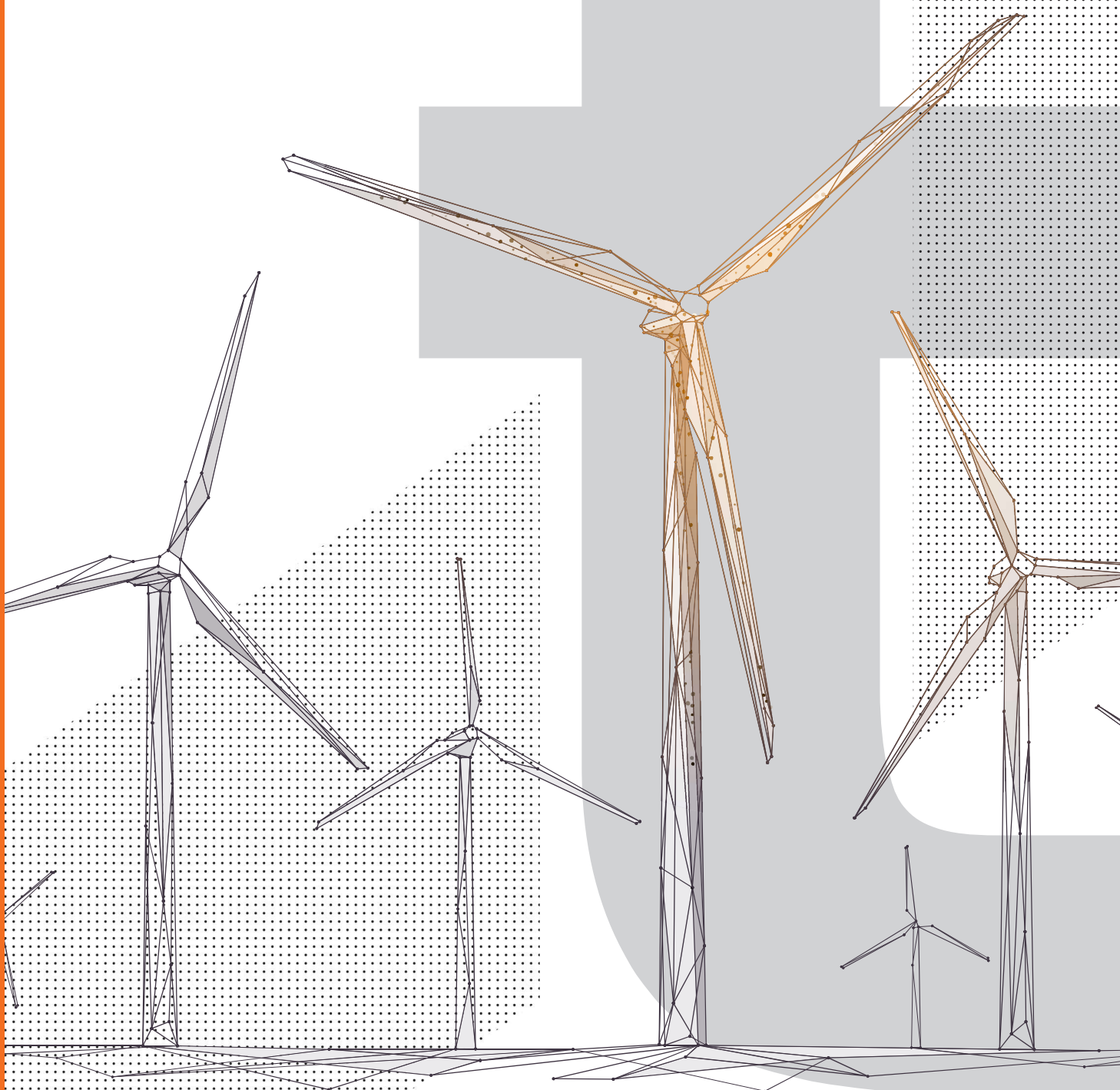




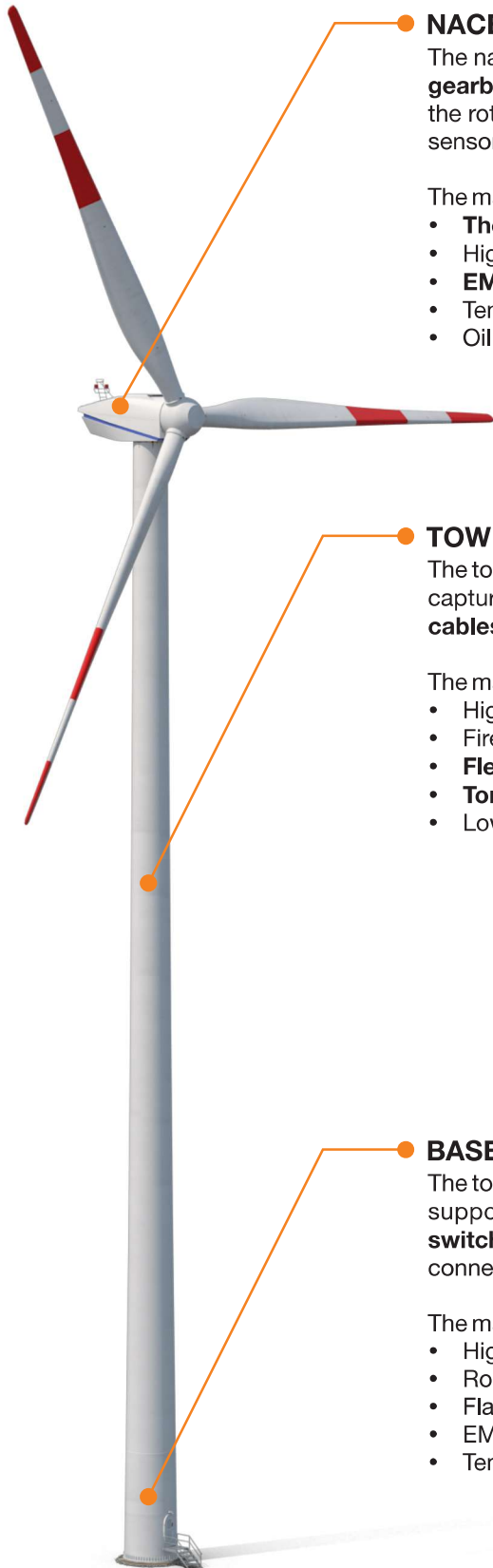
## Wind Turbine Cable Solutions

[www.tekima.com](http://www.tekima.com)



# Wind Turbine Towers

## Main components and cables' features



### NACELLE

The nacelle is the main housing on a wind turbine, containing the **generator**, **gearbox**, **yaw system**, and **control systems**. It converts wind energy from the rotor into electricity, with cabling that carries power down the tower and sensors for performance monitoring.

The main cable features used in the nacelle are:

- **Thermoplastic** and **Silicone** jacket material
- High **Flexibility**
- **EMI Shielding**
- Temperature, Fire and UV Resistant
- Oil and Chemical Resistance



### TOWER

The tower of a wind turbine supports the nacelle and rotor at high elevations to capture stronger winds. It houses internal **ladders**, **elevators** and **power cables** running from the nacelle to the base for energy transmission.

The main cable features used in the tower are:

- High **Durability**
- Fire and UV Resistant
- **Flexibility** for Vertical Runs
- **Torsion** resistance for Loops
- Low Voltage Drop



### BASE

The tower base anchors the wind turbine to the ground, providing stability and support. It houses electrical equipment, such as **transformers** and **switchgear**, and serves as the entry point for cables from the tower, connecting the turbine to the grid or storage systems.

The main cable features used in the tower base are:

