



**CONTACT**

Market information  
industryprojects.business@lynxéogroup.com

**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

**KEY CHARACTERISTICS**

Electrical characteristics	
Rated Voltage U <sub>0</sub> /U (U <sub>m</sub> )	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
Permissible current rating in air 60°C	98 A
Permissible current rating on a tray 60°C	93 A
Permissible short circuit current conductor 1s	1.4 kA

**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.



Conductor flexibility  
Flexible class 5



Halogen free  
IEC 60754-1



Rated Voltage U<sub>0</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

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

## CHARACTERISTICS

### Construction characteristics

Construction type	
Conductor material	Tin plated copper
Conductor flexibility	Flexible class 5
Insulation	Cross-linked halogen free rubber
Outer sheath	Cross-linked halogen free rubber
Halogen free	IEC 60754-1

### Dimensional characteristics

Conductor cross-section	10 mm <sup>2</sup>
Nominal conductor diameter	4 mm
Nominal insulation thickness	- mm
Nominal outer sheath thickness	- mm
Minimum outer diameter	7.1 mm
Nominal outer diameter	- mm
Maximum outer diameter	8.2 mm
Approximate weight	140 kg/km

### 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
Operating Voltage V <sub>o</sub> DC	1500 V
Max. DC resistance of the conductor at 20°C	3.39 Ohm/km
Permissible current rating in air 60°C	98 A
Permissible current rating on a tray 60°C	93 A
Permissible short circuit current conductor 1s	1.4 kA

### 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
Short-circuit max. conductor temperature	250 °C

## 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