ENERGYFLEX PV H1Z2Z2-K (1.5kV DC)

PV H1Z2Z2-K Energyflex 1x6mm² NR



Reference: 10189495
EAN 13: 3427640020217

FIRE PERFORMANCE CLASS

D_{ca}

D_{ca}-s2,d2,a1

CONTACT

Market information
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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

DESIGN

Single core fire resistance solar cable with low smoke, halogen free, crosslinked insulation and sheath.

1. Conductor
Stranded tinned copper wires class 5 acc. IEC 60228

2. Insulation
Cross-linked halogen-free rubber
Colour: white

3. Sheath
Cross-linked halogen-free fire retardant rubber
Colour: black

Example of marking: ENERGYFLEX® USE < HAR > H1Z2Z2-K 62930 IEC 131 1 x S mm² 1.5/1.5 (1,8) kV DC lynxeo 269 MADE IN FRANCE Dca

FEATURES

ENERGYFLEX® cables 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. Cable suitable to be used with Class II equipment.

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).

ENERGYFLEX® cables have a suitable behaviour in water : tests of Annexes D and E of H07RN8F AD8 cables (100 days at 50 °C under 1 kV AC without breakdown), and additional test of 1,5 year in hot water (85°C) under 1 kV DC without breakdown. They are suitable for submerged installations with a maximum cumulated immersion period of 6 months / year.

Conductor flexibility	Halogen free	Rated Voltage Uo/U (Um)	Mechanical resistance to impacts	Operating temp.	Gases corrosivity	Smoke density	Weather resistance
Flexible class 5	**IEC 60754-1; IEC 60754-2**	**1.0/1.0 (1.2) kV AC 1.5/1.5 (1.8) kV DC**	**Condition AG 2 (medium severity) acc.to HD 60364-5-52**	**-40 ... 90 °C**	**IEC 60754-2**	**IEC 61034-1-2**	**Excellent**

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Lynxeo is indicative only and shall not be binding on Lynxeo or be treated as constituting a representation on the part of Lynxeo.

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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	Black (blue or red stripe on request)
Colour	Black
Halogen free	IEC 60754-1; IEC 60754-2
Conductor shape	Circular
Dimensional characteristics	
Number of cores	1
Conductor cross-section	6 mm²
Nominal outer diameter	6.0 mm
Approximate net weight	76 kg/km
Minimum outer diameter	5.8 mm
Maximum outer diameter	6.4 mm
Approximate weight	80 kg/km
Conductor diameter	2.9 mm
Nominal conductor diameter	2.9 mm
Nominal insulation thickness	0.7 mm
Nominal outer sheath thickness	0.8 mm
Outer Diameter	- mm
Electrical characteristics	
Maximum permissible nominal current	50 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	3.39 Ohm/km
Maximum DC resistance of the conductor at 90°C	3.930 Ohm/km
Perm current rating in air 30°C	- A
Permissible current rating in air 60°C	70 A
Permissible current rating on a tray 60°C	67 A
Permissible short circuit current conductor 1s	0.8 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	90 N
Usage characteristics	
Operating temperature, range	-40 ... 90 °C
Packaging	Drum
Short-circuit max. conductor temperature	250 °C
Gases corrosivity	IEC 60754-2
Smoke density	IEC 61034-1-2
Ozone resistance	EN 50396

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Usage characteristics	
Weather resistance	Excellent
Flame retardant	IEC 60332-1
Corrosive or Polluting Substances	Condition AF 3 (intermittent accidential) acc. to HD 60364-5-52
Fire retardant	EN 50575
Length	- m
Maximum operating temperature	120 °C
Minimum Bend Radius - Installed	19.2 mm
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	AD8

LIST OF CERTIFICATES

NF EN 50618: BUREAU VERITAS LCIE licence 662568
IEC 62930: BUREAU VERITAS Certificate of conformity 158416-729944
Construction Product Regulation (CPR) Performance: Dca-s2,d2,a1

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