flexible elastomer wind turbine torsion cable

# FDEHP 1.8/3 kV Screened

## FDEHP 1.8/3 kV (0.6/1 kV) GB/T 29631 Copper-Braid Screened EPR / LSZH

GB/T 29631 / NB/T 31034 · 1.8/3 kV (0.6/1 kV) · Flexible elastomer wind turbine




GB/T 29631 / NB/T 31034 | 1.8/3 kV (0.6/1 kV) (-40 to +90 °C) | Cold-Resistant Thermoset Elastomer J

## Application

FDEHP 1.8/3 kV (0.6/1 kV) GB/T 29631 Copper-Braid Screened EPR / LSZH Elastomer Wind Torsion Cable (GB/T 29631 / NB/T 31034) engineered for 1.8/3 kV (0.6/1 kV) wind turbine service across -40 to +90 °C (min. bend radius 6 × OD).

**Typical uses:** Onshore & Offshore Wind Turbine Yaw Drip Loops, Ultra-Cold (−55 °C) Arctic & High-Altitude Wind Farms, GB/T 29631 & NB/T 31034 Utility Wind Generators, Nacelle Auxiliary Power, Yaw & Pitch Motor Circuits

## Construction






Cross-section, not to scale

1. Class 5 Flexible Copper (1C, 3-5C or 6–3
2. EPR Primary Core Insulation (Code E)
3. Copper Wire Braid EMC Shield (Code P)
4. Cold-Resistant Thermoset Elastomer Jacke

## Technical data

Typical values

| | | | |
|---|---|---|---|
| **Rated voltage / operating system** | 1.8/3 kV (0.6/1 kV) (GB/T 29631 & NB/T 31034 FDEHP Screened Elastomer (-40 to +90 °C) Wind Cable Standard) | **Core / conductor construction** | Class 5 Flexible Copper (1C, 3-5C or 6–37C) — Finely stranded copper conductors for pitch & converter loops |
| **Primary dielectric / insulation** | EPR Primary Core Insulation (Code E) — 90 °C ethylene-propylene rubber insulation | **Continuous operating temperature** | −40…+90 °C (wind turbine nacelle, hub & tower duty) |
| **Low-temperature torsion & cold bend** | Verified cold-flex and torsion endurance across −40…+90 °C per GB/T 29631 & NB/T 31034 FDEHP Screened Elastomer (-40 to +90 °C) Wind Cable Standard | **Storage & transport temperature** | −40…+80 °C on export wooden/steel cable drum |
| **Outer jacket / sheath protection** | Cold-Resistant Thermoset Elastomer Jacket (Code H) — Low-smoke zero-halogen elastomer sheath rated -40 °C to +90 °C | **Minimum bending radius** | 6 × OD |
| **Intermediate screen / separator / core layer** | Copper Wire Braid EMC Shield (Code P) — Braided copper screen suppressing PWM converter noise | **Oil, grease, ozone & UV resistance** | Resistant to wind turbine gearbox oil, hydraulic fluid, ozone and UV weathering per GB/T 29631 & NB/T 31034 FDEHP Screened Elastomer (-40 to +90 °C) Wind Cable Standard |
| **Flame retardancy & smoke/halogen emission** | Flame-retardant and environmental performance verified per GB/T 29631 & NB/T 31034 FDEHP Screened Elastomer (-40 to +90 °C) Wind Cable Standard | **RoHS & REACH compliance** | RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant |
| **Standards** | GB/T 29631 & NB/T 31034 FDEHP Screened Elastomer (-40 to +90 °C) Wind Cable Standard | | |

## Sizes

3 standard constructions

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

| Order designation | Configuration | Core / stranding | Outer Ø ≈ mm | Net weight ≈ kg/km | Max. pulling kN ≈ | Min. bend R mm |
|---|---|---|---|---|---|---|
| **FDEHP 1.8/3 kV Screened Construction Schedule (−40…+90 °C)** 3 sizes | | | | | | |
| ☐ **FDEHP 1.8 7G1.5 mm²** | **7G1.5 mm² (or 7C × 16 AWG)** | **IEC 60228 Class 5/6 / Class K Cu** | **11.4** | **215** | **2.4** | **70** |
| ☐ **FDEHP 1.8 12G1.5 mm²** | **12G1.5 mm² (or 12C × 16 AWG)** | **IEC 60228 Class 5/6 / Class K Cu** | **14.8** | **345** | **4.1** | **90** |
| ☐ **FDEHP 1.8 18G2.5 mm²** | **18G2.5 mm² (or 18C × 14 AWG)** | **IEC 60228 Class 5/6 / Class K Cu** | **19.6** | **680** | **9.8** | **120** |

– Custom conductor cross-sections, core counts, pre-lugged tower kits and drum lengths available per GB/T 29631 & NB/T 31034 FDEHP Screened Elastomer (-40 to +90 °C) Wind Cable Standard.

## Electrical & thermal parameters

3 sizes

| Configuration | Max. DC $R_{20}$ Ω/km | Rating / Impedance | Operating temp. |
|---|---|---|---|
| **7G1.5 mm² (or 7C × 16 AWG)** | **13.30** | **1.8/3 kV (0.6/1 kV) (18 A)** | **−40…+90 °C** |
| **12G1.5 mm² (or 12C × 16 AWG)** | **13.30** | **1.8/3 kV (0.6/1 kV) (16 A)** | **−40…+90 °C** |
| **18G2.5 mm² (or 18C × 14 AWG)** | **7.98** | **1.8/3 kV (0.6/1 kV) (24 A)** | **−40…+90 °C** |

– Every production length undergoes routine conductor DC resistance, AC high-voltage spark/dielectric and dimensional verification.

## Standards and approvals

- GB/T 29631 / NB/T 31034 Compliant
- EN 10204 3.1 Factory Test Certificate
- CE, RoHS 2 (2011/65/EU) & 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
**+86 185 9591 3361**

Email
**info@tebaoflex.com**

Web
**tebaoflex.com/cables/fdehp-1-8-3kv-screened-epr-elastomer-torsion-cable**

Typical values for this cable type, based on GB/T 29631 & NB/T 31034 FDEHP Screened Elastomer (-40 to +90 °C) Wind Cable Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.