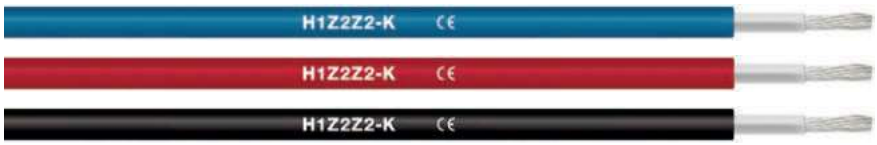
H1Z2Z2-K

Cross-linked solar cables - type H1Z2Z2-K, certified according to EN 50618



Info

- CPR: Article number choice under www.lappkabel.com/cpr
- H1Z2Z2-K type certified according to EN 50618
- Substitudes previous ÖLFLEX® SOLAR XLR-R

Benefits

- Reduction of flame propagation and of toxic combustion gases in the event of fire
- Robust against mechanical impacts
- For outdoor applications

Application range

- Photovoltaic systems with DC system voltage up to 1800 V
- For the cabling between the solar modules and as extension cable between the module strings and the DC/AC inverter
- Flexible or building-integrated PV systems
- Underground use inside protection conduits/ ducts for burial in combined case of (1) secure dissipation of water(logging) from outer cable surface, as well as (2) laying of conduit/ duct in professionally built cable trench with at least 50 cm of back-fill soil (70 cm underneath roads), above indicating tape, above covering plastic slab, above at least 10 cm of covering sand layer, above the conduit/ duct laid on at least 10 cm high sand bed layer
- Long-term permanent storage/ operation in water not permitted

Product features

- Flame retardant acc. to IEC 60332-1-2
- Weather/UV-resistant acc. to EN 50618, appendix E
- Ozone-resistant according to EN 50396
- Good notch and abrasion resistance
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas) Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity)

Norm references / Approvals

- H1Z2Z2-K type certified according to EN 50618
- Items with other cross-sections on request

Product Make-up

- Fine-wire, tinned-copper conductor
- Coreinsulation made of cross-linked copolymer
- Colour of core insulation: white
- Outer sheath made of cross-linked copolymer
- Outer sheath colour: black, red or blue

Technical data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC001578
ETIM 5.0/6.0 Class-Description: Flexible cable

Conductor stranding
Fine wire according to VDE 0295, class 5/IEC 60228 class 5

Minimum bending radius
D</=8mm: 4D;
8<D</=12mm: 5D;
D>12mm: 6D

Nominal voltage
AC U_0/U: 1.0/1.0 kV
DC U_0/U: 1.5/1.5 kV
Max. permissible DC operating voltage: 1.8 kV

Test voltage
AC 6500 V

Current rating
Im compliance with EN 50618, Table A.3

Temperature range
-40°C to +120°C
max. conductor temperature based on EN 60216-1
Ambient temperature range according to EN 50618: -40°C to +90°C

Article number	Conductor cross-section (mm²)	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
H1Z2Z2-K				
Core insulation: white / Outer sheath: black				
1023552	4.0	5.35	38.4	62
1023553	6.0	5.9	57.6	84
1023554	10.0	7	96	126
1023555	16.0	8.1	153.6	197
1023590	25.0	10.3	240	270
1023591	35.0	11.8	336	370
Core insulation: white / Outer sheath: red				
1023572	4.0	5.35	38.4	62
1023573	6.0	5.9	57.6	84
1023574	10.0	7	96	126
1023575	16.0	8.1	153.6	197
Core insulation: white / Outer sheath: blue				
1023582	4.0	5.35	38.4	62
1023583	6.0	5.9	57.6	84
1023584	10.0	7	96	126
1023585	16.0	8.1	153.6	197

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 100 m; Drum (500; 1000) m
Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Accessories

- EPIC® CRIMPTOOL
- KNIPEX Cable shear refer to page 952
- EPIC® SOLAR 4 M
- EPIC® SOLAR 4 F
- KS 20 cable shears

ÖLFLEX® SOLAR XLWP

Electron beam cross-linked solar cables with optimized performance in water - EN 50618 type

Info

- Optimised cable design - high volume resistance even after long-term period in water
- H1Z2Z2-K type certified according to EN 50618
- Burial-related, mechanical UL 854 Impact-Resistance Test

Benefits

- The alternative for water coverage, e.g. due to elevated water line caused by flooding
- Reduction of flame propagation and of toxic combustion gases in the event of fire
- Robust against mechanical impacts
- Extruded colour stripe serves as reverse polarity protection during installation.
- Exact quantity control during installation by meter marking on the cable sheath

Application range

- Photovoltaic systems with DC system voltage up to 1800 V
- For the cabling between the solar modules and as extension cable between the module strings and the DC/AC inverter
- Flexible or building-integrated PV systems
- Underground use without protection conduit/ duct in professionally built cable trench with at least 50 cm of back-fill soil (70 cm underneath roads), above indicating tape, above covering plastic slab, above at least 10 cm of covering sand layer, above the cable laid on at least 10 cm high sand bed layer
- In September 2018 and based on AD8 watertightness, this product was recommended by Solartechnik Bayern for underground use typically realized via underground conduits/ ducts (...) for PV applications

Product features

- Weather/ UV resistant per EN 50618, Annex E, as well as ozone resistant per EN 50396
- Burial-related, mechanical Impact-Resistance Test of Single-Conductor Type USE and USE-2 cables [Underground Service Entrance Cables] per UL 854, Section 23, conducted
- Halogen-free and flame-retardant
- Good notch and abrasion resistance
- XLWP = X-Linked + Water-Proof (Permanent water contact AD8 acc. to IEC 60364-5-51, 1 mtr. in max. submersion depth @ temperature of widely unmoved water between 5 °C and 40 °C), Proven electron beam cross-linked quality

