submersible water-quality, CTD & ocean sensor cable

Submersible TPU RS-485/SDI-12

Submersible TPU Non-Vented Submersible RS-485 SDI-12 Cable

SDI-12 v1.4 / TIA-485 · 300 V · Submersible water-quality, ctd & ocean sensor cable



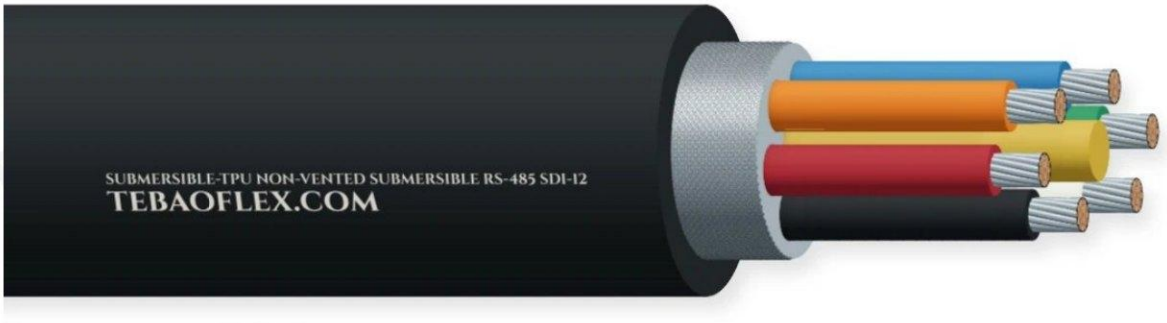
SDI-12 v1.4 / TIA-485 | 300 V (-40 to +80 °C) | Subsea / Marine Outer Protective She

Application

Submersible TPU Non-Vented Submersible RS-485 SDI-12 Cable featuring flexible stranded copper conductors (7 cores) and subsea / marine outer protective sheath (SDI-12 v1.4 / TIA-485, 300 V, -40 to +80 °C, min. bend radius 6 × OD).

Typical uses: Aquaculture Dissolved Oxygen (DO), pH & Salinity Monitoring, Vented Hydrostatic Water-Level & Borehole Pressure Probes, Oceanographic CTD Rosettes, Current Meters & Mooring Buoys, Recirculating Aquaculture (RAS) & Wastewater Sensor Networks

Construction





Cross-section, not to scale

1. Flexible Stranded Copper Conductors (7 C
2. 100% Al/PET Foil Electrostatic Shield
3. Copper Wire Braid EMC Screen
4. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	300 V (SDI-12 v1.4 & TIA-485 Non-Vented Submersible TPU Sensor Cable Specification)	**Core / conductor construction**	Flexible Stranded Copper Conductors (7 Cores) — Class 5/ Class 6 copper conductors with Fluoropolymer (FEP/ETFE) high-dielectric insulation
Primary dielectric / optical buffer	100% Al/PET Foil Electrostatic Shield — Laminated aluminum-polyester foil tape with drain wire	**Continuous operating temperature**	−40…+80 °C (submerged seawater & topside deck service)
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −40…+80 °C per SDI-12 v1.4 & TIA-485 Non-Vented Submersible TPU Sensor Cable Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel cable drum
Outer jacket / sheath protection	Subsea / Marine Outer Protective Sheath — Black hydrolysis- & abrasion-resistant marine Polyurethane (PUR) outer sheath	**Minimum bending radius**	6 × OD
Reinforcement / screen / bedding layer	Copper Wire Braid EMC Screen — High-coverage braided copper shield for EMI/VFD protection	**Seawater, hydrolysis & oil resistance**	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per SDI-12 v1.4 & TIA-485 Non-Vented Submersible TPU Sensor Cable Specification
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per SDI-12 v1.4 & TIA-485 Non-Vented Submersible TPU Sensor Cable Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	SDI-12 v1.4 & TIA-485 Non-Vented Submersible TPU Sensor Cable Specification		

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
Submersible TPU RS-485/SDI-12 Construction Schedule (−40…+80 °C) 3 sizes						
☐ **Submersible TPU RS-485 1×2×22AWG RS-485**	1 × 2 × 0.34 mm² (22 AWG) + Power Pair	Stranded SnCu + Foam PE + Foil/Braid	8.2	92	2.0	50
☐ **Submersible TPU RS-485 4×2×24AWG Cat5e**	4 × 2 × 24 AWG Subsea Gigabit Ethernet	Stranded SnCu + High-Pressure PE + SF/UTP	9.6	125	3.5	60
☐ **Submersible TPU RS-485 4×2×23AWG Cat6+2C**	4 × 2 × 23 AWG Cat6 + 2 × 1.5 mm² Power	Stranded SnCu + 600-Bar Matrix + PUR	12.8	215	6.8	78

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per SDI-12 v1.4 & TIA-485 Non-Vented Submersible TPU Sensor Cable Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
1 × 2 × 0.34 mm² (22 AWG) + Power Pair	55.00	300 V (120 Ω RS-485)	−40…+80 °C
4 × 2 × 24 AWG Subsea Gigabit Ethernet	84.00	300 V (100 Ω 1000BASE-T)	−40…+80 °C
4 × 2 × 23 AWG Cat6 + 2 × 1.5 mm² Power	72.00	300 V (100 Ω Cat6 6000m)	−40…+80 °C

– Every production length undergoes routine conductor DC resistance / OTDR optical attenuation, AC dielectric and dimensional verification.

Standards and approvals

- SDI-12 v1.4 / TIA-485 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/submersible-tpu-non-vented-submersible-rs-485-sdi-12

Typical values for this cable type, based on SDI-12 v1.4 & TIA-485 Non-Vented Submersible TPU Sensor Cable Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.