



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.

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 lynx^{eo} 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 4 months / year.



Halogen free
 IEC 60754-1; IEC 60754-2



Rated Voltage U₀/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

Dimensional characteristics

Number of cores 1

Electrical characteristics

Rated Voltage U₀/U (Um) 1.0/1.0 (1.2) kV AC 1.5/1.5 (1.8) kV DC

Usage characteristics

Operating temperature, range -40 ... 90 °C

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 Passed 100 days 50°C water immersion test of EN 50525-2-21 annex D and E



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IEC 60754-1; IEC
60754-2



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Fire retardant
EN 50575

DIMENSIONAL VALUES

Cross section [mm ²]	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 ²]	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