# Photovoltaic Solar H1Z2Z2-K Cable




Eland Product Group: E6S

## APPLICATION

Updated harmonised (H1Z2Z2-K) European standard solar cable intended for the interconnection within photovoltaic systems such as solar panel arrays. Suitable for fixed installations, internal and external, within conduit or systems. Impact tested - Suitable for direct burial. For installations where fire, smoke emissions and toxic fumes create a potential risk to life and equipment. Water resistant to AD8.

## CHARACTERISTICS

**Voltage Rating** Uo/U
AC: 1000/1000V
DC: 1500/1500V

**Maximum Voltage** (Umax)
1800V

**Test Voltage**
6.5kV AC

**Temperature Rating**
Fixed: -40°C to +90°C

**Minimum Bending Radius**
5 x overall diameter

**Maximum Conductor Temperature**
+120°C (for 20000h)

## CONSTRUCTION

**Conductor**
Class 5 flexible tinned copper conductor

**Insulation**
Halogen-free cross-linked compound

**Sheath**
Halogen-free cross-linked, flame retardant compound

**Sheath Colour**
● Black
Other colours available on request

## STANDARDS

EN 50618, IEC 62930, TÜV 2 PfG 1169/08.2007, EN 50288-3-7, EN 60068-2-78, EN 50395

Flame retardant to IEC/EN 60332-1-2
Low Smoke Zero Halogen to IEC/EN 60754-1/2, IEC/EN 61034-1/2, EN 50267-2-2
Ozone and UV Resistant to EN 60811-403, EN 50396, EN ISO 4892-1/3,
Water Resistant to AD8

## THE CABLE LAB®

AN ISO/IEC 17025 AND IECEE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.

## SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: www.elandcables.com/company/about-us/esg-sustainability

## REGULATORY COMPLIANCE

This cable is compliant with European Regulation EN 50575, the Construction Products Regulation.

This cable meets the requirements of the Low Voltage Directive 2014/35/EU, the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab®.

## DIMENSIONS

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA mm² | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km | TENSILE STRENGTH IN OPERATION N |
|---|---|---|---|---|---|
| E6S10015BK000 | 1 | 1.5 | 4.6 | 36 | 22 |
| E6S10025BK000 | 1 | 2.5 | 5.0 | 46 | 37 |
| E6S10040BK000 | 1 | 4 | 5.6 | 62 | 60 |
| E6S10060BK000 | 1 | 6 | 6.1 | 82 | 90 |
| E6S10100BK000 | 1 | 10 | 7.1 | 125 | 150 |
| E6S10160BK000 | 1 | 16 | 8.5 | 190 | 240 |
| E6S10250BK000 | 1 | 25 | 10.4 | 285 | 375 |
| E6S10350BK000 | 1 | 35 | 11.5 | 385 | 525 |
| E6S10500BK000 | 1 | 50 | 13.7 | 540 | 750 |
| E6S10700BK000 | 1 | 70 | 15.8 | 740 | 1050 |
| E6S10950BK000 | 1 | 95 | 17.3 | 965 | 1350 |
| E6S11200BK000 | 1 | 120 | 19.1 | 1210 | 1800 |
| E6S11500BK000 | 1 | 150 | 21.4 | 1495 | 2250 |
| E6S11850BK000 | 1 | 185 | 24.9 | 1885 | 2775 |
| E6S12400BK000 | 1 | 240 | 27.3 | 2395 | 3600 |

## ELECTRICAL CHARACTERISTICS

| NOMINAL CROSS SECTIONAL AREA mm² | MAXIMUM CONDUCTOR DC RESISTANCE AT 20°C Ω/km | MAXIMUM CONDUCTOR DC RESISTANCE AT 90°C Ω/km | CURRENT CARRYING CAPACITY A | | | VOLTAGE DROP mV/A/m |
|---|---|---|---|---|---|---|
| | | | Single Cable In Air | Single Cable On Surface | Two Cables Adjacent On Surface | |
| 1.5 | 13.70 | 17.468 | 30 | 29 | 24 | 38.2 |
| 2.5 | 8.21 | 10.468 | 41 | 39 | 33 | 23 |
| 4 | 5.09 | 6.490 | 55 | 52 | 44 | 14.3 |
| 6 | 3.39 | 4.322 | 70 | 67 | 57 | 9.49 |
| 10 | 1.95 | 2.486 | 98 | 93 | 79 | 5.46 |
| 16 | 1.24 | 1.581 | 132 | 125 | 107 | 3.47 |
| 25 | 0.795 | 1.013 | 176 | 167 | 142 | 2.23 |
| 35 | 0.565 | 0.720 | 218 | 207 | 176 | 1.58 |
| 50 | 0.393 | 0.501 | 276 | 262 | 221 | 1.1 |
| 70 | 0.277 | 0.353 | 347 | 330 | 278 | 0.772 |
| 95 | 0.21 | 0.267 | 416 | 395 | 333 | 0.585 |
| 120 | 0.164 | 0.209 | 488 | 464 | 390 | 0.457 |
| 150 | 0.132 | 0.168 | 566 | 538 | 453 | 0.368 |
| 185 | 0.108 | 0.137 | 644 | 612 | 515 | 0.301 |
| 240 | 0.0817 | 0.104 | 775 | 736 | 620 | 0.228 |

## DE-RATING FACTORS

| AIR TEMPERATURE | UP TO 60°C | 70°C | 80°C | 90°C | 100°C | 110°C |
|---|---|---|---|---|---|---|
| DE-RATING FACTOR | 1.00 | 0.91 | 0.82 | 0.71 | 0.58 | 0.41 |

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.



UK T 020 7241 8787 | F 020 7241 8700 | sales@elandcables.com | www.elandcables.com
International T +44 20 7241 8740 | F +44 20 7241 8700 | international@elandcables.com