heavy-duty subsea mining, trencher & excavation trailing cable

VDE MTO Mining & Excavation Cable

VDE MTO Heavy-Duty Mining & Excavation Cable

DIN VDE 0250-813 / 814 · 0.6/1 kV – 3.6/6 kV · Heavy-duty subsea mining, trencher &



DIN VDE 0250-813 / 814 | 0.6/1 kV – 3.6/6 kV (-40 to +90 °C) | Subsea / Marine Outer Protective She

Application

VDE MTO Heavy-Duty Mining & Excavation Cable featuring single-mode / multi-mode optical unit and subsea / marine outer protective sheath (DIN VDE 0250-813 / 814, 0.6/1 kV – 3.6/6 kV, -40 to +90 °C, min. bend radius 6 × OD).

Typical uses: Deep-Sea Polymetallic Nodule Mining Collectors & Risers, Subsea Pipeline Ploughs, Jet Trenchers & Rock Cutters, AS/NZS 1802 & VDE MTO Open-Cast Mining Shovels & Draglines, Submersible Dredging Pumps & Underwater Tunneling Machines

Construction





Cross-section, not to scale

1. Single-Mode / Multi-Mode Optical Unit
2. Power & Control Copper Conductors
3. Aramid / LCP Braided Strength Member
4. Subsea / Marine Outer Protective Sheath

Technical data

Typical values

Rated voltage / operating system	0.6/1 kV – 3.6/6 kV (DIN VDE 0250-813/814 VDE MTO Heavy-Duty Mining & Subsea Excavation Standard)
Primary dielectric / optical buffer	Power & Control Copper Conductors — Stranded copper conductors with Ethylene-propylene rubber (EPR/EPDM) insulation
Hydrostatic & thermal cycling endurance	Verified cold-bend and wet dielectric stability across −40…+90 °C per DIN VDE 0250-813/814 VDE MTO Heavy-Duty Mining & Subsea Excavation Standard
Outer jacket / sheath protection	Subsea / Marine Outer Protective Sheath — Black hydrolysis- & abrasion-resistant marine Polyurethane (PUR) outer sheath
Reinforcement / screen / bedding layer	Aramid / LCP Braided Strength Member — High-tenacity synthetic fiber braid absorbing dynamic tension
Hydrostatic pressure & water blocking	Radial and longitudinal water-blocking integrity verified per DIN VDE 0250-813/814 VDE MTO Heavy-Duty Mining & Subsea Excavation Standard
Standards	DIN VDE 0250-813/814 VDE MTO Heavy-Duty Mining & Subsea Excavation Standard
Core / conductor construction	Single-Mode / Multi-Mode Optical Unit — Hermetic stainless-steel tube / tight-buffered optical unit
Continuous operating temperature	−40…+90 °C (submerged seawater & topside deck service)
Storage & transport temperature	−40…+80 °C on export wooden/steel cable drum
Minimum bending radius	6 × OD
Seawater, hydrolysis & oil resistance	Resistant to permanent seawater immersion, hydrolysis, hydraulic oil and bio-fouling per DIN VDE 0250-813/814 VDE MTO Heavy-Duty Mining & Subsea Excavation Standard
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
VDE MTO Mining & Excavation Cable Construction Schedule (−40…+90 °C) 3 sizes						
☐ **VDE MTO Mining Hybrid 4G2.5+FO**	**4G2.5 mm² Power + 4×SM + 2×2×0.5**	**Class 5 SnCu + Aramid Braid + Subsea PUR**	**14.6**	**285**	**18.0**	**90**
☐ **VDE MTO Mining Hybrid 4G6+FO**	**4G6.0 mm² Power + 4×SM/MM + 4×2×0.5**	**Class 5 SnCu + Aramid Braid + Subsea PUR**	**19.2**	**540**	**32.0**	**120**
☐ **VDE MTO Mining Hybrid 4G16+FO**	**4G16 mm² Power + 8×SM/MM + 4×2×0.75**	**Class 5 SnCu + Heavy Aramid + Subsea PUR**	**26.5**	**1,120**	**55.0**	**165**

– Custom core counts, optical fiber channels, wet-mate terminations and continuous winch lengths available per DIN VDE 0250-813/814 VDE MTO Heavy-Duty Mining & Subsea Excavation Standard.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} Ω/km	Rating / Impedance / Load	Operating temp.
4G2.5 mm² Power + 4×SM + 2×2×0.5	**7.98**	**0.6/1 kV – 3.6/6 kV · 18 kN Tensile**	**−40…+90 °C**
4G6.0 mm² Power + 4×SM/MM + 4×2×0.5	**3.30**	**0.6/1 kV – 3.6/6 kV · 32 kN Tensile**	**−40…+90 °C**
4G16 mm² Power + 8×SM/MM + 4×2×0.75	**1.21**	**0.6/1 kV – 3.6/6 kV · 55 kN Tensile**	**−40…+90 °C**

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

Standards and approvals

- DIN VDE 0250-813 / 814 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/vde-mto-heavy-duty-mining-excavation-cable

Typical values for this cable type, based on DIN VDE 0250-813/814 VDE MTO Heavy-Duty Mining & Subsea Excavation Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.