UL 83 Type THW 600 V flat jacketed & twisted deep-well pump cable

UL 83 TYPE THW PUMP

UL 83 Type THW / THWN 600 V Flat & Twisted Deep-Well Submersible Cable

UL 83 / NEC Art. 310 · 600 V · Ul 83 type thw 600 v flat jacketed & twisted deep-well



UL 83 Listed Type THW | **600 V AC (75 °C Wet)** | **Flat Jacketed & Twisted**

Application

UL 83 Type THW / THHN-THWN 600V Heavy-Duty Flat Jacketed & Twisted Unjacketed Deep Well Submersible Pump Cable (Flat Parallel Jacketed & Twisted Heavy-Duty Series) (UL 83 / NEC Art. 310, 600 V, -40 to +75 °C, min. bend radius 6 × OD).

Typical uses: Naval Shipboard & Submarine Outboard, Offshore Cathodic Protection (ICCP), Underwater Welding & Nuclear Pools, Deep-Well & Seabed Pump Feeders

Construction





Cross-section, not to scale

1. Stranded Bare Copper (3×Phase + 1×GND)
2. UL 83 Type THW PVC + Nylon Insulation
3. Parallel Flat / Twisted Core Assembly
4. Heavy-Duty Black PVC Outer Jacket

Technical data

Typical values

Rated voltage / transmission duty	600 V (UL 83 Listed Type THW / THHN-THWN & NEC 250-122 Pump Standard)	**Core / conductor construction**	Stranded Bare Copper (3×Phase + 1×GND) — ASTM B3/B8 19- or 37-strand concentric bare copper + NEC 250-122 ground core
Primary dielectric / buffering	UL 83 Type THW PVC + Nylon Insulation — 600 V 75 °C wet heat/moisture-resistant PVC (Black, Red, Yellow, Green) + clear Nylon	**Continuous operating temperature**	−40…+75 °C (subsea, marine & submersible duty)
Short-circuit / peak thermal rating	Verified thermal stability per UL 83 Listed Type THW / THHN-THWN & NEC 250-122 Pump Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel drum
Outer protection / armouring	Heavy-Duty Black PVC Outer Jacket — 1.14–1.65 mm abrasion-, acid-, oil- and sunlight-resistant black PVC flat jacket	**Minimum bending radius**	6 × OD
Hydrostatic, tensile & crush duty	Parallel Flat / Twisted Core Assembly — Flat parallel construction (Flat Parallel Jacketed) or twisted (Twisted Heavy-Duty)	**Hydrostatic pressure & water blocking**	Engineered for continuous submersion and hydrostatic integrity per UL 83 Listed Type THW / THHN-THWN & NEC 250-122 Pump Standard
Seawater, oil & chemical resistance	Resistant to seawater hydrolysis, hydraulic oils and abrasion per UL 83 Listed Type THW / THHN-THWN & NEC 250-122 Pump Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	UL 83 Listed Type THW / THHN-THWN & NEC 250-122 Pump Standard		

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
UL 83 TYPE THW PUMP Construction Schedule (−40…+75 °C) 3 sizes						
☐ **UL 83 TYPE THW PUMP 4G16 mm²**	**4G16 mm² (3×16 + 1G16)**	**IEC 60228 Class 5 flexible Cu/SnCu**	**21.8**	**840**	**2.4**	**130**
☐ **UL 83 TYPE THW PUMP 4G35 mm²**	**4G35 mm² (3×35 + 1G16)**	**IEC 60228 Class 5 flexible Cu/SnCu**	**28.6**	**1,620**	**5.2**	**172**
☐ **UL 83 TYPE THW PUMP 3×70 + 3G16 mm²**	**3 × 70 mm² + 3G16 mm²**	**IEC 60228 Class 5 flexible Cu/SnCu**	**38.4**	**3,180**	**10.5**	**230**

– Custom core cross-sections, pair/fibre counts, armour grades and factory drum lengths available per UL 83 Listed Type THW / THHN-THWN & NEC 250-122 Pump Standard.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
4G16 mm² (3×16 + 1G16)	**1.21**	**600 V (94 A submerged)**	**−40…+75 °C**
4G35 mm² (3×35 + 1G16)	**0.55**	**600 V (152 A submerged)**	**−40…+75 °C**
3 × 70 mm² + 3G16 mm²	**0.27**	**600 V (235 A submerged)**	**−40…+75 °C**

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

Standards and approvals

- UL 83 / NEC Art. 310 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/ul-83-type-thw-pump

Typical values for this cable type, based on UL 83 Listed Type THW / THHN-THWN & NEC 250-122 Pump Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.