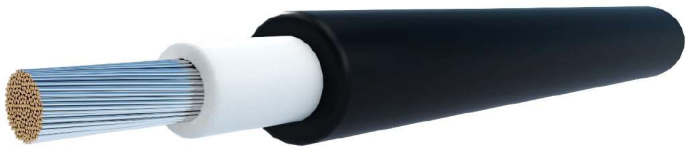
SOLAR - PHOTOVOLTAIC CABLE (H1Z2Z2-K) Datasheet

APPLICATION

Single core flexible cables suited for photovoltaic and solar system with cross-linked polymer insulation and halogen free sheath. Tested for more 25 years lifetime. These cables can be used up 1800V to earth. Cable suitable for the interconnection of the various elements of photovoltaic systems, suitable for fixed installations outside and indoor.

SAMPLE DRAWING



CHARACTERISTICS

Voltage Rating
DC 1.5/1.5 kV
AC 1.0 /1.0 kV

Max. permissible operating voltage
AC 1.2/ 1.2 kV
DC 1.8/ 1.8 kV

Voltage test on the complete cable with AC or DC
AC 6.5 kV 5 min
DC 15 kV 5 min

Minimum Bending Radius
8 x overall diameter

CERTIFICATIONS

BASEC APPROVED | TUV APPROVED | CPR Class D - UKCA | CPR Class D - CE

STANDARDS

BS EN 50618
IEC 62930
2Pfg1169/08.2007
EN 50267-2-2
EN 60216
IEC 60332-1-2
EN 50267-1-2

CONSTRUCTION

Conductor
Flexible Tinned Copper Conductor according to IEC 60228 Class 5

Insulation
Halogen free, thermoset polyolefin optimized for maximum flexibility

Sheath
Halogen free, thermoset polyolefin optimized for maximum flexibility

Sheath Colour
Red Blue Black

Cable Marking:

=ELSEWEDY CABLES= H1Z2Z2-K (Size) mm2 1.5kV DC BASEC EN 50618 CE Dca
HALOGEN FREE LOW SMOKE 62930 IEC 131 Manufacturing Year

PACKING

100 m Air Coils, 500 m Spools, 1000 m Spools
Other packing requests can be arranged

THERMAL SPECIFICATIONS

Ambient temperature in operation
-40 °C to + 90 °C

Min. ambient temperature for installation
-25 °C

Min. allowable ambient temperature
-40 °C

Max. temperature at conductor
120 °C, based on EN 60216-1
20.000 hr 50 % residual elongation.

Short-circuit temperature
+250 °C 5 sec

Technical Department
ELSEWEDY SPECIAL CABLES (ESC)
Egypt, 10th of Ramadan City

CABLE PROPERTIES

Fire performance

IEC 60332-1

Smoke & Corrosive Gas

EN 61034-2, IEC 60754-2

Weathering/ UV resistance

To EN 50618 Annex E

Ozone resistance

To EN 50396, IEC 60811-403

Halogen free

To EN 50267, EN 50525-1 Annex B

IMPACT RESISTANCE

To IEC 60811-506

Dynamic Penetration Resistance

To EN 50618 Annex D

EXTREME TEMPERATURES RESISTANCE

Min.: -40°C IEC 60811-504 505 & 506

High Humidity Resistance

To EN 60068-2, EN 50618

Chemical Resistant

To EN 60811-404, EN 50618

ENVIRONMENTALLY FRIENDLY

Water Immersion

To EN 50618

RoHS Compliant

DIMENSIONS

No. of	Size	Approx. Outer Diam.	Approx. Cable Weight	Conductor Diam.	Nominal Insulation Thickness	Min. Bending Radius (Fixed)	Max. Conductor DC Resistance at 20 °C
Cores	(mm2)	(mm)	(Kg/Km)	(mm)	(mm)	(mm)	(Ω/km)
1	1.5	4.5	35	1.53	0.7	280	13.7
1	2.5	5	45	1.98	0.7	360	8.21
1	4	5.5	62	2.52	0.7	496	5.09
1	6	6.1	82	2.98	0.7	656	3.39
1	10	7	123	3.99	0.7	984	1.95
1	16	8.2	185	5.04	0.7	1480	1.24

