

KEYLIOS® 1.5/1.5kV DC - 1/1kV AC (Full Dielectric Version)

Contact

Market information
industryprojects.business@nexans.com

KEYLIOS® 1.5/1.5kV DC - 1/1kV AC are low voltage unarmored cables.

DESCRIPTION

Application

KEYLIOS® 1.5/1.5kV DC - 1/1kV AC, XLPE insulated cables, offer exceptional performances and long-term reliability with an expected life time of more than 25 years. They are recommended for usage in utility-scale solar plants. By design, it makes them perfectly suitable for above ground installation and, with the reinforced sheath, for underground installation. While the Energyflex® cables are used in order to connect the solar strings onto the combiner boxes, the **KEYLIOS® 1.5/1.5kV DC - 1/1kV AC** unarmored cables will complete the LV-DC network from the combiner boxes to the inverters, and then from the inverter to the transformer station.

Universal Use

KEYLIOS® 1.5/1.5kV DC - 1/1kV AC can be used either on the DC link with an earth polarity or after the AC inverter when using an anti PID (potential inductive deterioration). The **KEYLIOS® 1.5/1.5kV DC - 1/1kV AC** cable is available in two versions :

- Unarmored version for above ground installations,
- Unarmored version with reinforced sheath for direct buried installations depending on local specifications. In this case, we recommend mechanical laying with sand bedding in the trench.

Design

- Single core cable with aluminum conductor
- XLPE insulation
- PVC outer-sheath or reinforced PVC outer-sheath

(insulation thickness and dielectric test according to IEC 60502-1, LCIE test report n° 159694-732611)

Recommended Use

Renewable Energies for photovoltaic solar plants.
These cables are suitable for above ground installation or underground installation using the reinforced sheath cable version.

STANDARDS

International IEC 60228;
IEC 60502-1



Conductor flexibility
Class 2



Mechanical resistance to impacts
Condition AG 2 (medium severity)
acc.to HD 60364-5-52



Max. conductor temp. in service
90 °C



Operating temp.
-25 - 60 °C



Flame retardant
IEC 60332-1



Water proof
AD8



U.V resistance
Yes



Weather resistance
Very good

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CHARACTERISTICS

Construction characteristics

Conductor material	Stranded aluminum
Insulation	Cross-linked polyethylene
Outer sheath	PVC
Sheath colour	Black
Conductor flexibility	Class 2
Conductor shape	Circular

Electrical characteristics

Rated Voltage U ₀ /U	1.5/1.5 kV DC – 1/1 kV AC
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Mechanical characteristics

Mechanical resistance to impacts	Condition AG 2 (medium severity) acc.to HD 60364-5-52
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Usage characteristics

Max. conductor temperature in service	90 °C
Short-circuit max. conductor temperature	250 °C
Operating temperature, range	-25 - 60 °C
Flame retardant	IEC 60332-1
Water proof	AD8
U.V resistance	Yes
Weather resistance	Very good
Chemical resistance	Accidental
RoHS conform	RoHS 2011/65/EU

PRODUCT LIST

Nexans Ref.	Country Ref.	Name	Conductor cross-section [mm ²]	Number of cores
🔌 10282295	-	Keylios Alu 1x70 1.5/1.5kV DC - 1/1kV AC Reinforced Sheath	70	1
🔌 10282289	-	TWISTAL Keylios 1,5/1,5kV DC 2x1x70 GR	70	2
🔌 10280741	-	1x50 Al Keylios 1,5/1,5kV DC-1/1kV AC	50	1
🔌 10282294	-	1x50 Al Keylios 1,5/1,5kV DC-1/1 AC GR	50	1
🔌 10280742	-	1x70 Al Keylios 1,5/1,5kV DC-1/1kV AC	70	1
🔌 10282286	-	TWISTAL Keylios 1,5/1,5kV DC 2x1x50	50	2
🔌 10282287	-	TWISTAL Keylios 1,5/1,5kV DC 2x1x50 GR	50	2
🔌 10282288	-	TWISTAL Keylios 1,5/1,5kV DC 2x1x70	70	2
🔌 10282290	-	TWISTAL Keylios 1,5/1,5kV DC 2x1x95	95	2
🔌 10282291	-	TWISTAL Keylios 1,5/1,5kV DC 2x1x95 GR	95	2
🔌 10282292	-	TWISTAL Keylios 1,5/1,5kV DC 2x1x120	120	2
🔌 10282293	-	TWISTAL Keylios 1,5/1,5kV DC 2x1x120 GR	120	2
🔌 10282271	-	TWISTAL Keylios 1/1kV AC 3x1x70	70	3

