



EN 50618 / IEC 62930 Solar PV & 1500 V DC Energy Storage Cables

Battery Energy Storage DC Cable

1500 V / 2000 V DC extra-flexible Class 5/6 tinned Cu halogen-free XLPO BESS battery rack



1500 V / 2000 V DC BESS Rated

Class 5/6 Tinned Cu + E-Beam XLPO

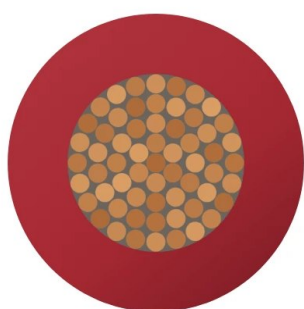
UL 1973 / VW-1 / IEC 60332-3 LSZH

Application

Battery Energy Storage DC Cable is a 1,500 V DC (up to 1,800 / 2,000 V DC max) single-core power interconnect cable engineered for utility-scale containerized and commercial Battery Energy Storage Systems (BESS). Combining an IEC 60228 Class 5 or Class 6 fine-

Typical uses: Utility-scale 1500 V DC BESS containers, Commercial & industrial energy storage, LiFePO4 battery pack & rack jumpers, PCS inverter & DC combiner cabinets, Data-centre HVDC & UPS battery rooms

Construction



Cross-section, not to scale

1	Class 5 / Class 6 tinned copper (IEC 60228)	IEC 60228
2	Halogen-free separator tape	EN 50618
3	Cross-linked LSZH XLPO insulation/sheath	EN 50618

Technical data

Typical values

Rated voltage	1,500 V DC (up to 1,800 / 2,000 V DC max) · 1,000 / 1,500 V AC	Dielectric test voltage	6.5 kV AC rms or 15 kV DC for 5 minutes
Insulation resistance	≥1,000 MΩ·km at +20 °C	Continuous operating temperature	-40 °C to +120 / +125 °C
Short-circuit temperature (5 s)	+250 °C thermoset cross-linked XLPO	Minimum bending radius	3 × D (≤50 mm ²) · 4 × D (>50 mm ²) for compact battery rack turns
Conductor flexibility	IEC 60228 Class 5 (standard) or Class 6 (extra-fine 0.15/0.20 mm strands)	Flame propagation & fire safety	UL 1581 VW-1, CSA FT1/FT4, IEC 60332-1-2 & IEC 60332-3-24 bunched flame
Halogen, smoke & electrolyte resistance	IEC 60754-1/2 zero halogen, IEC 61034-2 low smoke; resists carbonate electrolyte & battery acid	Standards	UL 1973 / UL 9540A component compliance, TÜV 2 PFG 2693, BS EN 50618 & IEC 62930

Sizes

12 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Designation	Metric AWG/MCM	Cond. Ø / Wall mm	Nom. OD mm	Copper kg/km	Total mass ≈ kg/km	Min. bend R mm
Battery Energy Storage DC Cable size schedule 12 sizes						
☐ BESS 1×16 mm ²	16 mm ² (6 AWG)	5.1 Ø · 1.5 mm	8.20	153.6	195.0	32.8
☐ BESS 1×25 mm ²	25 mm ² (4 AWG)	6.3 Ø · 1.6 mm	9.60	240.0	290.0	38.4
☐ BESS 1×35 mm ²	35 mm ² (2 AWG)	7.6 Ø · 1.6 mm	10.90	336.0	395.0	43.6
☐ BESS 1×50 mm ²	50 mm ² (1/0 AWG)	9.1 Ø · 1.8 mm	12.80	480.0	560.0	51.2
☐ BESS 1×70 mm ²	70 mm ² (2/0 AWG)	10.8 Ø · 1.8 mm	14.50	672.0	765.0	58.0
☐ BESS 1×95 mm ²	95 mm ² (3/0 AWG)	12.5 Ø · 2.0 mm	16.60	912.0	1,025.0	66.4
☐ BESS 1×120 mm ²	120 mm ² (4/0 AWG)	14.2 Ø · 2.0 mm	18.30	1,152.0	1,280.0	73.2
☐ BESS 1×150 mm ²	150 mm ² (300 MCM)	15.8 Ø · 2.2 mm	20.30	1,440.0	1,590.0	81.2
☐ BESS 1×185 mm ²	185 mm ² (350 MCM)	17.5 Ø · 2.2 mm	22.00	1,776.0	1,950.0	88.0
☐ BESS 1×240 mm ²	240 mm ² (500 MCM)	20.1 Ø · 2.4 mm	25.00	2,304.0	2,510.0	100.0
☐ BESS 1×300 mm ²	300 mm ² (600 MCM)	22.5 Ø · 2.6 mm	27.80	2,880.0	3,120.0	111.2
☐ BESS 1×400 mm ²	400 mm ² (777 MCM)	25.8 Ø · 2.8 mm	31.50	3,840.0	4,130.0	126.0

– Dimensions and tolerances conform to UL 1973 / UL 9540A / EN 50618 / IEC 62930.

Electrical data

12 sizes

Metric AWG/MCM	Max. DC R @ 20 °C Ω/km	Current in air A	Installed / duty A
16 mm ² (6 AWG)	1.240	135	108
25 mm ² (4 AWG)	0.795	180	144
35 mm ² (2 AWG)	0.565	225	180
50 mm ² (1/0 AWG)	0.393	285	228
70 mm ² (2/0 AWG)	0.277	355	284
95 mm ² (3/0 AWG)	0.210	430	344
120 mm ² (4/0 AWG)	0.164	500	400
150 mm ² (300 MCM)	0.132	575	460
185 mm ² (350 MCM)	0.108	655	524
240 mm ² (500 MCM)	0.082	775	620
300 mm ² (600 MCM)	0.065	895	716
400 mm ² (777 MCM)	0.050	1,050	840

– Reference ampacities at +30 °C ambient; apply duty-cycle or grouping correction factors per standard.

Standards and approvals

- ✓ TÜV 2 PFG 2693 / EN 50618 (1.5 kV DC)
- ✓ UL 3817 / UL 1973 Component
- ✓ UL VW-1 & CSA FT4 Flame
- ✓ IEC 60332-3-24 / EN 60754-1/2 LSZH
- ✓ RoHS 3 & REACH

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

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Email

info@tebaoflex.com

Web

tebaoflex.com/cables/battery-energy-storage-dc-cable



Typical values for this cable type, based on UL 1973 / UL 9540A / EN 50618 / IEC 62930. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.