Application

ÖLFLEX® SOLAR XLR-E [I+E] cables are weather- and UV-resistant photovoltaic cables.
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 of solar panels among themselves and as extension cable between the individual module strings or the DC/AC inverter.

Recommended use of cables for PV systems acc. to IEC 62930 and 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.
They are not intended for direct burial.
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 IEC 62930 and EN 50618 is at least 25 years.

The cable should be installed acc. to VDE 0100 - 520, IEC 60364-5-52, EN 50174-1 or comparable standards.
Long-term, permanent storage or constant use of the cables in or underwater is not permitted.
It has to be ensured that no long-term contact with water will occur and that any waterlogging is sure to be drawn away.

Design

Design	Sheathed single core cable acc. to IEC62930 and EN 50618
Code Designation 1x1.5 mm² to 1x300mm²	62930 IEC 131 H1Z2Z2-K
Certification	TÜV Rheinland certificate with No. R 50462071 (62930 IEC 131) TÜV Rheinland certificate with No. R 50345247 (H1Z2Z2-K) R 50425473 (H1Z2Z2-K)
Conductor	Fine wire strands of tinned copper acc. to IEC 60228 resp. EN 60228, class 5
Core insulation	Electron beam cross-linked polyolefin co-polymer acc. to IEC 62930 and EN 50618, halogen free Colour: White
Outer sheath	Electron beam cross-linked polyolefin co-polymer acc. to IEC 62930 and EN 50618, halogen free Colour: black or blue or red

Electrical properties

Rated voltage U_0/U	1.0/1.0 kV AC RMS acc. to IEC 62930 and EN 50618 1.5/1.5 kV DC acc. to IEC 62930 and EN 50618
Max. permissible operating voltage	1.8 kV DC acc. to IEC 62930 and EN 50618
Test voltage	6.5 kV AC acc. to IEC 62930 and EN 50618
Current carrying rating	IEC 62930, Table A.3 & A.4 and EN 50618, Table A.3 & A.4

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Mechanical and thermal properties

Minimum ambient temperature fixed installation	-40 °C
Conductor temperature, fixed installation	up to +90 °C maximum conductor temperature during normal continuous operation acc. to IEC 62930 and EN 50618 up to +120 °C (maximum conductor temperature limited to 20.000 hours acc. to IEC 60216-2) acc. to IEC 62930 and EN 50618
Minimum temperature, during installation and handling	-25 °C acc. to IEC 62930 and EN 50618
Max. storage temperature	+45 °C acc. to IEC 62930 +40 °C acc. to EN 50618
Max. short circuit temperature	+250 °C (5s) acc. to IEC 62930 and 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/UV resistance	acc. to IEC 62930, Appendix E and EN 50618, Appendix E
Ozone resistance	acc. to IEC 62930 and EN 50618
Halogen-free	acc. to IEC 62930 and EN 50618 acc. to IEC 60754-1 resp. EN 60754-1 and IEC 60754-2 resp. EN 60754-2
Smoke density	acc. to IEC 62930 and 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 alkali resistance	acc. to IEC 62930 and EN 50618 acc. to EN 60811-404 (oxalic acid and sodium hydroxide solution)
Presence of water	AD7 acc. to EN 50618
Salt mist resistance	acc. to DIN EN 60068-2-11
Ammonia resistance	Test requirements based on EN 50618 Medium: 10 % ammonium hydroxide 7d, 23 ± 2°C resp. 21d, 23 ± 2°C Deviation: ± 30 %
CTI - Determination	acc. to IEC 60112, CTI 600
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)

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