

SOLAR KABLO (H1Z2Z2-K)

SOLAR CABLE

HALOJENSİZ FOTOVOLTAİK KABLO (PV-1)
HALOGEN FREE PHOTOVOLTAIC CABLES (PV-1)

TEKNİK VERİLER / TECHNICAL DATA SHEET



STANDARTLAR
STANDARDS

EN 50618

SERTİFİKALAR
CERTIFICATES

CE

YAPISI / CONSTRUCTION

TEKNİK ÖZELLİKLER / SPECIFICATIONS

İletken / conductor

1.  çok telli kalaylı bakır
Fine-stranded tinned copper
(Class 5)

-  Min. bükülme yarı çapı
Min. bending radius

-  250°
Max. kısa devre sıcaklığı (5 sn)
Max. short circuit temperature
Up to 5 seconds

izole / insulation

2.  Çapraz Bağlı Halojensiz
Cross linked halogen free

-  120°
Max. çalışma sıcaklığı
Max. operating temperature
For 20000 hours

-  Düşük Duman Yoğunluğu
Low Smoke - EN 61034

Dış Kılıf / Outer Sheath

3.  Çapraz bağlı halojensiz
Cross linked halogen free

-  -40°
+90°
Çalışma sıcaklığı
Operating temperature

-  1,8 kV
Maks. İzin verilen Voltaj Değeri (DC)
Max. Permitted Voltage (DC)

-  Halojeniz
Halogen free EN 50525-1 / 50267

-  6,5 kV
Deney gerilimi
AC test voltage

-  Tek kablo düşey alev yayılma testi
Flame propagation test on single cable - EN 60332-1-2



TÜVRheinland®
Precisely Right.

Rated Voltage For DC System 1500/1500 V

Rated Voltage For AC System 1000/1000 V

TEKNİK VERİLER / TECHNICAL DATA

Cu-Sn/TPE/TPE

Nominal Kesit	İzole Et Kalınlığı	Dış Kılıf Et Kalınlığı	Ortalama Dış Çap	Ortalama Ağırlık	Max. Akım Taşıma Kapasitesi			20°C Max. İletken Direnci
Nominal Cross Sectional	Thickness of Insulation	Thickness of Over sheath	Overall Diameter app.	Net Weight app.	Current Carrying Capacity in			Conductor DC Resistance at (20°C) max.
(mm)	(mm)	(mm)	(mm)	(kg/km)	Kablo Havada Single core free in Air	Kablo yüzey üzerindeyken Single core on a Surface	İki kablo birbirine dokunurken Two cables adjacent on surface	ohm/km
SOLAR CABLE (PV-1) 0,6/1 kV								
1,5	0,70	0,80	4,60	35	30	29	24	13,7
2,5	0,70	0,80	5,00	50	41	39	33	8,21
4	0,70	0,80	5,55	65	55	52	44	5,09
6	0,70	0,80	6,10	85	70	67	57	3,39
10	0,70	0,80	7,10	125	98	93	79	1,95
16	0,70	0,90	8,45	190	132	125	107	1,24
25	0,90	1,00	10,40	285	176	167	142	0,795
35	0,90	1,10	11,50	385	218	207	176	0,565

RoHS'a uygundur.

RoHS Compliant

TEKNİK VERİLER / TECHNICAL DATA SHEET



UYGULAMA ALANLARI / APPLICATIONS



4 mm ve 6 mm tek çekirdekli güneş kablosu; özellikle kalıcı bağlantı kutuları, invertörler veya denetleyicileri için güneş panelleri bağlamak için tasarlanmıştır. Ozona dayanıklı, iyi ısınma ve alev geciktirici özelliklere sahiptir. Halojensiz, yağa dayanıklı, azaltılmış çap ve olağan üstü esneklik.

4 mm and 6 mm single-core solar cable: Especially designed to connect solar panels for permanent junction boxes and inverters. Good abrasion and ozone resistant flame-retardant properties. Halogen-free oil-resistant, reduced diameter and outstanding flexibility.

TEKNİK VERİLER / TECHNICAL DATA

Chemical properties	
Halogen-free	acc. to EN 50525-1 Annex B (EN 50267-2-1, EN 50267-2-2, IEC 60754-1, IEC 60754-2)
Low Smoke Emission	acc. to IEC 61034, EN 61034 (Light Transmittance > 60%)
Weather resistance	Ozone resistance: acc. to EN 60811-403 Test Method A, EN 50396 clause 8.1.3 Test Method B
	Weathering/UV resistance: acc. to EN ISO 4892-1 and 4892-3 (Method A) tensile strength and elongation at break after 840h (70 Cycles) of exposure to UV lights
Acid and alkaline resistance	acc. to EN 50618:2014 Annex B: 7 days, 23° C (N-Oxalic Acid, N-Sodium Hydroxide) as for EN 60811-404
Resistance to fire	Flame propagation acc. to EN 60332-1-2 (Single Cable Flame Test)
	Tested according to CPR: EN 50399 Common test methods for cables under fire conditions Heat release and smoke production measurement on cables during flame spread test, UNI EN 13501-6
	Flammability class: Dca
	Smoke emission class: s2 Drip particle class: d2
Mechanical properties	
	for insulation and sheath before ageing acc. to EN 50618 Annex B (test acc. To EN 60811-501). tensile strength $\geq 8 \text{ N/mm}^2$ elongation at break for insulation and sheath $\geq 125 \%$
Shrinkage test on sheath	acc. to EN 50618, Table 2: <2% (test acc. to EN 60811-503).
Durability of Print	acc. to EN 50618 (test acc. to EN 50396)
Direct Burial	Impact test resistance of single conductor type USE and USE-2 cables (tested acc. to UL854) Rodent resistance safety can be optimized by utilizing protective hoses and cables with spinning or braid metallic coatings
Water resistance	AD8 category Tested with successful acc. to EN 50525-2-21 "Annex E" (after immersion for 100 days / 2.400 h to 50°C):
Long term resistance of insulation to d.c	acc. to EN 50618, Table 2 test acc. to EN 50395 clause 9: Cable immersed in water containing 1% NaCl for 240h ; water temperature: 85°C ± 5 ; Voltage applied: 1.8 kV D.C.
Thermal properties	
Lifetime	acc. to EN 50618 : 25 years the cables are designed to operate at a normal max conductor temperature of 90°C, but for a maximum of 20.000 hours a max. conductor temperature of 120 °C at a max. ambient temperature of 90 °C is permitted. (test according to EN 60216-1 and EN 60216-2)
Max.short circuit temperature	250°C (for 5 sec.)
Resistance to cold	EN 50618, Table 2: Cold Bending Test at -40°C acc. to EN 60811-504; Cold Elongation Test at -40°C acc. to EN 60811-505; Cold Impact Test at -40°C acc. to EN 50618 Annex C and EN 60811-506. Damp-Heat Test Acc. to EN 50618, Table 2 (test acc. to EN 60068-2-78) : 90°C for 1.000h and min. 85% humidity