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| 38115805 | DATA SHEET |  |
| Valid from: 2024-02-27 | ÖLFLEX® SOLAR H1 BUR | |

Application

ÖLFLEX® SOLAR H1 BUR 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.

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.

Based on UL's Impact-Resistance and Crushing-Resistance Test and an additional AD8 rating ÖLFLEX® SOLAR H1 BUR cables will be suitable for the installation underground if the cable is laid in a cable trench acc. to VDE 0891-6, Section 4.2, or comparable standards. Wiring systems shall be selected and erected so as to minimize the damage arising from mechanical stress, e.g. by impact, penetration or compression during installation, use or maintenance.

For underground use, installation in conduits is allowed. Where water may collect or condensation may form in wiring systems, provision shall be made for its escape.

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

Design

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| Design | Sheathed single core cable acc. to IEC62930 and EN 50618 |
| Code Designation | 62930 IEC 131: 1x4 mm ² to 1x10 mm ² H1Z2Z2-K: 1x4 mm ² to 1x10 mm ² |
| Certification | TÜV Rheinland certificate with No. R 50598420 (62930 IEC 131) TÜV Rheinland certificate with No. R 5059841B (H1Z2Z2-K) EN 13501-6 and EN 50575, Class Dca Classification of fire behavior (article/dimension range see WN38115805-1_CPR) |
| Conductor | Fine wire strands of tinned copper acc. to IEC 60228 resp. EN 60228, class 5 |
| Core insulation | cross-linked polyolefin co-polymer acc. to IEC 62930 and EN 50618, halogen free Colour: White |
| Outer sheath | cross-linked polyolefin co-polymer acc. to IEC 62930 and EN 50618, halogen free Colour: black or blue or red |



Electrical properties

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| 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

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| 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 IEC 60811-404 resp. EN 60811-404 (oxalic acid and sodium hydroxide solution) |
| Underground use | acc. to UL 854, Section 23 (Impact Resistance Test) acc. to UL 854, Section 24 (Crushing Resistance Test) |
| Presence of water | Permanent submersion AD8 acc. to IEC 62440 and IEC 60364-5-51, tested acc. to EN 50525-2-21, appendix D and E |

General requirements These cables are conform to the EU Directive 2014/35/EU (Low Voltage Directive)
A part of these cables (see www.lappkabel.com/cpr) are classified acc. to the EU-Regulation no. 305/2011 (CPR).

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

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| 44428277 | DATA SHEET |  |
| Valid from: 06.02.2024 | EPIC® SOLAR 4 GEN2 MALE CONNECTOR | |

Description

- Low contact-resistance for efficient power transmission
- Crimp connection for field mounting

General Characteristics

| | |
|-----------------------|------------------------|
| Series | EPIC® SOLAR 4 GEN2 |
| Rated voltage | 1500 V DC |
| Rated impulse voltage | 16 kV |
| Contact resistance | < 0.5 mOhm |
| Flammability Class | V-0 |
| Protection | IP 65 / IP 68, (1m/1h) |
| Protection class | II |
| Temperature range | -40°C to +85°C |



Materials and Surfaces

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| Insulating Body | Polycarbonate |
| Nut | Polyamid |
| Contact | Copper alloy, tin plated |

