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

ENERGYFLEX EN50618 1x4 ONE Stripe RED D500

Nexans Ref.: 20056098-927-05
Country Ref.: 0505315
EAN 13: 3427640026301

Energyflex® cables 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

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Conductor flexibility
Flexible class 5


Rated Voltage Uo/U (Um)
1.0/1.0 (1.2) kV AC
1.5/1.5 (1.8) kV DC


Mechanical resistance to impacts
Condition AG 2 (medium severity) acc.to HD 60364-5-52


Operating temp.
-40 ... 90 °C


Max.conductor temp.in service
120 °C


Weather resistance
Excellent


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

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CHARACTERISTICS

Construction characteristics	
Conductor material	Tin Coated Copper Class 5 acc. To EN 60228
Conductor flexibility	Flexible class 5
Insulation	-
Outer sheath	-
Sheath colour	Black with red stripe
Colour	Black
Conductor shape	Circular
Dimensional characteristics	
Number of cores	1
Conductor cross-section	4 mm²
Nominal outer diameter	5.6 mm
Approximate net weight	61 kg/km
Minimum outer diameter	5.3 mm
Maximum outer diameter	5.9 mm
Conductor diameter	2.5 mm
Nominal insulation thickness	0.7 mm
Nominal outer sheath thickness	0.8 mm
Outer Diameter	- mm
Electrical characteristics	
Maximum permissible nominal current	39 A
Rated Voltage Uo/U (Um)	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	5.09 Ohm/km
Maximum DC resistance of the conductor at 90°C	5.880 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	0.5 kA
Mechanical characteristics	
Bending	100 000 cycles in reverse bending
Frequent torsion	100 000 cycles
Mechanical resistance to impacts	Condition AG 2 (medium severity) acc.to HD 60364-5-52
Tensile strength	- N
Usage characteristics	
Operating temperature, range	-40 ... 90 °C
Max. conductor temperature in service	120 °C
Packaging	Drum
Short-circuit max. conductor temperature	250 °C
Ozone resistance	EN 50396:2005
Weather resistance	Excellent
Corrosive or Polluting Substances	Condition AF 3 (intermittent accidential) acc. to HD 60364-5-52
Length	- m
Minimum Bend Radius - Installed	17.7 mm

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Usage characteristics	
Outdoor Use	Condition AN 3 (high solar radiation), permanent according to EN 50565-1:2014
Resistance to vibrations	Condition AH 3 (sever industrial conditions) acc. to HD 60364-5-52
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
Fire safety characteristics	
Gases corrosivity	IEC 60754-2
Smoke density	-
Flame retardant	-
Halogen free	IEC 60754-1; IEC 60754-2

PV