marine & offshore instrumentation cable

TPN & TPN-CW/SB / TP(IS-OS)PNBS

TPN, TPN-CW/SB & TP(IS-OS)PNBS 300/600 V IEEE 1580 Type P Individually

IEEE 1580 Type P / UL 1309 · 300/600 V · Marine & offshore instrumentation cable



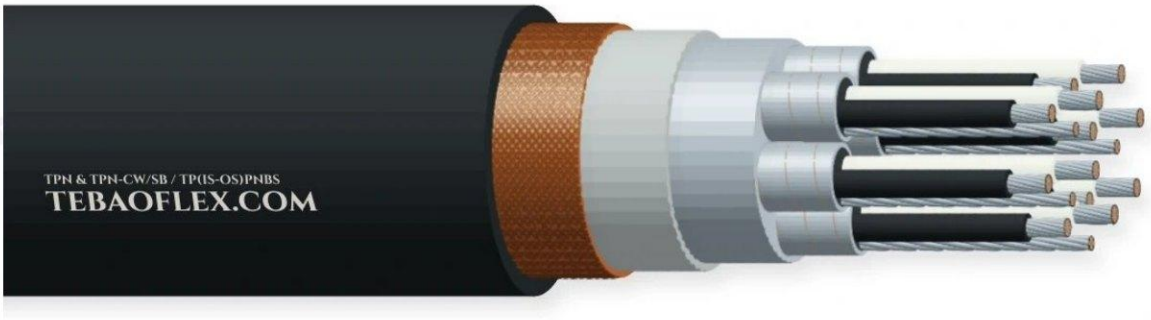
IEEE 1580 Type P / UL 1309 | **300/600 V (-40 to +125 °C)** | **Arctic Type P Mud-Resistant Outer Sh**

Application

TPN, TPN-CW/SB & TP(IS-OS)PNBS 300/600 V IEEE 1580 Type P Individually & Overall Shielded Rig Instrumentation Cable (IEEE 1580 Type P / UL 1309) engineered for 300/600 V service across -40 to +125 °C (min. bend radius 6 × OD).

Typical uses: Offshore DCS, ESD & Fire-Gas Systems, Shipboard Bridge & Engine Room Automation, Drilling Rig Instrumentation & Mud Logging, Naval Radar, Sonar & Combat Switchboards

Construction





Cross-section, not to scale

1. 125 °C XLPO Twisted Pairs (6Pr × 18 AWG)
2. Individual & Overall Foil Shields (IS/OS
3. Thermoset Inner Bedding Jacket
4. Bronze Wire Braid Armour (SB / BS)
5. Arctic Type P Mud-Resistant Outer Sheath

Technical data

Typical values

Rated voltage / transmission duty	300/600 V (IEEE 1580 Type P & UL 1309 Individually & Overall Shielded (IS/OS))	**Core / conductor construction**	125 °C XLPO Twisted Pairs (6Pr × 18 AWG) — Flexible tinned copper conductors with Black/White numbered XLPO
Primary dielectric / buffering	Individual & Overall Foil Shields (IS/OS) — 100% Al/PET tape + tinned copper drain wire on each pair and overall	**Continuous operating temperature**	−40…+125 °C (shipboard & offshore duty)
Short-circuit / peak thermal rating	Verified thermal stability per IEEE 1580 Type P & UL 1309 Individually & Overall Shielded (IS/OS)	**Storage & transport temperature**	−40…+80 °C on export wooden/steel drum
Outer protection / armouring	Arctic Type P Mud-Resistant Outer Sheath — IEEE 1580 Type P & NEK 606 mud-resistant thermoset jacket	**Minimum bending radius**	6 × OD
Armour, screen & mechanical duty	Bronze Wire Braid Armour (SB / BS) — Corrosion-resistant bronze wire braid mechanical armour	**Flame, fire & smoke performance**	Qualified for marine flame-retardance and low-smoke zero-halogen / fire safety per IEEE 1580 Type P & UL 1309 Individually & Overall Shielded (IS/OS)
Oil, drilling mud & seawater resistance	Resistant to marine fuel/lube oils, salt mist and offshore fluids per IEEE 1580 Type P & UL 1309 Individually & Overall Shielded (IS/OS)	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	IEEE 1580 Type P & UL 1309 Individually & Overall Shielded (IS/OS)		

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	Tensile rating kN ≈	Min. bend R mm
TPN & TPN-CW/SB / TP(IS-OS)PNBS Construction Schedule (−40…+125 °C) 3 sizes						
☐ **TPN 2×2×0.75 mm²**	2 × 2 × 0.75 mm² (2Pr)	Stranded Cu/SnCu (IEC 60228 Class 2/5)	11.4	195	1.2	70
☐ **TPN 4×2×1.0 mm²**	4 × 2 × 1.0 mm² (4Pr)	Stranded Cu/SnCu (IEC 60228 Class 2/5)	15.6	365	2.4	95
☐ **TPN 8×2×1.5 mm²**	8 × 2 × 1.5 mm² (8Pr)	Stranded Cu/SnCu (IEC 60228 Class 2/5)	22.8	760	4.8	140

– Custom core cross-sections, pair/fibre counts, armour grades and factory drum lengths available per IEEE 1580 Type P & UL 1309 Individually & Overall Shielded (IS/OS).

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
2 × 2 × 0.75 mm² (2Pr)	26.00	300/600 V (≤60 nF/km)	−40…+125 °C
4 × 2 × 1.0 mm² (4Pr)	19.50	300/600 V (≤65 nF/km)	−40…+125 °C
8 × 2 × 1.5 mm² (8Pr)	13.30	300/600 V (≤75 nF/km)	−40…+125 °C

– Every production length undergoes routine conductor DC resistance, high-voltage dielectric or OTDR continuity and dimensional verification.

Standards and approvals

- IEEE 1580 Type P / UL 1309 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/tpn-tpn-cw-sb-tp-is-os-pnbs

Typical values for this cable type, based on IEEE 1580 Type P & UL 1309 Individually & Overall Shielded (IS/OS). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.