Wind turbine torsion cable for nacelle loops

TORSION CLASS · −40 °C

Multi-core power and control cable for the nacelle-to-tower loop and pitch runs, where the cable twists in both directions for the life of the turbine.

RATED VOLTAGE	TORSION	SHEATH	LOW TEMPERATURE
0.6/1 kV · 1.8/3 kV	±150 ° per metre	PUR	−40 °C

TYPICAL APPLICATIONS

- Nacelle-to-tower loop
- Pitch system and blade root
- Yaw deck and hub wiring
- Turbine auxiliary power and control

CONSTRUCTION

- Fine-strand copper conductor, Class 5 / 6
- EPR or XLPE insulation
- Optimised lay length for torsion
- PUR or PCP sheath, abrasion resistant
- Optional steel wire braid and screened pairs

TECHNICAL DATA

Rated voltage	0.6/1 kV · 1.8/3 kV	**Temperature**	−40 °C to +90 °C
Conductor	Fine-strand copper, Class 5 / 6	**Bending radius**	6 × OD moving, 4 × OD fixed
Insulation	EPR or XLPE	**Flame**	IEC 60332-1-2
Sheath	PUR or PCP	**Standard**	IEC 60502-1, TÜV 2 PfG 2577
Torsion	±150 ° per metre, 3 million cycles	**Packing**	500 m / 1000 m drums, cut loop lengths

Typical values. The final construction is confirmed on the order datasheet and the released drawing.

STANDARDS, TESTING AND DOCUMENTS

Routine tests	Conductor resistance, voltage test and insulation resistance on every length
Type tests	Type-test reports for each construction, witnessed by a third party on request
Documents with the drum	Packing list, drum list, routine test certificate, datasheet, CO / FORM A
Traceability	Drum number marked and recorded against the routine test certificate

OTHER CONSTRUCTIONS FROM THE SAME RANGE

Solar Tracking System Flexible Cable	www.zmsenergycable.com/products/special-energy-cables/solar-tracking-flexible-cable/
Energy Storage Monitoring Cable	www.zmsenergycable.com/products/special-energy-cables/energy-storage-monitoring-cable/

PACKING AND DELIVERY

Drum	Wooden or steel-framed export drum, 250–500 m per drum by cross-section
Packing	Sealed ends, protected lugs, desiccant, UV-resistant wrap
Marking	Drum no., designation, voltage, cross-section, length, gross weight
Lead time	15–25 working days for standard builds
Terms	FOB Qingdao, Tianjin or Shanghai. CIF, CFR and DAP on request

HOW TO ORDER

To quote, send the voltage class (U0/U), conductor material and cross-section, screen or armour, sheath, drum length, delivery port and the standard the project specifies. We return a released drawing, the test programme and a drum plan with the quotation.

SELECTION NOTES

How is torsion life verified?
Torsion resistance is verified by a cyclic test at the specified angle per metre, and the construction is released against a stated cycle count. Ask for the test report for the construction you are buying.

Can power and control cores be combined?
Yes. Mixed power and control cores in one cable reduce the number of loops in the tower. Screened pairs can be included for encoder and communication signals.

What is the minimum installation temperature?
−40 °C for the standard PUR construction. A −55 °C variant is available for cold-climate sites; cable should still be handled with care during installation.

Certification. Environmental management to ISO 14001:2015 and occupational health and safety to ISO 45001:2018, with CE marking under the EU low-voltage and EMC directives. Independent inspection and type testing are carried out through ISO/IEC 17020 and 17025 accredited laboratories. Certificate numbers and validity dates are published at www.zmsenergycable.com/certificates/.

Request a quotation for this cable

Send the specification sheet or the cable schedule and we return a released drawing, the test programme and a drum plan with the price.

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