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No:
140/002/041
Issue No: 1

Certificate of Product Approval

Licensee:
United Industries Company (UIC)

10th of Ramadan City

Industrial Zone A3, Cairo, Egypt

Factory:
10th of Ramadan City

Industrial Zone A3, Cairo, Egypt

Standard:
BS EN 50618:2014 incorporating corrigendum February 2015

Description:
Electric cables for photovoltaic systems

Details:
N/A

Materials:
Insulation XLHFFR, Sheath XLHFFR

Brand Name:
N/A

Origin Mark:
=EL SEWEDY CABLES= or 140/002

Permissible Approval Marks:

BASEC name | BASEC roundel

Signed for and on behalf of the British Approvals Service for Cables

Tony Lioveri Date: 15/07/2021

Date of original issue: 15/07/2021

Check BASEC website to verify validity.

UKAS PRODUCT CERTIFICATION 0004

Expiry date:
04/11/2023

BASEC, Presley House, Presley Way, Milton Keynes, MK8 0ES,
Registered in England No. 1150237, Tel: +44(0)1908267300
Email: mail@basec.org.uk, Web: www.basec.org.uk

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No:
140/002/041
Issue No: 1

Type(s) and Range(s) of Approval

Table / Clause	Code Designation	Conductor Class	Range of Cores	Min Nominal Size -sqmm	Max Nominal Size - sqmm
1	H1Z2Z2-K	Class 5	1	1.5	16

Signed for and on behalf of the British Approvals Service for Cables

Tony Lioveri Date: 15/07/2021

Date of original issue: 15/07/2021

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0004

Expiry date:
04/11/2023

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No:
140/002/043
Issue No: 1

Certificate of Product Approval

Licensee:
Elsewedy Special Cables

10th of Ramadan City

Industrial Zone A3, Cairo, Egypt

Factory:
10th of Ramadan City

Industrial Zone A3, Cairo, Egypt

Standard:
IEC 62930 Edition 1.0:2017

Description:
Electric cables for photovoltaic systems with a voltage rating of 1.5 kV DC

Details:
N/A

Materials:
Insulation XLHFFR, Sheath XLHFFR

Brand Name:
N/A

Origin Mark:
=EL SEWEDY CABLES= or 140/002

Permissible Approval Marks:

BASEC name | BASEC roundel

Signed for and on behalf of
BASEC Group Ltd

Kieran O'Brien Date: 12/04/2023

Date of original issue: 12/04/2023

Check BASEC website to verify validity.

BASEC Group Ltd, Presley House, Presley Way, Milton Keynes, MK8 0ES, UK
Registered in England No. 13950143, Tel: +44 (0)1908 267300
Email: mail@basec.org.uk Web: www.basec.org.uk

BSF079 Issue 5 (20-03-2023)

UKAS PRODUCT CERTIFICATION 0004

Expiry date:
04/11/2023

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No:
140/002/043

Issue No: 1

Type(s) and Range(s) of Approval

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Kieran O'Brien Date: 12/04/2023

Date of original issue: 12/04/2023

Check BASEC website to verify validity.

BASEC Group Ltd, Presley House, Presley Way, Milton Keynes, MK8 0ES, UK
Registered in England No.13950143, Tel: +44 (0)1908 267300
Email: mail@basec.org.uk Web: www.basec.org.uk

BSF079 Issue 5 (20-03-2023)

UKAS PRODUCT CERTIFICATION 0004

Expiry date:
04/11/2023

Zertifikat

Certificate

Registrier-Nr.
Registered No.

44 780 23 406749 - 214

Zeichen des Auftraggebers *Customer´s reference*	**Auftragsdatum** *Date of order*	**Aktenzeichen** *File reference*	**Prüfbericht Nr.** *Test report no.*
QT-PVP04008/22C	**2022-04-06**	**PVP04008/22C**	**492012439.001**

Name und Anschrift des Auftraggebers

Elsewedy Special Cables
10th of Ramadan City Industrial Zone A3,
Cairo,Egypt

Name and address of the customer

ist berechtigt, das unten genannte Produkt mit dem abgebildeten Zeichen zu kennzeichnen

is authorized to provide the product mentioned below with the mark as illustrated

