

Tai Sin Electric Cable

*\*Actual colour of cable may appear differently on different screens and on print.*

## WHY USE SOLAR CABLES?

Electricity from renewable energy is the future and solar is one of the purest form. Solar energy is not only sustainable, but also leaves no carbon foot print compared to fossil fuels causing pollution and negative environmental impact. As long as the Sun continues to rise and set everyday, its energy can be harnessed.

## APPLICATION

Tai Sin Solar PV Cable (also known as H1Z2Z2-K) is certified by TUV Rheinland according to IEC 62930 and EN 50618 standards.

It is suitable for use in both indoor and outdoor photovoltaic power supply system, most commonly in solar farms, roof-top solar and floating platforms.

Its highly flexible trait of Tai Sin Solar PV cable allows for easy installation and is compatible with most major connectors for solar panels.

Tai Sin Solar PV Cables to be customised with fire resistant properties, as well as copper wire braided screen for protection against rodent or mechanical impact.

## BENEFITS OF TAI SIN SOLAR PV CABLES

- ✓ Low smoke zero halogen (LSZH) produces no toxic combustible gases in the event of fire
- ✓ Flame retardant properties reduce flame propagation
- ✓ Electron beam cross-linked compounds produces low to no residual chemical contaminants
- ✓ Ultraviolet (UV), ozone and hydrolysis resistant
- ✓ High flexibility for easy installation
- ✓ Long lifespan of more than 25 years at temperature of up to 90°C
- ✓ Compatible with most solar panel connectors

### TAI SIN ELECTRIC LIMITED

📍 24 Gul Crescent, Singapore 629531

☎ (65) 6672 9292

📠 (65) 6861 4084

✉ sales@taisin.com.sg

🌐 www.taisin.com.sg



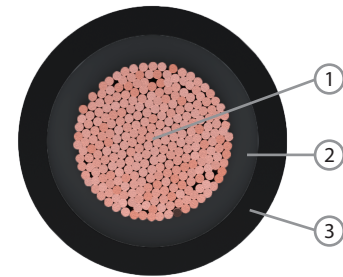
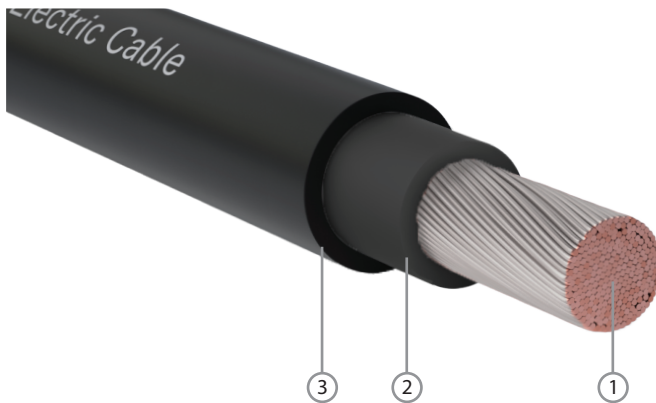
Tai Sin®

WE'RE MORE THAN CABLES

# FRT-HH-PV (H1Z2Z2-K)

## TCU / HFFR / HFFR ( SINGLE CORE )

HFFR Insulated, HFFR Sheathed Photovoltaic Cable,  
Rated DC voltage 1500V between Conductors and Conductor & Earth



**Component**  
1. Tinned Annealed Copper Wire (Class 5)  
2. Cross-linked Polyolefin (HFFR)  
3. Cross-linked Polyolefin (HFFR) sheath

### CONSTRUCTION

Conductor:	Tinned Annealed Flexible Copper Wire, Class 5
Insulation:	Cross-linked Polyolefin (HFFR)
Insulation Colour:	Black / Natural
Outer Sheath:	Cross-linked Polyolefin (HFFR) with Anti-Termite Characteristic and UV Resistant
Outer Sheath Colour:	Black or Red / Other colour upon request
Optional:	Copper Wire Braided Screen; Fire Resistant option upon request

### REFERENCE STANDARDS

Design Specification:	BS EN50618, IEC62930
Conductor:	IEC60228, BS EN60228
Flame Retardancy:	IEC60332-3-24, BS EN60332-3-24
Low Smoke Zero Halogen:	IEC61034-2, BS EN61034-2 IEC60754-1, IEC60754-2 BS EN60754-1, BS EN60754-2

### INSTALLATION REFERENCE

Min. Bending Radius (mm):	6 x cable overall diameter
Max. Pulling Tension (N/mm <sup>2</sup> ):	15

### ELECTRICAL CHARACTERISTICS

Operating Voltage:	1500Vdc Conductor / Conductor & Earth
Operating Temperature:	-15°C to 90°C Max. temp. at conductor +120°C
Final Short Circuit Temperature:	250°C
Test Voltage:	6.5kV for 5 minutes

Nominal Conductor Area (mm <sup>2</sup> )	Approx Conductor Diameter (mm)	Insulation Thickness (mm)	Overall Sheath Thickness (mm)	Approx Cable Overall Diameter (mm)	Approx Cable Weight (kg/km)	Current Carrying Capacity			Minimum Insulation Resistance at Ambient (MΩ.km)	Maximum Conductor Resistance at 20°C (Ω/km)
						Single Cable free in air (A)	Single Cable on a surface (A)	Two Loaded Cables Touching on a surface (A)		
						(A)	(A)	(A)		
1 x 1.5	1.5	0.7	0.8	4.7	33	30	29	24	860	13.7
1 x 2.5	1.9	0.7	0.8	5.1	44	41	39	33	690	8.21
1 x 4	2.5	0.7	0.8	5.7	60	55	52	44	580	5.09
1 x 6	3.0	0.7	0.8	6.2	79	70	67	57	500	3.39
1 x 10	3.9	0.7	0.8	7.1	118	98	93	79	420	1.95
1 x 16	5.6	0.7	0.9	9.0	187	132	125	107	340	1.24
1 x 25	7.2	0.9	1.0	11.9	306	176	167	142	340	0.795
1 x 35	9.0	0.9	1.1	13.3	409	218	207	176	290	0.565
1 x 50	10.1	1.0	1.2	14.9	546	276	262	221	270	0.393
1 x 70	11.9	1.1	1.2	16.9	738	347	330	278	250	0.277
1 x 95	13.9	1.1	1.3	19.1	974	416	395	333	220	0.210
1 x 120	15.6	1.2	1.3	21.0	1209	488	464	390	210	0.164
1 x 150	17.6	1.4	1.4	23.6	1508	566	538	453	210	0.132
1 x 185	19.4	1.6	1.6	26.2	1858	644	612	515	200	0.108
1 x 240	22.1	1.7	1.7	29.3	2361	775	736	620	200	0.0817