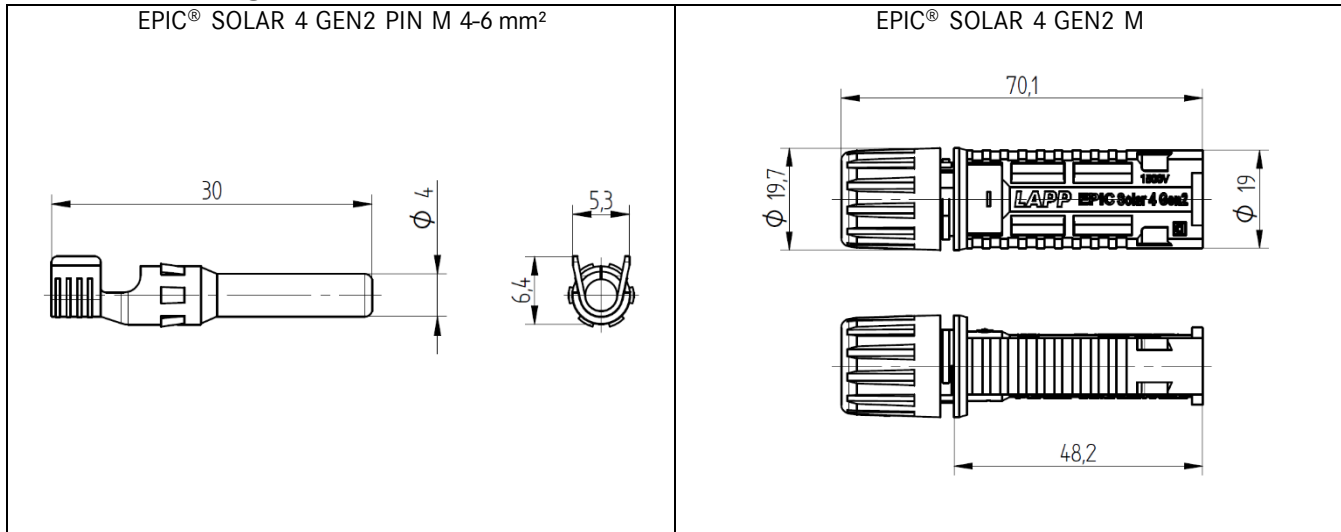
| Article Number | Article | Description | Cross section [mm ²] | Cable clamping range [mm] | Rated current [A] |
|--|--|--|----------------------------------|---------------------------|-------------------|
| EPIC® SOLAR 4 GEN2, male field-mountable, inclusive contacts | | | | | |
| 44428277 | EPIC® SOLAR 4 GEN2 M 4-6 5.2-7.0mm | male connector incl. contacts 4-6mm ² | 4 - 6 | 5,2 - 7,0 | 50 |
| EPIC® SOLAR 4 GEN2, male field-mountable, exclusive contacts | | | | | |
| 44428270 | EPIC SOLAR 4 GEN2 M 5.2-7.0mm | male connector without contacts (100 pcs) | - | 5,2 - 7,0 | 50 |
| 381166461 | EPIC SOLAR 4 GEN2 M 5.2-7.0mm | male connector without contacts (700 pcs) | - | 5,2 - 7,0 | 50 |
| EPIC® SOLAR 4 GEN2, male contacts | | | | | |
| 44428272 | EPIC SOLAR 4 GEN2 PIN M 4-6mm ² | male contacts on reel (2500 pcs) | 4 - 6 | - | - |

| Article Number | Cross section [mm ²] | Max. permitted current [A] |
|----------------|----------------------------------|----------------------------|
| 44428277 | 4 | 40 |
| 44428277 | 6 | 50 |

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| 44428277 | DATA SHEET |  |
| Valid from: 06.02.2024 | EPIC® SOLAR 4 GEN2 MALE CONNECTOR | |

Technical Drawings



Solar Energy



UV-resistant



Waterproof



Info

4 mm connector system with double hook
Field-mountable solar connector

Application range

Photovoltaic plants
Crystalline and thin-film constructions
Solartracker


Product features

TÜV SÜD certified
Inclusive contacts

Remark

Photographs are not to scale and do not represent detailed images of the respective products.

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| 44428278 | DATA SHEET |  |
| Valid from: 06.02.2024 | EPIC® SOLAR 4 GEN2 FEMALE CONNECTOR | |

Description

- Low contact-resistance for efficient power transmission
- Crimp connection for field mounting



General Characteristics

| | |
|-----------------------|------------------------|
| Series | EPIC® SOLAR 4 GEN2 |
| Rated voltage | 1500 V DC |
| Rated impulse voltage | 16 kV |
| Contact resistance | < 0.5 mOhm |
| Flammability Class | V-0 |
| Protection | IP 65 / IP 68, (1m/1h) |
| Protection class | II |
| Temperature range | -40°C to +85°C |

