 mm
Conductor diameter	2.4 mm
Nominal insulation thickness	- mm
Nominal outer sheath thickness	- mm
Outer Diameter	- mm

Electrical characteristics

Maximum permissible nominal current	- A
Rated Voltage U ₀ /U (U _m)	1.0/1.0 (1.2) kV AC 1.5/1.5 (1.8) kV DC
Max. DC resistance of the conductor at 20°C	- Ohm/km
Maximum DC resistance of the conductor at 90°C	- Ohm/km
Perm current rating in air 30°C	- A
Permissible current rating in air 60°C	55 A
Permissible current rating on a tray 60°C	52 A
Permissible short circuit current conductor 1s	- kA

Mechanical characteristics

Bending	100 000 cycles in reverse bending
Frequent torsion	100 000 cycles
Mechanical resistance to impacts	
Tensile strength	50 N

Usage characteristics

Operating temperature, range	-40 ... 90 °C
Max. conductor temperature in service	120 °C
Packaging	Drum
Short-circuit max. conductor temperature	- °C
Gases corrosivity	IEC 60754-2
Smoke density	IEC 61034-2
Ozone resistance	EN 50396:2005
Weather resistance	Excellent

Usage characteristics

Flame retardant	IEC 60332-1-2
Corrosive or Polluting Substances	
Length	500 m
Minimum Bend Radius - Installed	- mm
Outdoor Use	Condition AN 3 (high solar radiation), permanent according to EN 50565-1:2014
Resistance to vibrations	
RoHS conform	RoHS 2011/65/EU
Thermal endurance	IEC 60216-1-2
U.V resistance	EN 50289-4-17 method A, for 720h. Nexans prestige test 4000h
Water proof	Passed 100 days 50°C water immersion test of EN 50525-2-21 annex D and E

PV

