torsion-resistant wind turbine fieldbus & data cable

PROFIBUS / CAN Torsion PUR 250 V

PROFIBUS DP / CAN Bus 250 V (±150°/m Torsion, -40 °C) Foil + TCWB Dual

IEC 61158-2 / EN 50170 · 250 V · Torsion-resistant wind turbine fieldbus & data cable



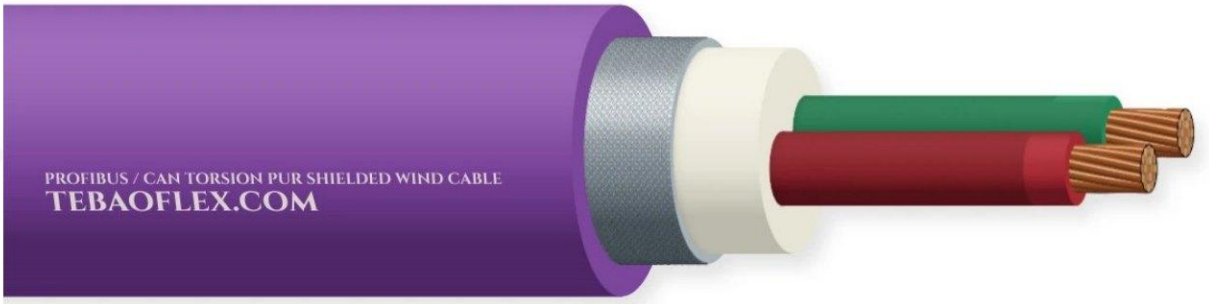
IEC 61158-2 / EN 50170 | 250 V (-40 to +80 °C) | Halogen-Free PUR Torsion Outer Jacke

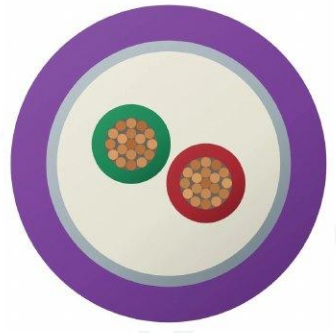
Application

PROFIBUS DP / CAN Bus 250 V (±150°/m Torsion, -40 °C) Foil + TCWB Dual-Shielded Violet PUR Wind Fieldbus Cable (IEC 61158-2 / EN 50170) engineered for 250 V wind turbine service across -40 to +80 °C (min. bend radius 6 × OD).

Typical uses: Wind Turbine Main PLC, Yaw & Pitch Fieldbus Networks, PROFIBUS DP & CANopen Hub-to-Nacelle Slip-Ring Links, Anemometer, Vibration, Ice & Condition Monitoring Sensors, Cold-Climate (−40 °C) Wind Farm SCADA & Telemetry

Construction





Cross-section, not to scale

1. High-Flex 7/19-Strand Copper Pair (Red/G
2. Core Filling & Stabilizing Inner Sheath
3. Al/PET Foil + Tinned Copper Braid Dual S
4. Halogen-Free PUR Torsion Outer Jacket (-

Technical data

Typical values

Rated voltage / operating system	250 V (IEC 61158-2 & EN 50170 PROFIBUS DP / CANopen (±150°/m Torsion) PUR Wind Fieldbus Specification)
Primary dielectric / insulation	Core Filling & Stabilizing Inner Sheath — Maintains constant impedance during ±150°/m yaw & pitch torsion
Low-temperature torsion & cold bend	Verified cold-flex and torsion endurance across −40…+80 °C per IEC 61158-2 & EN 50170 PROFIBUS DP / CANopen (±150°/m Torsion) PUR Wind Fieldbus Specification
Outer jacket / sheath protection	Halogen-Free PUR Torsion Outer Jacket (-40 °C) — Oil-, hydrolysis- and UV-resistant violet polyurethane sheath
Intermediate screen / separator / core layer	Al/PET Foil + Tinned Copper Braid Dual Shield — 100% foil tape plus high-density tinned copper wire braid
Flame retardancy & smoke/halogen emission	Flame-retardant and environmental performance verified per IEC 61158-2 & EN 50170 PROFIBUS DP / CANopen (±150°/m Torsion) PUR Wind Fieldbus Specification
Standards	IEC 61158-2 & EN 50170 PROFIBUS DP / CANopen (±150°/m Torsion) PUR Wind Fieldbus Specification
Core / conductor construction	High-Flex 7/19-Strand Copper Pair (Red/Green) — Torsion-resistant stranded copper with low-capacitance Foamed PE
Continuous operating temperature	−40…+80 °C (wind turbine nacelle, hub & tower duty)
Storage & transport temperature	−40…+80 °C on export wooden/steel cable drum
Minimum bending radius	6 × OD
Oil, grease, ozone & UV resistance	Resistant to wind turbine gearbox oil, hydraulic fluid, ozone and UV weathering per IEC 61158-2 & EN 50170 PROFIBUS DP / CANopen (±150°/m Torsion) PUR Wind Fieldbus Specification
RoHS & REACH compliance	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant

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
PROFIBUS / CAN Torsion PUR 250 V Construction Schedule (−40…+80 °C) 3 sizes						
☐ **PROFIBUS 1×2×0.34 mm²**	**1 × 2 × 0.34 mm² (22 AWG) Bus Pair**	**19-strand Cu + Foam PE + Foil/TCWB**	**8.0**	**88**	**0.9**	**50**
☐ **PROFIBUS 2×2×0.25 mm²**	**2 × 2 × 0.25 mm² (24 AWG) CANopen**	**Finely stranded Cu + Foam-Skin PE + TCWB**	**8.6**	**104**	**1.1**	**55**
☐ **PROFIBUS 2×2×0.34 mm²**	**2 × 2 × 0.34 mm² Redundant Bus**	**19-strand Cu + Foam PE + Dual Shield**	**10.4**	**148**	**1.5**	**65**

– Custom conductor cross-sections, core counts, pre-lugged tower kits and drum lengths available per IEC 61158-2 & EN 50170 PROFIBUS DP / CANopen (±150°/m Torsion) PUR Wind Fieldbus Specification.

Electrical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance	Operating temp.
1 × 2 × 0.34 mm² (22 AWG) Bus Pair	**55.00**	**250 V (120/150 Ω)**	**−40…+80 °C**
2 × 2 × 0.25 mm² (24 AWG) CANopen	**78.00**	**250 V (120 Ω CAN)**	**−40…+80 °C**
2 × 2 × 0.34 mm² Redundant Bus	**55.00**	**250 V (120/150 Ω)**	**−40…+80 °C**

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

Standards and approvals

- IEC 61158-2 / EN 50170 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/profibus-can-torsion-pur-shielded-wind-cable

Typical values for this cable type, based on IEC 61158-2 & EN 50170 PROFIBUS DP / CANopen (±150°/m Torsion) PUR Wind Fieldbus Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.