



power connection cable series

(N)TMCGCHXOEUK 26-45 kV

26/45 kV Screened Flexible Railway

26/45 kV (U_{max} 52 kV) screened halogen-free EN 45545-2 HL3 railway HV cable



(N)TMCGCHXOEUK 26/45 kV

EN 45545-2 HL3 Halogen-Free

Screened 25 kV AC Rail HV

Application

(N)TMCGCHXOEUK 26-45 kV Screened Flexible Railway Pantograph & Roof HV Cable (26/45 kV, U_{max} 52 kV; 50 mm² to 185 mm²) engineered per DIN VDE 0250-813 and EN 45545-2 Hazard Level HL3—combining Class 5 fine-stranded tinned copper.

Typical uses: 25 kV AC High-Speed Rail Inter-Car & Roof HV Buslines, Roof Pantograph / VCB to Underframe Main Transformer, EN 45545-2 HL3 Underground Tunnel Passenger EMUs, 15 kV 16.7 Hz / 25 kV 50 Hz Multi-System Locomotives, Plug-In HV Transformer Bushing & Roof Transition Leads

Construction



Cross-section, not to scale

- 1 Class 5 fine-stranded tinned copper conductor
- 2 Triple-extruded inner ('C') & outer ('G') semiconducting layers
- 3 11.5 mm 3GI3 High-Voltage EPR dielectric insulation
- 4 Concentric tinned copper wire / counter-helix screen ('C')
- 5 HX-OEU-K Halogen-Free, Oil- & -50 °C Cold-Resistant sheath

Technical data

Typical values

Rated voltage (U _o /U / U _{max})	26 / 45 kV AC (U _{max} = 52 kV AC)	Routine AC test & PD	65 kV AC rms for 5 min · Partial discharge ≤ 5 pC at 45 kV (1.73 × U _o)
Lightning impulse (BIL)	250 kV peak (1.2/50 µs wave)	Max. DC resistance @ 20 °C	0.393 Ω/km (50) · 0.277 Ω/km (70) · 0.206 Ω/km (95) · 0.164 Ω/km (120)
Continuous conductor temp.	+90 °C continuous operation	Short-circuit temperature	+250 °C (conductor) · +200 °C (copper screen)
Cold-flex ('K') temperature	-50 °C to +80 °C ambient (-35 °C dynamic inter-car bending)	Min. bend radius	6 × OD (fixed carbody routing) · 10 × OD (inter-car flexing)
Vibration & fatigue	IEC 61373 Category 1 Class B carbody & roof mounted	Touch safety	Grounded 'C' screen satisfies EN 50153 high-voltage protection
Railway fire hazard level	EN 45545-2 Hazard Level HL1, HL2 & HL3 (Requirement Sets R15 / R16)	Halogen-free & low smoke	IEC 60754-1/2 (pH ≥ 4.3, cond. ≤ 10 µS/mm) & IEC 61034-2 (≥ 70 %)
Oil, ester & UV resistance	Resistant to mineral/synthetic ester transformer fluid ('OEU'), UV & ozone	Standards	DIN VDE 0250-813 · EN 45545-2 · EN 50153 · EN 50163

Sizes

6 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

VDE designation	Conductor + Cu screen	Outer Ø ≈ mm	Weight ≈ kg/km	Max. DC R Ω/km	Air 30°C A
26/45 kV (U _{max} 52 kV) Screened EN 45545-2 HL3 Railway Cables 6 sizes					
☐ (N)TMCGCHXOEUK 1×50/16 26/45kV	50 mm ² Cl.5 + 16 mm ² Cu screen	44.2	2,240	0.3930	250
☐ (N)TMCGCHXOEUK 1×70/16 26/45kV	70 mm ² Cl.5 + 16 mm ² Cu screen	46.0	2,560	0.2770	310
☐ (N)TMCGCHXOEUK 1×95/16 26/45kV	95 mm ² Cl.5 + 16 mm ² Cu screen	48.2	2,980	0.2060	375
☐ (N)TMCGCHXOEUK 1×120/25 26/45kV	120 mm ² Cl.5 + 25 mm ² Cu screen	50.8	3,480	0.1640	435
☐ (N)TMCGCHXOEUK 1×150/25 26/45kV	150 mm ² Cl.5 + 25 mm ² Cu screen	52.8	3,940	0.1320	505
☐ (N)TMCGCHXOEUK 1×185/35 26/45kV	185 mm ² Cl.5 + 35 mm ² Cu screen	55.4	4,560	0.1080	580

– Outer diameters are calibrated to fit standard Pfisterer Connex Size 3/4 and Staubli 52 kV railway plug-in transformer bushings.

Standards and approvals

- ✓ EN 45545-2 HL1 / HL2 / HL3
- ✓ DIN VDE 0250-813 (26/45 kV)
- ✓ EN 50153 / EN 50163 Rail HV

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/26-45-kv-screened-flexible-railway-pantograph-cable



Typical values for this cable type, based on DIN VDE 0250-813 / EN 45545-2 HL3 / EN 50264 / EN 50153. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.