



## CONTACT

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## Outstanding water proof performance

The ENERGYFLEX® WR patented solar cable is designed to withstand humid or immersed installations over its lifetime.

## STANDARDS

**Product** EN 50618; IEC 60228; IEC 62930

## DESIGN

Single core water resistant 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® IWR USE < HAR > H1Z2Z2-K 62930 IEC 131 PV1500-WR 1 x S mm<sup>2</sup> 1.5/1.5 (1,8) kV DC lynxéo 269 HALOGEN FREE LOW SMOKE Dca

## FEATURES

ENERGYFLEX® WR 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® WR cables have been put under testing protocol TÜV 2PfG 2750/09.20 - Requirements for cables with improved water resistance for installation in photovoltaic-systems 84 days (2,016 hours) / 90°C / 3,6 KV DC (vs 1,8 kV DC at 85°C during 240 hours for IEC 62930 / EN 50618 cables). They are suitable for installations immersed in water for 12 months / year.



Halogen free  
IEC 60754-1



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



Water proof  
AD8



Fire retardant  
EN 50575



Flame retardant  
IEC 60332-1-2



Smoke density  
IEC 61034-2



Gases corrosivity  
IEC 60754-2



Weather resistance  
Excellent

## CHARACTERISTICS

### Construction characteristics

Halogen free	IEC 60754-1
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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

Water proof	AD8
Fire retardant	EN 50575
Flame retardant	IEC 60332-1-2
Smoke density	IEC 61034-2
Gases corrosivity	IEC 60754-2
Weather resistance	Excellent
Ozone resistance	EN 50396
Thermal endurance	IEC 60216-1-2
Operating temperature, range	-40 ... 90 °C
Maximum operating temperature	120 °C

## DIMENSIONAL CHARACTERISTICS

Cross section [mm <sup>2</sup> ]	Nom. cond. diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
4	2.5	6.8	77
6	2.9	7.3	95
10	4	8.2	140

## ELECTRICAL CHARACTERISTICS

Cross section [mm <sup>2</sup> ]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rat. air 60°C [A]	Perm. current rating tray 60°C [A]	short circuit conductor 1s [kA]
4	5.09	55	52	0.5
6	5.09	50	67	0.8
10	3.39	98	93	1.4

## 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