

ÖLFLEX[®] SOLAR XLR and XLR TF

DB 0025905EN

valid from: 25.02.2010

1. LAPP Designation

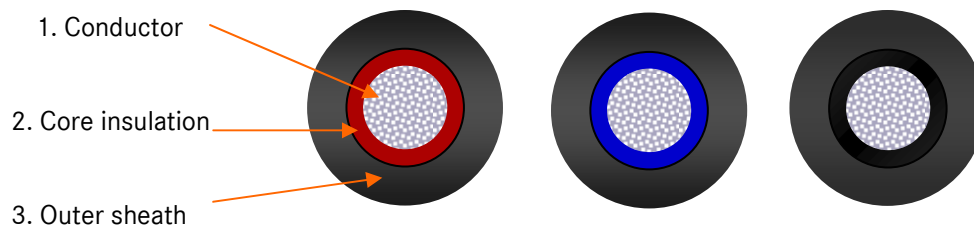
ÖLFLEX[®] SOLAR XLR

2. Application

ÖLFLEX[®] SOLAR XLR cables are weather-, abrasion- and UV-resistant. These halogen free, double insulated, cross-linked solar cables are suitable for permanent outdoor use. They are for use for photovoltaic systems both for cabling of solar modules among themselves and as extension cable between the individual module strings and DC / AC inverter.

Special features are the extended temperature range and that they achieve best values concerning UV-, ozone- and abrasion resistance. The cables are Type Approved by TÜV Rheinland according latest version 2 PfG 1169/08.2007 (PV1-F).

3. Cable design



1. Conductor:	Fine wire strands of tinned copper according to IEC 60228, Class 5
2. Core insulation:	Temperature resistant and halogen free Co-Polyolefine, electron beam cross-linked Colours: Black, red resp. blue
3. Outer sheath:	Flame retardant and halogen free Co-Polymer, electron beam cross-linked, highly weather- and UV- resistant Jacket colour: Black

4. Electrical Properties

Nominal voltage U_0/U acc. VDE	AC 600/1000 V / DC 900/1500 V
Max. permitted DC voltage	1.8 kV (Conductor/Conductor. non earthed system)
Working voltage acc. TÜV 2 PfG 1169	DC 1000 V
Test voltage	AC 6,5 kV
Voltage resistance tests	according to EN 50395

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5. Thermal Properties

Temperature range	fixed installation: -40 °C up to +120 °C max. conductor temperature
Temperature range acc. to TÜV 2 PfG 1169/08.2007	-40 °C up to +90 °C
Thermal endurance test	according to EN 60216-2 (temperature index +120 °C; exp. service life 25 years)
High temperature pressure test	according to EN 60811-3-1
Short-circuit temperature	+200 °C / 5 sec.
Damp-Heat resistance	according to EN 60068-2-78 with 85% humidity

6. Mechanical Properties

Minimum bending radius	occasional flexing: 15 x cable diameter fixed installation: 5 x cable diameter
Dynamic penetration	according to TÜV 2 PfG 1169/08.2007 Annex F
Notch propagation	according to TÜV 2 PfG 1169/08.2007 Annex G
Tensile strength and elongation of insulation and jacket	according to EN 60811

7. Chemical Properties

Ozone resistance	according to EN 50396 part 8.1.3 Method B
Weathering- and UV resistance	according to HD 605/A1
Flame characteristics	flame retardant according to IEC 60332-1-2
Halogen free	according to TÜV 2 PfG 1169/08.2007 Table B.1: EN 50267-2-2, EN 50267-2-1, Annex C, EN 60684-2
Acid and alkaline resistance	according to EN 60811-2-1 (Oxal acid and sodium hydroxid)

8. EC Directives

The cables are conform to the EC-Directives ECD 2006/95/EC (Low Voltage Directive) and RoHS 2002/95/EC (Restriction of the use of certain hazardous substances).

9. Approvals

TÜV Rheinland	TÜV Type Approved according to 2 PfG 1169/08.2007
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10. Dimensions and versions

Part No.	Core colour	Outer sheath colour	Conductor cross section	Outer diameter nominal in mm
1. Thin-Film Version				
0025905	black	black	1 X 1.5	5.4 +/- 0.2
0025911	red	black	1 X 1.5	5.4 +/- 0.2
0025917	blue	black	1 X 1.5	5.4 +/- 0.2
0025923	black	black	1 X 2.5	5.4 +/- 0.2
0025926	red	black	1 X 2.5	5.4 +/- 0.2
0025927	blue	black	1 X 2.5	5.4 +/- 0.2
0025943	black	black	1 X 4	6.0 +/- 0.2
0025946	red	black	1 X 4	6.0 +/- 0.2
0025947	blue	black	1 X 4	6.0 +/- 0.2
2. Standard Version				
0025906	black	black	1 X 2.5	6.0 +/- 0.2
0025912	red	black	1 X 2.5	6.0 +/- 0.2
0025918	blue	black	1 X 2.5	6.0 +/- 0.2
0025907	black	black	1 X 4	6.5 +/- 0.2
0025913	red	black	1 X 4	6.5 +/- 0.2
0025919	blue	black	1 X 4	6.5 +/- 0.2
0025908	black	black	1 X 6	7.1 +/- 0.2
0025914	red	black	1 X 6	7.1 +/- 0.2
0025920	blue	black	1 X 6	7.1 +/- 0.2
0025909	black	black	1 X 10	8.9 +/- 0.2
0025915	red	black	1 X 10	8.9 +/- 0.2
0025921	blue	black	1 X 10	8.9 +/- 0.2
0025910	black	black	1 X 16	9.8 +/- 0.2
0025916	red	black	1 X 16	9.8 +/- 0.2
0025922	blue	black	1 X 16	9.8 +/- 0.2