



CONTACT

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Solar 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 more than 25 years under normal usage conditions (lifetime acc. to Arrhenius-Diagram).

STANDARDS

Product EN 50618

APPLICATION

These state-of-art AC 1.0/1.0 and DC 1.5kV cross-linked cables offer exceptional performances, easy installation and long-term reliability for solar plant. They link photovoltaic panels for Utility-Scale solar plants or rooftops, and also connect them to the array box (if existing), or potentially to the inverter.

Designation: H1Z2Z2-K

Standard: EN 50618

Current Rating Temperature

Ambient temperature = 60°C

Maximum conductor temperature = 120°C

Water Resistant to AD8 According to EN 50525-2-21, Annex E

CONSTRUCTION

1. Conductor: Flexible tinned copper, class 5 according to IEC 60228
2. Insulation: Cross-linked halogen-free (XL-HFFR)
3. Outer Sheath: Cross-linked halogen-free (XL-HFFR)



Halogen free
IEC 60754-1



Rated Voltage U_0/U
(Um)
1.0/1.0 (1.2) kV AC
1.5/1.5 (1.8) kV DC



Flame retardant
IEC 60332-1-2



Operating temp.
-40 ... 90 °C



Smoke density
IEC 61034-2



Gases corrosivity
IEC 60754-2



Max. conductor temp. in
service
120 °C

CHARACTERISTICS

Construction characteristics

Conductor material	Tin Coated Copper Class 5 acc. To EN 60228
Insulation	Cross-linked (XL) HFFR acc. to EN 60811 and EN 60216-1-2
Halogen free	IEC 60754-1
Outer sheath	Cross-linked (XL) HFFR acc. to EN 60811 and EN 60216-1-2

Electrical characteristics

Rated Voltage U ₀ /U (U _m)	1.0/1.0 (1.2) kV AC 1.5/1.5 (1.8) kV DC
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Usage characteristics

Flame retardant	IEC 60332-1-2
Operating temperature, range	-40 ... 90 °C
Short-circuit max. conductor temperature	250 °C
Smoke density	IEC 61034-2
Gases corrosivity	IEC 60754-2
Max. conductor temperature in service	120 °C

TECHNICAL PROPERTIES

Cross section [mm²]	Nom. insulation thick. [mm]	Nom. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rat. air 60°C [A]	Perm. current rating tray 60°C [A]
1.5	0.7	4.6	30	13.7	30	-
1.5	0.7	4.6	30	13.7	30	-
2.5	0.7	5.0	40	8.21	41	-
2.5	0.7	5.0	40	8.21	41	-
4	0.7	5.6	55	5.09	55	-
4	0.7	5.6	55	5.09	55	-
6	0.7	6.0	75	3.39	70	-
6	0.7	6.0	75	3.39	70	-
6	0.7	6.0	75	3.39	70	-
6	0.7	6.0	75	3.39	70	-
10	0.7	7.0	115	1.95	98	-
10	0.7	7.0	115	1.95	98	-
16	0.7	8.7	180	1.24	132	-
16	0.7	8.7	180	1.24	132	-
25	0.9	10.9	270	0.795	176	-
25	0.9	10.9	270	0.795	176	-
35	0.9	12.5	370	0.565	218	-
35	0.9	12.5	370	0.565	218	-
50	1.0	14.1	520	0.393	276	-
50	1.0	14.1	520	0.393	276	-
70	1.1	16.4	720	0.277	347	-
70	1.1	16.4	720	0.277	347	-

Cross section [mm ²]	Nom. insulation thick. [mm]	Nom. outer diam. [mm]	Approx. weight [kg/km]	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm. current rat. air 60°C [A]	Perm. current rating tray 60°C [A]
95	1.1	18.6	940	0.21	416	-
95	1.1	18.6	940	0.21	416	-
120	1.2	20.5	1180	0.164	488	-
120	1.2	20.5	1180	0.164	488	-
150	1.4	22.9	1470	0.132	566	-
150	1.4	22.9	1470	0.132	566	-
185	1.6	25.4	1820	0.108	644	-
185	1.6	25.4	1820	0.108	644	-
240	1.7	28.6	2380	0.0817	775	-
240	1.7	28.6	2380	0.0817	775	-
300	1.8	32.9	2990	0.0654	913	-
300	1.8	32.9	2990	0.0654	913	-
400	2.0	37.6	3790	0.0495	1098	-
400	2.0	37.6	3790	0.0495	1098	-

PRODUCT LIST

Nexans Ref.	Country Ref.	Name	Sheath colour
☎ 10577514	TR	H1Z2Z2-K 1x4 mm ²	Black
☎ 10577511	TR	H1Z2Z2-K 1x1,5 mm ²	Black
☎ 10577835	TR	H1Z2Z2-K 1x1,5 mm ²	Red
☎ 10577512	TR	H1Z2Z2-K 1x2.5 mm ²	Black
☎ 10577855	TR	H1Z2Z2-K 1x2.5 mm ²	Red
☎ 10575636	TR	H1Z2Z2-K 1x6 mm ²	Black
☎ 10577865	TR	H1Z2Z2-K 1x50 mm ²	Red
☎ 10577531	TR	H1Z2Z2-K 1x70 mm ²	Black
☎ 10577866	TR	H1Z2Z2-K 1x70 mm ²	Red
☎ 10577536	TR	H1Z2Z2-K 1x240 mm ²	Black
☎ 10577871	TR	H1Z2Z2-K 1x240 mm ²	Red
☎ 10577537	TR	62930 IEC 131 1x300 mm ²	Black
☎ 10577873	TR	62930 IEC 131 1x300 mm ²	Red
☎ 10577513	TR	62930 IEC 131 1x400 mm ²	Black
☎ 10577874	TR	62930 IEC 131 1x400 mm ²	Red
☎ 10572628	TR	H1Z2Z2-K 1x6 mm ²	Red
☎ 10577856	TR	H1Z2Z2-K 1x4 mm ²	Red
☎ 10577517	TR	H1Z2Z2-K 1x16 mm ²	Black
☎ 10577862	TR	H1Z2Z2-K 1x16 mm ²	Red
☎ 10577518	TR	H1Z2Z2-K 1x25 mm ²	Black
☎ 10577863	TR	H1Z2Z2-K 1x25 mm ²	Red
☎ 10577519	TR	H1Z2Z2-K 1x35 mm ²	Black

☎ = Make to order, 📦 = In stock,

Nexans Ref.	Country Ref.	Name	Sheath colour
☎ 10577864	TR	H1Z2Z2-K 1x35 mm2	Red
☎ 10577530	TR	H1Z2Z2-K 1x50 mm2	Black
☎ 10577532	TR	H1Z2Z2-K 1x95 mm2	Black
☎ 10577867	TR	H1Z2Z2-K 1x95 mm2	Red
☎ 10577533	TR	H1Z2Z2-K 1x120 mm2	Black
☎ 10577869	TR	H1Z2Z2-K 1x120 mm2	Red
☎ 10577534	TR	H1Z2Z2-K 1x150 mm2	Black
☎ 10577870	TR	H1Z2Z2-K 1x150 mm2	Red
☎ 10577535	TR	H1Z2Z2-K 1x185 mm2	Black
☎ 10577872	TR	H1Z2Z2-K 1x185 mm2	Red
☎ 10572627	TR	H1Z2Z2-K 1x6 mm2	Black
☎ 10573356	TR	H1Z2Z2-K 1x10 mm2	Red
☎ 10573355	TR	H1Z2Z2-K 1x10 mm2	Black
☎ 10575637	TR	H1Z2Z2-K 1x6 mm2	Red

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