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10282272	-	TWISTAL Keylios 1/1kV AC 3x1x70 GR	70	3
10282273	-	TWISTAL Keylios 1/1kV AC 3x1x95	95	3
10282274	-	TWISTAL Keylios 1/1kV AC 3x1x95 GR	95	3
10282275	-	TWISTAL Keylios 1/1kV AC 3x1x120	120	3
10282276	-	TWISTAL Keylios 1/1kV AC 3x1x120 GR	120	3
10282278	-	TWISTAL Keylios 1/1kV AC 3x1x150 GR	150	3
10282279	-	TWISTAL Keylios 1/1kV AC 3x1x185	185	3
10282280	-	TWISTAL Keylios 1/1kV AC 3x1x185 GR	185	3
10282281	-	TWISTAL Keylios 1/1kV AC 3x1x240	240	3
10282277	-	TWISTAL Keylios 1/1kV AC 3x1x150	150	3
10282282	-	TWISTAL Keylios 1/1kV AC 3x1x240 GR	240	3
10282283	-	TWISTAL Keylios 1/1kV AC 3x1x300	300	3
10282284	-	TWISTAL Keylios 1/1kV AC 3x1x300 GR	300	3
10282285	-	TWISTAL Keylios 1/1kV AC 3x1x400	400	3
10280743	-	Keylios Alu 1x95 1.5/1.5kV DC - 1/1kV AC	95	1
10282296	-	Keylios Alu 1x95 1.5/1.5kV DC - 1/1kV AC Reinforced Sheath	95	1
10280784	-	Keylios Alu 1x120 1.5/1.5kV DC - 1/1kV AC	120	1
10280785	-	Keylios Alu 1x120 1.5/1.5kV DC - 1/1kV AC Reinforced Sheath	120	1
10280479	-	Keylios Alu 1x150 1.5/1.5kV DC - 1/1kV AC	150	1
10282297	-	Keylios Alu 1x150 1.5/1.5kV DC - 1/1kV AC Reinforced Sheath	150	1
10278897	-	Keylios Alu 1x185 1.5/1.5kV DC - 1/1kV AC	185	1
10282298	-	Keylios Alu 1x185 1.5/1.5kV DC - 1/1kV AC Reinforced Sheath	185	1
10276621	-	Keylios Alu 1x240 1.5/1.5kV DC - 1/1kV AC	240	1
10280787	-	Keylios Alu 1x240 1.5/1.5kV DC - 1/1kV AC Reinforced Sheath	240	1
10278387	-	Keylios Alu 1x300 1.5/1.5kV DC - 1/1kV AC	300	1
10280789	-	Keylios Alu 1x300 1.5/1.5kV DC - 1/1kV AC Reinforced Sheath	300	1
10280790	-	Keylios Alu 1x400 1.5/1.5kV DC - 1/1kV AC	400	1
10282299	-	Keylios Alu 1x400 1.5/1.5kV DC - 1/1kV AC Reinforced Sheath	400	1
10282269	-	TWISTAL Keylios 1/1kV AC 3x1x50	50	3
10282270	-	TWISTAL Keylios 1/1kV AC 3x1x50 GR	50	3
10282266	-	TWISTAL Keylios 1/1kV AC 4x1x50	50	4
10282267	-	TWISTAL Keylios 1/1kV AC 4x1x50 GR	50	4
10282264	-	TWISTAL Keylios 1/1kV AC 4x1x70	70	4
10282265	-	TWISTAL Keylios 1/1kV AC 4x1x70 GR	70	4
10282232	-	TWISTAL Keylios 1/1kV AC 4x1x95	95	4

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 10282233	-	TWISTAL Keylios 1/1kV AC 4x1x95 GR	95	4
 10280792	-	TWISTAL Keylios 1/1kV AC 4x1x150 GR	150	4
 10280793	-	TWISTAL Keylios 1/1kV AC 4x1x185	185	4
 10280794	-	TWISTAL Keylios 1/1kV AC 4x1x185 GR	185	4
 10276644	-	TWISTAL Keylios 1/1kV AC 4x1x240	240	4
 10280795	-	TWISTAL Keylios 1/1kV AC 4x1x240 GR	240	4
 10282229	-	TWISTAL Keylios 1/1kV AC 4x1x300	300	4
 10280791	-	TWISTAL Keylios 1/1kV AC 4x1x120 GR	120	4
 10282230	-	TWISTAL Keylios 1/1kV AC 4x1x150	150	4

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