Fertigungsstätte

Elsewedy Special Cables
10th of Ramadan City Industrial Zone A3,
Cairo,Egypt

Manufacturing plant

Geprüft nach

IEC 62930:2017
EN 50618:2014

Tested in accordance with

Beschreibung des Produktes (Details s. Anlage 1)

Leitungen für PV-Systeme
Cables for PV systems

62930 IEC 131 1x1.5mm²...16mm²/
H1Z2Z2-K 1x1.5mm²...16mm²

Description of products (Details see Annex 1)

TÜV NORD CERT GmbH
Zertifizierungsstelle
Fachleiter Konsumgüter

Gültig bis/ *Valid until:* **2028-07-17**

Essen, 2023-07-18

Bitte beachten sie auch die umseitigen Hinweise
Please also pay attention to the information stated overleaf

Langemarckstr. 20 • 45141 Essen • Fon +49 (0)201 825 5120 • Fax +49 (0)201 825 3209 • Email: prodcert@tuev-nord.de

Beschreibung des Produktes:
Description of product(s):

Typbezeichnung: *Type designation*:	62930 IEC 131 1x1.5mm²...16mm² / H1Z2Z2-K 1x1.5mm²...16mm²	
Beschreibung: *Description*:	**Leitungen für PV-Systeme** *Cables for PV systems*	
Allgemeine Informationen: *General Information:*	**Nennspannung AC:** *Rated voltage:*	1000/ 1000V
	Höchstspannungs DC: *Maximum voltage:*	1500V DC
	Nenntemperatur: *Rated temperature:*	-40°C to +90°C
	Maximale Leitertemperatur: *Maximum conductor temperature:*	120°C

Die oben aufgeführten Produkte dürfen wie folgt gekennzeichnet werden:
The above mentioned products could be provided with the following marking:

TÜV NORD CERT GmbH
Certification Body
Consumer Products

ELSEWEDY CABLES

Declaration Of Performance (DOP)

DOP Document Number : ESCD-01-22

Standard & product range.

BS EN 50618

H1Z2Z2-K Solar Cable

1 core (1.5sqmm, 2.5sqmm, 4sqmm, 6sqmm, 10sqmm, 16sqmm).

Traceability of each cable is followed by drum numbers

Intended Use of Product Type

Electric Cables for Photovoltaic systems
Works with the objective of limiting the generation and spread of fire and smoke

Manufacturer Information

Manufacturer : ESC (EL Sewedy Special Cables)
=EL SEWEDY CABLES=
WWW.ELSEWEDYELECTRIC.COM

Address : 10th of Ramadan City Zone, A3,
Tel.: (+2015) 411350 **fax:** (+2015)411366
PO.Box: 1748 post code: 10505

System or Systems of Assessment and Verification of Constancy of Performance

System 3

Notified Body/laboratory

IMQ No. 0051

Performances Declared

Essential Characteristic	Performance	Harmonized Technical Specification
Reaction to Fire	Dca	EN 50575:2014+A1:2016
Smoke Production	s1a	
Flaming Droplets	d2	
Acidity	a1	
Dangerous substance	NPD	

*** This declaration of performance is issued under the responsibility of the identified manufacturer.**

Eng. Hady M. ELDEWIK

Technical Manager

ELSEWEDY CABLES

Declaration Of Performance (DOP)

DOP Document Number : ESCD-03-23

Standard & product range.

BS EN 50618

H1Z2Z2-K Solar Cable

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WWW.ELSEWEDYELECTRIC.COM

Address : 10th of Ramadan City Zone, A3,
Tel.: (+2015) 411350 **fax:** (+2015)411366
PO.Box: 1748 post code: 10505

System or Systems of Assessment and Verification of Constancy of Performance

System 3

Notified Body/laboratory

BASEC No. 2661

Performances Declared

Essential Characteristic	Performance	Harmonized Technical Specification
Reaction to Fire	Dca	EN 50575:2014+A1:2016
Smoke Production	s2	
Flaming Droplets	d2	
Acidity	a1	
Dangerous substance	NPD	

*** This declaration of performance is issued under the responsibility of the identified manufacturer.**

Eng. Hady M. ELDEWIK

Technical Manager