- High Voltage Capacity
- Robust Insulation
- Flame and Oil Resistant
- EMI Shielding
- Temperature Resistance



# Cables for Wind Turbine Towers

Reliable, Power, Control, and Communication Solutions for Wind Energy Applications

**SERIES**  
**365S**

## Low capacity VFD 3xG or 1xG cables TC-ER, CIC, MTW, WTTC Direct Burial, Sun Res

Shielded, with or without signal pairs

Size / No.cond	10 AWG+450 kcmil (6+240 mm <sup>2</sup> ) / 4 or 6
Conductor	Flexible copper strand, class 5
Insulation	Special XLPE (type XHHW-2)
Conductor distinction	Black numbered + 3 wires yellow/green or Black numbered + 1 wire yellow/green
Shield	Aluminum/polyester foil, coverage 100% + Tinned copper braid + Drain wire
Jacket	PVC compound, oil-resistant, black color. Metric marking.
Temperature range	-40°C (fixed); -5°C (not fixed), +90°C
Voltage rating	600 V (TC/CIC/MTW), 1000 V (WTTC), 600/1000 V (IEC)
Bending radius	6 x cable outer diameter (fixed) 20 x cable outer diameter (not fixed)
Standards of construction	UL/CSA approvals: (UL) Type TC-ER, MTW, WTTC, Dir Bur, Sun Res Oil Res I, c(UL) Type CIC/TC-ER, Dir Bur, Sun Res, Oil Res I, Type RW90 (≥14 AWG); NFPA 79; Class 1, Div. 2 NEC Art. 336, 392, 501, CSA C22.1 Tab.19; UL 1063, UL 1277, UL 2277, CSA C22.2 No.230-09 and No.239-09   Flame res.: FT4/IEEE UL 1685   UV res.: UNI EN ISO 4892-2 (black)   Oil res.: Oil Res I UL 1277; Water res.: 90°C UL 1277; Other: Direct Burial UL 1277, Low Voltage Directive (LVD) 2014/35/EU



