


1023600	<b>DATA SHEET</b>	
Valid from: 05.02.2021	<b>ÖLFLEX® SOLAR XLWP</b>	

## Application

ÖLFLEX® SOLAR XLWP cables are weather-, UV-resistant photovoltaic cables. Thanks to optimized cable design, a constant, remarkable volume resistivity can be ensured even after long-term period in uncontaminated water. These cross-linked, halogen-free and double-insulated solar cables are suitable for permanent outdoor use and especially for the interconnection of grounded and ungrounded photovoltaic power systems. They are applicable for the connection between solar panels and as extension cable between the individual module strings or the DC/AC inverter.

Recommended use of cables for PV systems acc. to EN 50618:

Intended for use in PV installations e.g. acc. to IEC 60364-7-712 resp. HD 60364-7-712.

They are intended for permanent use outdoor and indoor, for free movable, free hanging and fixed installation.

It is also permitted to install the cables in conduit or trunking systems.

Halogen free low smoke cables are intended to reduce the risks for people and goods in the event of fire, for example in buildings.

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

They are inherently short-circuit and earth fault proof acc. to IEC 60364-5-52.

The expected period of use under normal usage conditions as specified in and EN 50618 is at least 25 years.

Based on UL's Crushing, Impact Resistance and Crushing Resistance Test, ÖLFLEX® SOLAR XLWP cables will be suitable for the installation underground if the cable is laid in a cable trench acc. to IEC 60364-5-52 resp. VDE 0100-520, or comparable standards. They are not intended for direct burial.

For underground use, installation in conduits or for open wiring even in water, where the cables can be / are exposed to uncontaminated water (salt or fresh water), the use is only permitted under the following conditions:

Submersion depth, max. 1 m

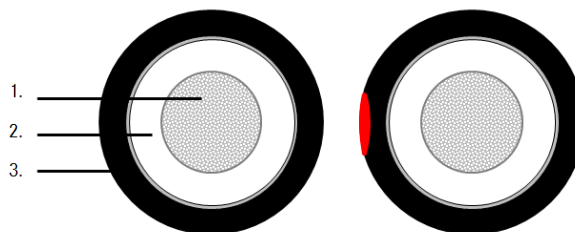
Water temperature 5 °C up to 40 °C

Additional tensile force or shearing during installation and operation has to be ruled out.

## Design


Design Sheathed single core cable acc. to EN 50618

Certification 2.5 mm<sup>2</sup> up to 300 mm<sup>2</sup>  
H1Z2Z2-K acc. to EN 50618  
TÜV Rheinland certificate with No. R 50345247 (H1Z2Z2-K)  
R 50425473 (H1Z2Z2-K)



- |                    |  |
|--------------------|--|
| 1. Conductor       | Fine wire strands of tinned copper acc. to IEC 60228, conductor class 5  |
| 2. Core insulation | Electron beam cross-linked polymer compound acc. to EN 50618, halogen free<br>Colour: White  |
| 3. Outer sheath    | Electron beam cross-linked Co-Polymer acc. to EN 50618, halogen free<br>Colour: Black, or Black with red stripe, or Black with blue stripe |

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### Electrical properties

Rated voltage $U_0/U$	1.0/1.0 kV AC RMS acc. to EN 50618 1.5/1.5 kV DC acc. to EN 50618
Max. permissible operating voltage	1.8 kV DC acc. to EN 50618
Test voltage	6.5 kV AC acc. to EN 50618
Current carrying capacity	EN 50618, Table A.3 & A.4
DC voltage resistant in water after ageing	EN 50395, Section 9 (3 % NaCl), after water submersion @ 0.08 bar in pressure

### Mechanical and thermal properties

Minimum ambient temperature fixed installation	-40 °C
Conductor temperature, fixed installation	up to +90 °C acc. to EN 50618
Conductor temperature, fixed installation	up to +120 °C (20.000 hours acc. to IEC 60216-2) acc. to EN 50618
Minimum temperature, during installation and handling	-25 °C acc. to EN 50618
Max. storage temperature	+40 °C acc. to EN 50618
Max. short circuit temperature	+250 °C (5s) acc. to EN 50618
Minimum bending radius, occasional flexing	15 x outer diameter
Minimum bending radius, stationary use	4 x outer diameter for outer diameter ≤ 8 mm 5 x outer diameter for outer diameter > 8 mm
Weather and UV resistance	acc. to EN 50618, Appendix E
Ozone resistance	acc. to EN 50618
Halogen-free	acc. to EN 50618 acc. to IEC 60754-1 resp. EN 60754-1 & IEC 60754-2 resp. EN 60754-2
Smoke density	acc. to EN 50618 acc. to IEC 61034-2 resp. EN 61034-2
Flammability	flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2
Acid and alkaline resistance	acc. to EN 50618 acc. to EN 60811-404 (oxalic acid and sodium hydroxide)
Underground use	acc. to UL 1277, Section 19 (Crushing Test) acc. to UL 854, Section 23 (Impact Resistance Test) acc. to UL 854, Section 24 (Crushing Resistance Test)

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Presence of water                      Permanent submersion AD8 acc. to IEC 62440 in unmoved water up to 1 m maximum submersion depth, and within a water temperature range from 5 °C up to 40 °C

General requirements                      These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive)

Environmental information                      These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

### Exemplary versions

(further versions on request)

Part. No.	Colour of Core insulation	Colour of Outer sheath with/without Outer stripe	Nominal Conductor Cross Section [mm <sup>2</sup> ]	Nominal Outer diameter [mm]
1023600	white	black	2.5	5.4
1023601	white	black	4	5.8
1023602	white	black	6	6.4
1023603	white	black	10	7.6
1023604	white	black	16	9.1
1023605	white	black	25	11.2
1023606	white	black	35	12.8
1023612	white	black	185	26.0
1023613	white	black	240	29.2
1023620	white	black + red stripe	2.5	5.4
1023621	white	black + red stripe	4	5.8
1023622	white	black + red stripe	6	6.4
1023623	white	black + red stripe	10	7.6
1023624	white	black + red stripe	16	9.1
1023625	white	black + blue stripe	4	5.8
1023626	white	black + blue stripe	6	6.4