PHOTOVOLTAIC STRING AND MODULE CABLES

BETAflam® Solar 125 RV flex 1500 V DC

Photovoltaic power cables, halogen-free, flame retardant

Applications

Is used as photovoltaic cable between solar modules and inverters in a photovoltaic system with a rated value U_0 = 1.5 kV DC.

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, **with white or red marking and stripe**
Jacket colour	Black

Benefits

- EN 50618, IEC 62930 approval
- Electron-beam cross-linked compounds
- UV, ozone and hydrolysis resistant
- High temperature resistance, the materials do not melt or flow
- Good cold flexibility
- Very long service life >25 years at 90 °C
- Compatible to all popular connectors

Electrical properties

Rated value	U_0	1500 V DC (max. permitted voltage U_0 1800 V DC)
Test voltage		6.5 kV AC, 50 Hz

Thermal properties

Operating temperature	−50 °C up to +120 °C
Ambient temperature	−50 °C up to +90 °C
Max. short circuit temperature	+280 °C / 5 s +536 °F / 5 s

Bending radius

Fixed installation	>4 × outer Ø
Occasionally moved	>5 × outer Ø

Standards / Material properties

Fire performance	IEC 60332-1; IEC 60332-3-25
Smoke emission	IEC 61034; EN 61034-2
Low fire load	DIN 51900
Approvals	EN 50618; H1Z2Z2-K; IEC 62930

Fire properties acc. to CPR

D_{ca}-s2, d2, a2	EN 50575; EN 13501-6
Fire performance D_{ca}	EN 50399
Low corr. of the combustion gases – halogen-free a2	EN 60754-2
Medium smoke density s2	EN 50399
Flaming droplets d2	EN 50399
No flame propagation	EN 60332-1-2
Material selection	RoHS-compliant

Nominal cross section (n × mm²)	Conductor Ø (mm)	Outer Ø (mm)	Resistance max. at 20 °C (mΩ/m)	Weight (kg/km)	Fire load (kWh/m)	Order no.	
						White[1]	Red[1]
1 × 2.5	1.95	5.00	8.21	46	0.095	313738	313739
1 × 4	2.45	5.50	5.09	61	0.109	313740	313741
1 × 6	3.00	6.10	3.39	82	0.127	313742	313743
1 × 10	3.90	7.20	1.95	126	0.158	313744	313745
1 × 16	5.00	8.50	1.24	190	0.213	313746	–
1 × 25	6.20	10.40	0.79	291	0.314	313747	–
1 × 35	7.70	11.90	0.56	400	0.392	313748	–
1 × 50	9.70	14.30	0.39	570	0.549	313749	–

Nominal cross section (n × mm²)	Order no					
	8 × 500 m		18 × 500 m		8 × 1000 m	
	White[1]	Red[1]	White[1]	Red[1]	White[1]	Red[1]
1 × 4	–	–	313740V2[2]	313741V2[2]	313740V3[2]	313741V3[2]
1 × 6	–	–	313742V2[2]	313743V2[2]	313742V3[2]	313743V3[2]
1 × 10	313744V3[2]	313745V3	–	–	–	–

Further packaging units on request.

[1] Jacket colour black with red or white inscription.

[2] Stock item.