LEONI BETAflam® Solar Cable

Excellent solution for floating PV

EN 50618 & UL 2000V approval

Resistant to extreme weather conditions. Direct burial.

Features

- **Water-resistance tested acc. to UL44**
- **EN50618 & UL 4703 (2000V) approval**
- **Direct burial**
- **Electron-beam cross-linked compounds**
- **UV, ozone and hydrolysis resistant**
- **Hight temperature resistance, the materials do not melt or flow**
- **Very long service life, good cold flexibility**
- **Improved encapsulation properties**

Sustainable, highly efficient energy

Floating solar systems offer many advantages:

- Sustainable
- Lower space costs than on the mainland
- Faster installation
- Reduced fire protection measures
- Intense, all-day sunshine without shading
- Greater power efficiency than mainland systems
- Lower system temperature because of water environment
- Particularly suitable for pumped storage lakes in the Alpine region

A floating solar system is exposed to extreme weather conditions for life. Scorching heat in summer (high UV radiation) and frost temperatures in winter add to the material. Cables are particularly exposed to these weather influences. They often hang between modules, with a high chance of water contamination or are buried directly in the underground.

LEONI

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www.powerandcables.com

EN 50618 & UL 2000V approval

Resistant to extreme weather conditions. Direct burial.

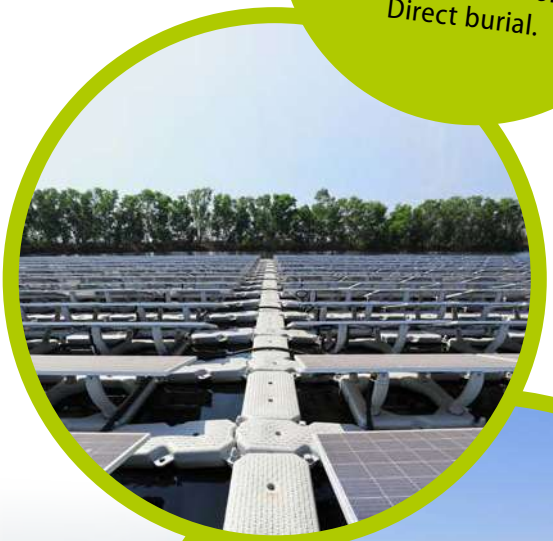
The **BETAflam Solar 125 flex UL/EN** is a flame-retardant, waterproof module and string cable. This cable, tested and certified according to EN50618 and UL 4703 (2000V), is also characterized by its durability (> 25 years) and its resistance to the effects of ozone, UV and hydrolysis. It is also suitable for direct burial. It can withstand high temperatures due to high quality, temperature stable and electron-beam cross linked polymer.

» BETAflam Solar 125 flex UL/EN is one of the few certified cables on the market which are best for floating solar systems.

• BAUART GEPRÜFT
• TYPE APPROVED

EN50618 zertified

LISTED
PV wire
USE-2



Energy transition – together with our customers

The market for floating PV systems is growing rapidly. LEONI offers its customers much more than just cable solutions. Sustainable, joint growth with our customers and partners corresponds to a win / win / win situation – for our customers, ourselves but also for the environment.

Talk to us about your projects. Together we will find a suitable, efficient and sustainable solution.

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Suitable for floating PV

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BETAflam® Solar 125 flex UL/EN

Photovoltaic power cables, halogen free, flame retardant

Advantages

- EN50618 & UL 2000V approval
- Electron-beam cross-linked compounds
- UV, ozone and hydrolysis resistant
- High temperature resistance, the materials do not melt or flow
- Very long service life*, good cold flexibility
- Compatible to all popular connectors
- Improved encapsulation properties

BETAflam® **Solar 125 flex UL/EN**

Applications

- Double insulated, electron-beam cross-linked cables for photovoltaic power applications.

Construction

■ Conductor	Tinned fine copper strands acc. to VDE 0295 / IEC 60228, Class 5
■ Insulation	XLPO, flame retardant, halogen free, electron-beam cross-linked
■ Jacket	XLPO, flame retardant, halogen free, electron-beam cross-linked, UV and ozone resistant
■ Jacket colour	● black

Electrical characteristics

Rated value	**U_0 1500 V DC / EN50618**
	(max. permitted voltage U_0 1800 V DC)
	UL 2000 V

Thermal characteristics

Operating temperature	–40 °C up to +120 °C
	–40 °F up to +248 °F
Ambient temperature	–40 °C up to +90 °C
min. 25 years**	–40 °F up to +194 °F
Max. short circuit temp.	+280 °C, +536 °F / 5 s

Bending radius

Fixed installation	> 4 × ∅
Occasionally moved	> 5 × ∅

Standards / Material properties

■ Fire performance	IEC 60332-1; UL 1581 1060 / VW1
■ Smoke emission	IEC 61034; EN 61034-2
■ Low fire load	DIN 51900
■ Approvals	EN50618; H1Z2Z2-K, UL4703 PV wire, cTÜVus
■ Application standards	NEC 2008 / UL PV wire; EN 50618, IEC 62930

Nominal cross section		Conductor ∅	Outer ∅	Resistance max. at 20°C	Weight	Fire load	Order no.
n × mm²		mm	mm	mΩ/m	kg/km	kWh/m	
1 × 2.5	14 AWG	1.95	6.85	8.21	67	0.187	310810
1 × 4	12 AWG	2.45	7.05	5.09	86	0.213	310811
1 × 6	10 AWG	3.00	7.60	3.39	109	0.238	310812
1 × 10	8 AWG	3.90	9.70	1.95	155	0.340	310813
1 × 16	6 AWG	5.00	10.80	1.24	224	0.605	312296
1 × 25	4 AWG	6.20	12.00	0.79	310	0.704	312297
1 × 35	2 AWG	7.70	13.50	0.56	418	0.871	312298
1 × 50	1 AWG	9.70	16.80	0.39	617	1.347	312299

Nominal cross section		Order no.	
n × mm²		8 × 1000 m	1 × 5000 m
1 × 2.5	14 AWG	*	310810V4
1 × 4	12 AWG	**310811V3**	310811V4
1 × 6	10 AWG	**310812V3**	*
1 × 10	8 AWG	*	*

* on request.
You will find more information on the standard packaging unit in our Solar catalogue ›
Further packaging units on request. **Bold** printed order no. = stock item

** Subject to the standard IEC 60216 -1 (Thermal endurance properties – Ageing procedures and evaluation of test results) and the test conditions specified in the EN50618 – 2014 (Electric cables for photovoltaic systems), a cable material should pass a test with specific test conditions described therein. The standard IEC60216 -1 further states that these test conditions simulate a lifetime of min. 25 years. LEONI warrants that the cables would successfully pass this test before the delivery to the customer.

05.2020/en

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