**ECOLAB®**



**SERIES**  
**8110**  
**8110S**

## Power and Control Tray Cable TC-ER-HL, CIC, MTW, WTTC, AWM Direct Burial, Sun Res, Hazardous Locations

Unshielded or shielded

Size / No.cond	18 AWG+450 kcmil (1+240 mm <sup>2</sup> ) / 2+25
Conductor	Flexible copper strand, class 5
Insulation	TKblend®-R
Conductor distinction	Black numbered + yellow/green (beginning from 3 conductors). Other options available.
Shield	Tinned copper braid, nom. coverage 85%
Jacket	PVC compound, oil-resistant, RAL 7001 gray or black color. Metric marking.
Temperature range	+90°C (dry conditions), +75°C (wet conditions) -40°C (fixed); -5°C (not fixed)
Voltage rating	600 V* (TC/CIC/MTW), 1000 V (AWM/WTTC), 600/1000 V (IEC)
Bending radius	4 x cable outer diameter (15 x cable outer diameter for non-cyclical mobile uses)
Standards of construction	UL/CSA approvals: (UL) Type TC-ER-HL (18 AWG-1000 kcmil), MTW, WTTC, Dir Bur, Sun Res, Oil Res I, c(UL) Type CIC/TC-ER (18 AWG-4/0 AWG), Dir Bur, Sun Res, Oil Res I, cURus AWM Style 21179, AWM I/II A/B; Class 1, Div.1 or Div.2 NEC Art. 336, 392, 501; CSA C22.1 Tab.19; UL 1581, UL 758, UL 1277, UL 1063, UL 2277, CSA C22.2 No.230-09 e No. 239-09   Flame res.: FT1, FT4, IEC 60332-1-2, IEC 60332-3-24   UV res.: UNI EN ISO 4892-3 (grigio/gray), UNI EN ISO 4892-2 (black)   Other: Low Voltage Directive (LVD) 2014/35/EU



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\* Tray Cable 2 kV are available upon request.

# Cables for Wind Turbine Towers

Reliable, Power, Control, and Communication Solutions for Wind Energy Applications

SERIES  
380  
380S

High temperature multi-norm silicone cables

Unshielded or shielded

Size / No.cond	20 AWG+8 AWG (0,5+10 mm <sup>2</sup> ) / 2+25
Conductor	Flexible copper strand, class 5
Insulation	Silicone
Conductor distinction	HD 308 S2 colored or black numbered + yellow/green beginning from 6 conductors.
Shield	Tinned copper braid, nom. coverage 85%
Jacket	Silicone, orange or black color. Metric marking.
Temperature range	+150°C (UL/CSA), +180°C (IEC) -60°C
Voltage rating	600 V (UL/CSA), 450/750 V (IEC)
Bending radius	5 x cable outer diameter (12 x cable outer diameter for non-cyclical mobile uses)
Standards of construction	UL/CSA approvals: UL 758, UL 1581, AWM Style 4476, CSA AWM II A/B   Flame res.: FT1, IEC 60332-1-2   Other: Low Voltage Directive (LVD) 2014/35/EU



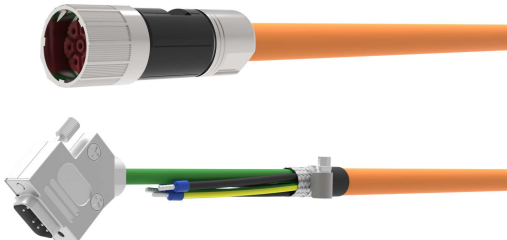
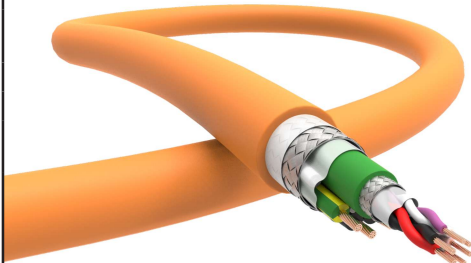
SERIES  
HYBRID

Multi-conductor «Hybrid» cables

Unshielded or shielded

The integration of the essential components such **power, control and fiber optic** necessary for the operation of a latest generation electric motor, involves the aggregation **in a single cable** of the power supply conductors and those necessary for digital communications.

Combining very different electrical quantities and extremely reliable electrical parameters in a single product represents today the new goal in the construction of hybrid cables.



**Signal, communication, control and power in a single pre-assembled cable.** You can now receive your cable assembly certified, pre-connectorized, tested and ready to be installed as per your specifications.







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