ELSEWEDY CABLES

PV SOLAR
CABLES

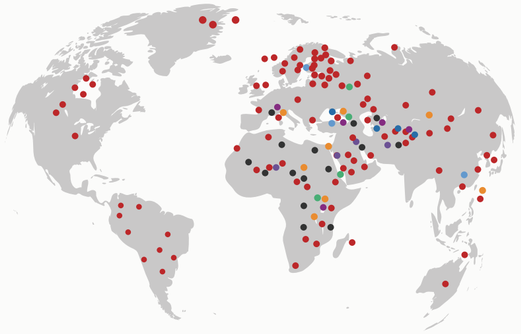
ELSEWEDY ELECTRIC S.A.E
Plot No. 13co3, Cairo Festival City, 5th Settlement, P.O. Box 310, New Cairo, Egypt.

Call Now 19159
+202 2759 9700
+202 2759 9701
Info@elsewedyelectric.com
www.elsewedyelectric.com

ABOUT ELSEWEDY ELECTRIC

ELSEWEDY ELECTRIC, a leading industrial force with over 19,000 employees and USD 5.13 billion in revenue (2024), empowers sustainable development through comprehensive infrastructure solutions. Our vast portfolio spans five key business sectors and encompasses everything from wire, cable, steel products and accessories to transformers, busways, motors, and fiberglass poles. We have also installed over 100 million electric meters, showcasing our expertise in efficient energy management. Our global presence is solidified through 43 production facilities in 19 countries, with exports reaching over 110 countries worldwide. We offer an all-encompassing Engineering, Procurement & Construction (EPC) service, delivering the most intricate turnkey projects with exceptional efficiency. As an unwavering advocate for sustainable energy solutions, ELSEWEDY ELECTRIC drives decarbonization, digitalization, and a sustainable future globally. Our talent-centric approach fuels our growth, empowering businesses and communities wherever we operate. We equip our customers with the tools to embrace digitalization and navigate the ever-changing world, remaining committed to exceeding customer expectations while protecting the environment.

Global Presence



Wire, Cable, & Accessories · Electrical Products · Meters · Transformer · Telecommunication · Renewable Energy · Project Development · Export

85+ Years Of Evolution

19K Employees

43 Production Facilities

48 International Offices

19 Operation Countries

20% Engineers

5.13B Revenue in USD

110 Export Countries

The Hidden Hero of Every Solar System

While solar panels take the spotlight, the true backbone of every solar energy system lies beneath, in the cables that silently carry power from generation to grid.

Elsewedy H1Z2Z2-K Solar Cable is engineered for long-term, reliable energy transmission under the most demanding conditions.

Elsewedy cables deliver every watt of solar power, every day, for decades.

9001:2015 Quality Management

45001:2018 Occupational Health and Safety Management

14001:2015 Environmental Management

50001:2018 Energy Management

17025 Accredited Testing Laboratory

16949:2016 Quality Management

Applications

Single core flexible cables with cross-linked polymer insulation and a halogen-free sheath are used for connecting photovoltaic modules and panels, as well as low voltage (LV) DC installations between panels, connection boxes, and inverters.

Tested for over 25 years of service life and compliant with key international standards.

Installation Recommendation

These cables are ideal for free movable, free hanging, and fixed installations both indoors and outdoors, within conduits or trunkings on, in or under plaster as well as in appliances.

Suitable for the application in/at equipment with protective insulation (protection class II).

Packing

- 500 m Spools
- 1000 m Spools
- Other lengths and packing types are available upon request

Applicable standards:

- BS EN 50618
- BS EN 60228
- TÜV 2 PFG 1169/08.2007
- IEC 60332-1-2
- IEC 60754
- IEC 61034
- EN 60216

Product Overview – H1Z2Z2-K Solar Cable

Construction:

- **Conductor:** Flexible Tinned Copper Conductor according to IEC 60228 Class 5
- **Insulation:** Low smoke, Halogen-free, flame retardant, thermoset cross-linked poly-Olefin (XLPO)
- **Sheath:** Low smoke, Halogen-free, flame retardant, UV and Ozone resistant, thermoset cross-linked poly-Olefin (XLPO)
- **Colors:** As per customer's request

Thermal Ratings:

- Operating temperature: -40°C to +90°C
- Max. conductor temperature: +120°C for max. 20,000 hours
- Short circuit temperature: +250°C (max. 5 sec.)
- Installation temperature: -25°C to +60°C
- Max. storage temperature: + 40 °C
- Resistance to cold: EN 50618

Voltage Ratings:

- **AC:** 1 kV (max. permissible 1.2 kV AC)
- **DC:** 1.5 kV (max. permissible 1.8 kV DC)

Why It Matters:

Designed for durability under real-world stress, from extreme heat to mechanical strain. For reliable energy flow and operational continuity.

Cable Properties

Environmentally Friendly

- **Fire Performance** IEC 60332-1
- **Smoke & Corrosive Gas** BS EN 61034-2 IEC 60754-2
- **Weathering / UV Resistance** 50618-Annex E
- **Ozone Resistance** EN 50396 IEC 60811-403
- **Halogen Free** IEC 60754-1 BS EN 50525-1 Annex B
- **Impact Resistance** To IEC 60811-506
- **Dynamic Penteration Resistance** 50618 Annex D
- **Extreme Temperatures Resistance** Mini.: -40°C IEC 60811-504-505
- **High Humidity Resistance** BS EN 60068-2 BS 50618
- **Chemical Resistant** EN 50618 EN 60811-404

TECHNICAL SPECIFICATIONS

Nominal Cross Section Area (mm²)	Insulation Thickness (mm)	Jacket Thickness (mm)	Approx. Diameter (mm)	Approx. Weight (Kg/km)	Conductor DC Resistance (Ω/km)	Current carrying capacity Ambient Temperature 60 °C		
						Single cable free in air	Single cable on a surface	Two loaded cables
						(A)	(A)	(A)
1.5	0.7	0.8	4.5	35	13.7	30	29	24
2.5	0.7	0.8	5.0	45	8.21	41	39	33
4	0.7	0.8	5.5	62	5.09	55	52	44
6	0.7	0.8	6.1	82	3.39	70	67	57
10	0.7	0.8	7.0	123	1.95	98	93	79
16	0.7	0.9	8.2	185	1.24	132	125	107
25	0.9	1.0	12.5	290	0.795	176	167	142
35	0.9	1.1	14.0	392	0.565	218	207	176
50	1.0	1.2	16.3	548	0.393	276	262	221
70	1.1	1.2	18.7	752	0.277	347	330	278
95	1.1	1.3	20.8	957	0.210	416	395	333
120	1.2	1.3	22.8	1205	0.164	488	464	390
150	1.4	1.4	25.5	1544	0.132	566	538	453
185	1.6	1.6	28.5	1862	0.108	644	612	515
240	1.7	1.7	32.1	2436	0.0817	775	736	620

Current Rating Conversion Factors For Different Ambient Temperatures

Temperature (°C)	Factor
Up to 60	1.00
70	0.92
80	0.84
90	0.75

Sustainability Runs Through Us

At ELSEWEDY ELECTRIC, caring for the planet and our communities has been at the heart of what we do for over 80 years. We are on a journey to Net Zero. We're passionate about creating energy solutions that not only meet our customers' needs but also protect the world we all share.