Norm references / Approvals

- H1Z2Z2-K type certified according to EN 50618
- Items with other cross-sections on request

Product Make-up

- Fine-wire, tinned-copper conductor
- Core insulation made of electron beam cross-linked copolymer
- Colour of core insulation: white
- Outer sheath made of electron beam cross-linked copolymer
- Outer sheath colour: Black only, or Black with Red or Blue stripe

Technical data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC001578
ETIM 5.0/6.0 Class-Description: Flexible cable

Conductor stranding
Fine wire according to VDE 0295, class 5/IEC 60228 class 5

Minimum bending radius
D</=8mm: 4D;
8<D</=12mm: 5D;
D>12mm: 6D

Nominal voltage
AC U_0/U: 1.0/1.0 kV
DC U_0/U: 1.5/1.5 kV
Max. permissible DC operating voltage: 1.8 kV

Test voltage
AC 6500 V

Current rating
Im compliance with EN 50618, Table A.3

Temperature range
-40°C to +120°C
max. conductor temperature based on EN 60216-1
Ambient temperature range according to EN 50618: -40°C to +90°C

Article number	Conductor cross-section (mm²)	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
ÖLFLEX® SOLAR XLWP				
Core insulation: white / Outer sheath: black				
1023601	4.0	5.8	38.4	68.1
1023602	6.0	6.4	57.6	91.6
1023603	10.0	7.6	96	138.6
1023604	16.0	9.1	153.6	209.7
Core insulation: white / Outer sheath: black with red stripe				
1023621	4.0	5.8	38.4	68.1
1023622	6.0	6.4	57.6	91.6
1023623	10.0	7.6	96	138.6
1023624	16.0	9.1	153.6	209.7
Core insulation: white / Outer sheath: black with blue stripe				
1023625	4.0	5.8	38.4	68.1
1023626	6.0	6.4	57.6	91.6

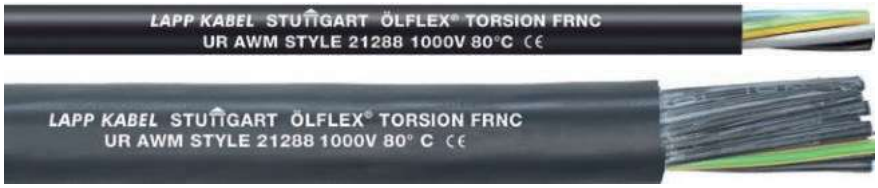
Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 100 m; Drum (500; 1000) m
Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Accessories

- KNIPEX Cable shear refer to page 952
- EPIC® SOLAR 4 M
- EPIC® SOLAR 4 F
- UNIVERSAL STRIP stripping tool refer to page 963
- KS 20 cable shears

ÖLFLEX® TORSION FRNC

Cold and oil-resistant cables for flexible applications under torsional load, halogen-free - 0.6/1 kV



Info

- Torsion resistant, Cold flexible and Oil resistant for drip loops
- Halogen-free, Highly flame retardant, Low smoke density

Application range

- Stationary or Flexible
- Torsion in Wind Turbines

Product features

- Torsion resistant up to ±150 °/m for the drip loop of wind turbine generators
- Resistant to weather, abrasion, temperature, sunlight (EN 50525-1, EN 50618, EN 50620, EN ISO 4892-2/ Method A) and ozone (EN 50396)
- Resistant to splashes of sea water as well as broad oil resistance, incl. EN 60811-404 and UL OIL RES I + II
- Fire behaviour:
  - Halogen-free (IEC 60754-1);
  - Low corrosivity (IEC 60754-2);
  - Low smoke density (IEC 61034-2);
  - Highly flame retardant (IEC 60332-3-24 and -25; IEC 60332-1-2)

Norm references / Approvals

- UL AWM Style 21288

Product Make-up

- Extra-fine wire conductor made of bare copper
- Core insulation: polyolefin compound
- Optional, overall shielding (D version) reducing electromagnetic interferences by tinned copper wire wrapping
- Outer sheath: special compound, halogen-free, black (RAL 9005)

Technical data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000057
ETIM 5.0/6.0 Class-Description: Low voltage power cable

Core identification code
HD 308 coloured up to 5 cores, from 6 cores all black with white numbers (except PE)
Paired signal cables: DIN 47100

Conductor stranding
IEC 60228, Cl. 6

Torsion movement in WTG
TW-0 & TW-2, refer to Appendix T0

Minimum bending radius
Flexible: 10x Outer diameter
Stationary: 6x Outer diameter

Nominal voltage
IEC U_0/U=0.6/1kV; UL 1kV

Test voltage
C/C: 4000 V

Temperature range
-40°C to +90°C
UL: max. +80°C

Article number	Number of cores and mm² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
ÖLFLEX® TORSION FRNC				
1150373	12 G 1.0	13.2	115.2	274
1150378	16 G 1.0	14.8	153.6	392
1150271	3 G 1.5	9.0	43.2	131
1150272	4 G 1.5	9.7	57.6	156
1150273	5 G 1.5	10.6	72	183
1150275	7 G 1.5	12.6	100.8	253
1150279	12 G 1.5	15.3	172.8	386
1150311	3 G 2.5	10.4	72	181
1150312	4 G 2.5	11.3	96	242
1150313	5 G 2.5	12.4	120	258
1150350	3 G 4.0	11.9	115.2	254
1150351	4 G 4.0	13.0	153.6	313
1150357	5 G 6.0	16.0	288	486
1150362	5 G 10.0	20.5	480	799

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/ 100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Drum
Details of the clamping force are available upon request, halogen-free.
Photographs and graphics are not to scale and do not represent detailed images of the respective products.

Similar products

- H07RN-F, enhanced version refer to page 99