DIN VDE 0250-813 electro-optical MV reeling cable

R-(N)TSCGEWÖU + FO

6/10 kV Electro-Optical Reeling Cable

DIN VDE 0250-813 · 3.6/6–12/20 kV · Electro-optical medium-voltage mining reeling cable



DIN VDE 0250-813 | 6/10 kV + 12/18 FO | 250 m/min High-Speed Reel

Application

R-(N)TSCGEWÖU + FO 6/10 kV hybrid electro-optical medium-voltage reeling cable per DIN VDE 0250-813 for mining shovels, TBMs and cranes, integrating 3 × 3GI3 EPR phase cores, 2 split earths, a 12–18F optical module, anti-torsion braid and 5GM5 sheath.

Typical uses: Underground Coal & Hard-Rock Mining, Open-Cast Excavators, Draglines & Shovels, Vertical Mine Shafts, Hoists & Boreholes, Tunneling, Mineral Processing & Slurry Plants

Construction





Cross-section, not to scale

1. Phase Conductors (3×50 mm²)
2. Split Earth Cores (2×25/2 mm²)
3. Fiber-Optic Module (A-D(ZN)13Y 12FO)
4. 5GM3 Inner Sheath & Polyamide Braid
5. Outer Sheath (5GM5 Red)

Technical data

Typical values

Rated voltage / transmission duty	6/10 kV (DIN VDE 0250-813 / IEC 60794-1-2)	**Core / conductor construction**	Phase Conductors (3×50 mm²) — DIN VDE 0295 Class 5 flexible tinned copper + triple-extruded 3GI3 EPR
Primary dielectric / buffering	Split Earth Cores (2×25/2 mm²) — Two tinned copper earth conductors with semiconductive covering in interstices	**Continuous operating temperature**	-25 to +80 °C (mining & industrial service)
Short-circuit / peak thermal rating	Verified thermal stability per DIN VDE 0250-813 / IEC 60794-1-2	**Storage & transport temperature**	−40…+80 °C on export wooden/steel drum
Outer protection / armouring	Outer Sheath (5GM5 Red) — Heavy-duty red crosslinked polychloroprene rubber outer jacket	**Minimum bending radius**	10 × OD
Crush, impact & abrasion duty	Heavy-duty mining rock-cut, impact and tensile protection per DIN VDE 0250-813 / IEC 60794-1-2	**Flame retardancy & mine fire safety**	Self-extinguishing / flame-retardant mining jacket per DIN VDE 0250-813 / IEC 60794-1-2
Mine water, oil & chemical resistance	Resistant to acidic mine water, hydraulic oils and abrasion per DIN VDE 0250-813 / IEC 60794-1-2	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	DIN VDE 0250-813 / IEC 60794-1-2		

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
R-(N)TSCGEWÖU + FO Construction Schedule (-25 to +80 °C) 3 sizes						
☐ **R-(N)TSCGEWÖU 3×35 + 2×25/2 + 12FO 6/10 kV**	3×35 + 2×25/2 + 12×SM/MM FO	Class 5 tinned Cu + 12FO	46.5	3,080	2.1	465
☐ **R-(N)TSCGEWÖU 3×50 + 2×25/2 + 12FO 6/10 kV**	3×50 + 2×25/2 + 12×SM/MM FO	Class 5 tinned Cu + 12FO	50.4	3,740	3.0	505
☐ **R-(N)TSCGEWÖU 3×70 + 2×35/2 + 18FO 6/10 kV**	3×70 + 2×35/2 + 18×SM/MM FO	Class 5 tinned Cu + 18FO	55.2	4,690	4.2	555

– Custom core cross-sections, pair/fibre counts, armour grades and factory drum lengths available per DIN VDE 0250-813 / IEC 60794-1-2.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
3×35 + 2×25/2 + 12×SM/MM FO	0.56	6/10 kV (169 A) + 12F Optical	-25 to +80 °C
3×50 + 2×25/2 + 12×SM/MM FO	0.39	6/10 kV (206 A) + 12F Optical	-25 to +80 °C
3×70 + 2×35/2 + 18×SM/MM FO	0.28	6/10 kV (255 A) + 18F Optical	-25 to +80 °C

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

Standards and approvals

- VDE 0250-813 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/r-n-tscgewou-fo-6-10kv-electro-optical-medium-voltage-mining-reeling-cable

Typical values for this cable type, based on DIN VDE 0250-813 / IEC 60794-1-2. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.