NEW Aluminium & Copper Wind Cables

HELUWIND®
Wind turbine power cables and connection technology
Copper cables

Wind cables in the wind turbine’s nacelle place extreme torsional stress on power cables. HELUKABEL understands this and has added to its torsion cable portfolio. These cables have been rigorously tested in HELUKABEL’s wind turbine test simulator for up to 15,000 torsion cycles.

A power cable for vertical lifts/elevators in wind turbines has also been added to aid in climbing up tower walls and accessing the nacelle.

HELUWIND® WK 110-TORSION

Temperature Range — fixed & flexing: -40°C to +90°C
Nominal voltage — 300/500 V
Min. bending radius — fixed: 4 x Ø, flexing: 6 x Ø
Properties — oil resistant, flame retardant, low smoke, halogen free

HELUWIND® WK MS-SINGLE-TORSION 610

Temperature Range — fixed & flexing: -40°C to +90°C
Nominal voltage — 3,6/6 kV
Min. bending radius — fixed: 5 x Ø, flexing: 10 x Ø
Properties — flame retardant, low smoke, halogen free

HELUWIND® WK 110-TORSION MULTI*

Temperature Range — fixed & flexing: -40°C to +90°C
Nominal voltage — 300/500 V
Min. bending radius — fixed: 4 x Ø, flexing: 6 x Ø
Properties — oil resistant, flame retardant, low smoke, halogen free

* Uses core identification colour code: DIN VDE 0293:308

HELUWIND® WK MS-SINGLE-310-TORSION

Temperature Range — fixed & flexing: -40°C to +90°C
Nominal voltage — 1,8/3 kV
Min. bending radius — fixed: 4 x Ø, flexing: 6 x Ø
Properties — oil resistant, flame retardant, low smoke, halogen free

Connection technology

To ensure that our latest cables can connect to other wind turbine subsystems, we have expanded our connection technology range to include additional aluminium and aluminium/copper hybrid compression terminal pins, shear bolt connectors and lugs, junction boxes and cable connectors.

HELU-5-PAB-AL
- Aluminium alloy 99.5
- Die code information req. for hexagon crimp
- Tube filled with grease & closed with end cap (protection against drying out)

HELU-5-PAB-AL/CU
- Aluminium alloy 99.5 (tube) & bare copper (PIN) acc. to DIN EN 13601
- Die code information req. for hexagon crimp
- Tube filled with grease & closed with end cap (protection against drying out)

WK-SC-T shear bolt connector
- Easy and secure connection system for Cl. 5 Aluminium flexible cables tested to IEC 61238-1 Cl. A
- Easier & faster installation possible without application tooling
- For cable cross sections: 70 mm² - 500 mm²

Separable bolt connector w/ shear head
- For cable cross sections: 120 mm² - 400 mm²
- Tested acc. to IEC 61238-1 Cl. A
- For copper Cl. 5 & aluminium Cl. 2; not for use w/fine-wire ALU
Aluminium cables

Aluminium cables and wires are gaining popularity for their reduced weight (70 percent lighter than copper) and their ability to perform comparably to their copper counterparts with only a minimal size increase to the cable or wire’s diameter.

**HELUWIND® WK POWERLINE ALU MS-SINGLE**

- Temperature Range — flexing: -20°C to +90°C
- Nominal voltage — 3,6/6kV, 12/20kV, 18/30kV
- Max. bending radius — dynamic: 10 x Ø, continuous install: 8 x Ø
- Insulation/outer sheath material — ERP/CSP rubber compound

**HELUWIND® WK POWERLINE ALU MULTICORE**

- Temperature Range — fixed: -40°C to +90°C, flexing: -20°C to +90°C
- Nominal voltage — 600/1000V
- Approvals — IEC 60332-1, EN 60332-3 Cat C, EN 60754-1, EN 61034-2
- Properties — UV resistant, oil resistant, halogen free, flame retardant

**HELUWIND® WK POWERLINE ALU SINGLE**

- Temperature Range — static: -40°C to +105°C, motion: -20°C to +90°C
- Nominal voltage — 600/1000V
- Approvals — DIN VDE 0250-813, UL/CSA (in process), IEC 60332-1
- Properties — UV resistant, oil resistant, recyclable

**ALUMINIUM MV-90 & MV-105**

- Temperature Range — MV 90: 90°C (194°F) MV 105: 105°C (221°F)
- Maximum operating voltage — MV 90/MV 105 shielded: 5kV/8kV/15kV/25kV/35kV 100% and 133% IL
- MV 90 unsheilded: 2.4kV

**WK-SL-T shear bolt cable lug**
- Easy and secure connection system for Cl. 5 aluminium flexible cables tested to IEC: 61238-1 Cl. A
- For cable cross sections: 70 mm² to 500 mm²
- Easier & faster installation possible without application tooling

**Junction box**
- For cable cross sections: 25mm² - 300mm²
- Voltage level up to 42 kV
- Powder-coated metal housing or corrosion-resistant, high-grade steel for offshore uses
- For MS cable connection set type RST1

**Cable connection RST1**
- Screened, separable coupling connection system RST1, 630A up to 36kV for SF6-insulated switchgear with 630A bushings, Type C, 630/1250A acc. to CENELEC HD506 S1, EN 50180 & EN 50181
- For cable cross sections: 25mm² - 630mm²
HELUWIND® WK DLO 2kV-TORSION

Temperature range — flexing: -40°C up to +90°C
Nominal voltage — 2000V
Approvals — UL44 Type RW 90, CSA RW90, UL62, PRI, PRII,
ASTM B-3, AAR RP-585, MSHA, VW-1 FOR CT USE.
EPA 40 CFR Part 26, Subpart C, heavy metals per
Table 1, TCLP method
Flame tests — CSA FT1, FT4, IEEE 1202
Standard sizes — 8 AWG to 1111 kcmil

TRAYCONTROL® 610

Temperature range — UL/CSA TC & UL/AWM: -40°C up to +90°C
Nominal voltage — TC: 600 V, AWM & WTTCC: 1000 V
Approvals — Oil Res /II, Class1, Div. 2 per NEC Art. 336, 392, 501
UL: Type 2277 (WTTCC), Type1277 (TC), TC-ER, PL1C-ER
(18 AWG-12 AWG), ITC-ER (18 AWG-12 AWG),
Type MTW or Type AWM, NFPA 79, 90°C dry/75°C wet
CSA: c(UL) Type TC & CIC FT4, CSA AWM I/II A/B FT4
Standard sizes — 18 AWG to 500 kcmil

Fax reply to: 07150 9209-5501

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