Materials and Surfaces

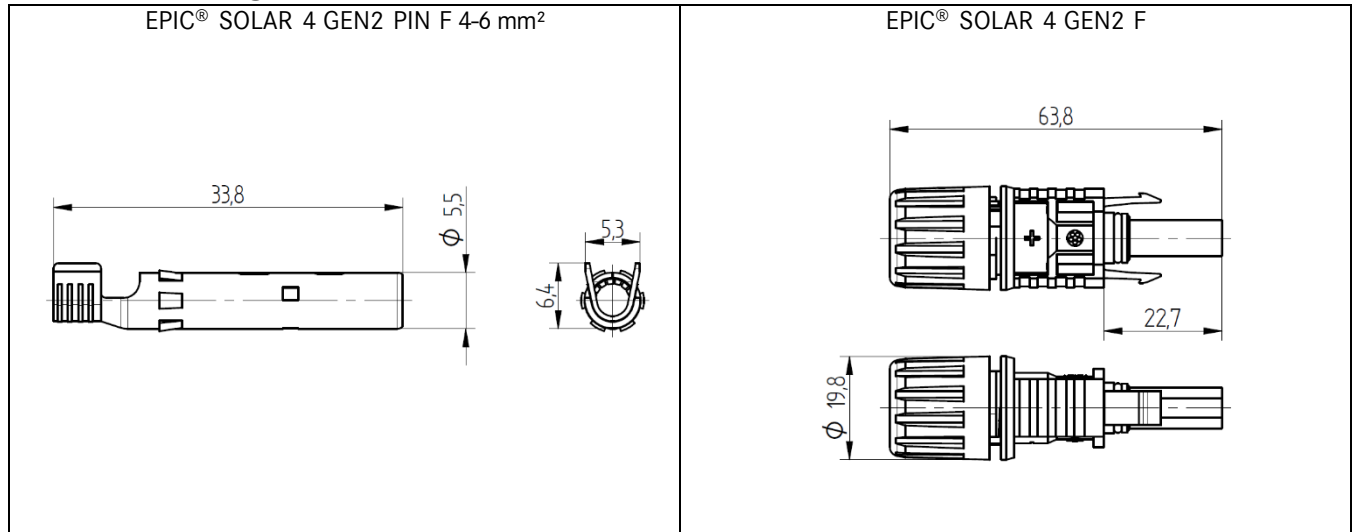
| | |
|-----------------|--------------------------|
| Insulating Body | Polycarbonate |
| Nut | Polyamid |
| Contact | Copper alloy, tin plated |

| Article Number | Article | Description | Cross section [mm ²] | Cable clamping range [mm] | Rated current [A] |
|--|--|--|----------------------------------|---------------------------|-------------------|
| EPIC® SOLAR 4 GEN2, female field-mountable, inclusive contacts | | | | | |
| 44428278 | EPIC® SOLAR 4 GEN2 F 4-6 5.2-7.0mm | female connector incl. contacts 4-6mm ² | 4 - 6 | 5,2 - 7,0 | 50 |
| EPIC® SOLAR 4 GEN2, female field-mountable, exclusive contacts | | | | | |
| 44428271 | EPIC SOLAR 4 GEN2 F 5.2-7.0mm | female connector without contacts (100 pcs) | - | 5,2 - 7,0 | 50 |
| 381166462 | EPIC SOLAR 4 GEN2 F 5.2-7.0mm | female connector without contacts (700 pcs) | - | 5,2 - 7,0 | 50 |
| EPIC® SOLAR 4 GEN2, female contacts | | | | | |
| 44428273 | EPIC SOLAR 4 GEN2 PIN F 4-6mm ² | female contacts on reel (2500 pcs) | 4 - 6 | - | - |

| Article Number | Cross section [mm ²] | Max. permitted current [A] |
|----------------|----------------------------------|----------------------------|
| 44428278 | 4 | 40 |
| 44428278 | 6 | 50 |

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44428278

DATA SHEETValid from:
06.02.2024**EPIC® SOLAR 4 GEN2 FEMALE CONNECTOR****Technical Drawings**

Solar Energy



UV-resistant



Waterproof

**Info**

4 mm connector system with double hook
Field-mountable solar connector

Application range

Photovoltaic plants
Crystalline and thin-film constructions
Solartracker

Product features

TÜV SÜD certified
Inclusive contacts

Remark

Photographs are not to scale and do not represent detailed images of the respective products.

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