



### CONTACT

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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.

### 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 mm<sup>2</sup> 1.5/1.5 (1,8) kV DC lynxéo 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.



Halogen free  
IEC 60754-1; IEC 60754-2



Rated Voltage U<sub>0</sub>/U  
(Um)  
1.0/1.0 (1.2) kV AC  
1.5/1.5 (1.8) kV DC



Operating temp.  
-40 ... 90 °C



Gases corrosivity  
IEC 60754-2



Smoke density  
IEC 61034-1-2



Weather resistance  
Excellent



Flame retardant  
IEC 60332-1



Fire retardant  
EN 50575

## CHARACTERISTICS

## Construction characteristics

Halogen free	IEC 60754-1; IEC 60754-2
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## Dimensional characteristics

Number of cores	1
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## Electrical characteristics

Rated Voltage U <sub>o</sub> /U (U <sub>m</sub> )	1.0/1.0 (1.2) kV AC 1.5/1.5 (1.8) kV DC
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## Usage characteristics

Operating temperature, range	-40 ... 90 °C
Packaging	Drum
Gases corrosivity	IEC 60754-2
Smoke density	IEC 61034-1-2
Ozone resistance	EN 50396
Weather resistance	Excellent
Flame retardant	IEC 60332-1
Fire retardant	EN 50575
Maximum operating temperature	120 °C
U.V resistance	EN 50289-4-17 method A, for 720h. Nexans prestige test 4000h
Water proof	AD8

## DIMENSIONAL VALUES

Cross section [mm <sup>2</sup> ]	Nom. cond. diam. [mm]	Nom. outer sheath thick. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
4	2.5	0.8	5.9	62
6	2.9	0.8	6.4	80
10	4	0.8	7.8	127

## ELECTRICAL VALUES

Cross section [mm <sup>2</sup> ]	short circuit conductor 1s [kA]	Perm. current rat. air 60°C [A]	Perm. current rating tray 60°C [A]	Max. DC Resist. Cond. 20°C [Ohm/km]
4	0.5	55	52	5.09
6	0.8	70	67	3.39
10	1.3	98	93	1.95

## 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