



UIC 541-5 9-pole ep-brake & NBÜ rail jumper

UIC 541-5 Jumper Assembly

9-pole UIC 541-5 electropneumatic brake (ep), NBÜ & TB 0 door-control inter-coach jumper

UIC 541-5 (9-Pole)

EN 45545-2 HL3

ep-Brake + NBÜ + TB 0

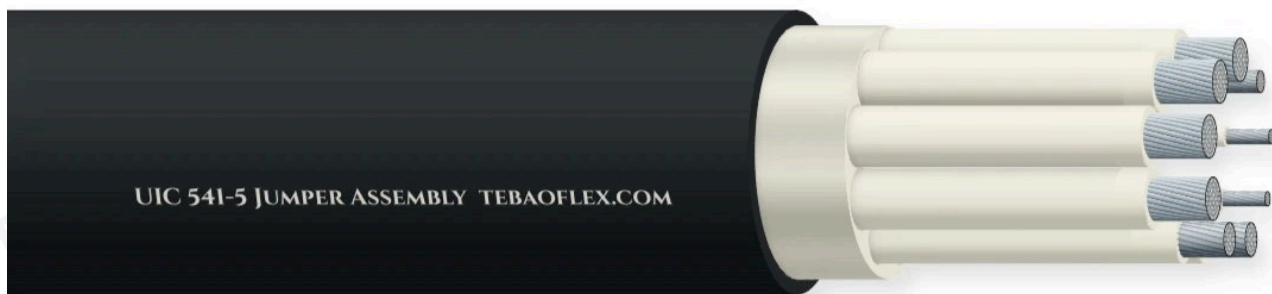


Application

Inter-vehicle 9-pole railway jumper assembly built to UIC 541-5, EN 50264 and EN 45545-2 HL3 for electropneumatic brake actuation (ep-brake), passenger alarm override (NBÜ) and door control (TB 0) between coaches.

Typical uses: Main-Line InterCity Passenger Coaches, Locomotive Push-Pull & Multiple-Unit Sets, International Cross-Border Night Trains, Rolling Stock Overhaul & Modernization, UIC ep-Brake & NBÜ Safety Retrofits

Construction



Cross-section, not to scale

- 1 Fine-stranded tinned copper conductors
- 2 Cross-linked halogen-free EI 109 insulation
- 3 Individual pair & overall tinned copper braid
- 4 Halogen-free separating & torsion-slip tape
- 5 Heavy-duty cross-linked LSZH elastomer (EM 104)

Technical data

Typical values

Rated operating voltage	110 V DC / 250 V AC (cable 0.6/1 kV to EN 50264)	Contact current (Pins 1–5)	25 A max (2.5 mm ² ep-brake & door control)
Contact current (Pins 6–9)	16 A max (1.5 mm ² screened NBÜ / pilot pairs)	Contact resistance	≤ 1.5 mΩ (silver-plated machined brass contacts)
AC dielectric test	2.0 kV AC rms for 1 min (connector) · 3.5 kV AC (cable)	Ambient operating range	–40 °C to +85 °C
Max. conductor temperature	+90 °C continuous · +200 °C short-circuit	Core configuration	5 × 2.5 mm ² + 2 × (2 × 1.5 mm ²) C (OD ≈ 17.5 mm)
Vibration & shock	IEC 61373 Category 2 (bogie / headstock mounted)	Mating cycles	≥ 1,500 coupling cycles
Breakaway safety	Controlled pull-out disconnection under unscheduled uncoupling	Min. bend radius	6 × OD dynamic inter-coach loop
Fire & smoke safety	EN 45545-2 HL1 / HL2 / HL3 (R15 indoor / R16 outdoor)	Halogen & smoke density	EN 60754-1/2 zero halogen · EN 61034-2 ≥ 70 % transmittance
Ingress protection	IP66 / IP67 mated or parked in dummy receptacle	Fluid resistance	EN 50264 mineral oil, diesel, acid & alkaline car-wash
Standards	UIC Leaflet 541-5 (9-pole ep-brake & door control)	Standard packing	Individually boxed with serialized routine test protocol & EN 45545-2 DoC

Sizes

12 standard constructions

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

Order designation	Termination Configuration	Cable Core Build	Length mm	Cable OD mm	Assy Wt kg	Fire Class EN 45545-2
Plug-to-Plug (PP) Double-Ended UIC 541-5 Jumper Assemblies 6 sizes						
☐ UIC541-5-PP-9P-1200	9P Plug ↔ 9P Plug (Metal Housing)	5×2.5 + 2×(2×1.5C)C	1,200	17.5	2.45	HL3 (R15/R16)
☐ UIC541-5-PP-9P-1400	9P Plug ↔ 9P Plug (Metal Housing)	5×2.5 + 2×(2×1.5C)C	1,400	17.5	2.60	HL3 (R15/R16)
☐ UIC541-5-PP-9P-1500	9P Plug ↔ 9P Plug (Metal Housing)	5×2.5 + 2×(2×1.5C)C	1,500	17.5	2.68	HL3 (R15/R16)
☐ UIC541-5-PP-9P-1650	9P Plug ↔ 9P Plug (Metal Housing)	5×2.5 + 2×(2×1.5C)C	1,650	17.5	2.80	HL3 (R15/R16)
☐ UIC541-5-PP-9P-1800	9P Plug ↔ 9P Plug (Metal Housing)	5×2.5 + 2×(2×1.5C)C	1,800	17.5	2.92	HL3 (R15/R16)
☐ UIC541-5-PP-9P-2000	9P Plug ↔ 9P Plug (Metal Housing)	5×2.5 + 2×(2×1.5C)C	2,000	17.5	3.08	HL3 (R15/R16)
Plug-to-Junction-Box (PJ) Fixed Pigtail & Receptacle Kits 6 sizes						
☐ UIC541-5-PJ-9P-1350	9P Plug → M32 EMC Gland + Lugs	5×2.5 + 2×(2×1.5C)C	1,350	17.5	2.10	HL3 (R15/R16)
☐ UIC541-5-PJ-9P-1500	9P Plug → M32 EMC Gland + Lugs	5×2.5 + 2×(2×1.5C)C	1,500	17.5	2.22	HL3 (R15/R16)
☐ UIC541-5-PJ-9P-1700	9P Plug → M32 EMC Gland + Lugs	5×2.5 + 2×(2×1.5C)C	1,700	17.5	2.38	HL3 (R15/R16)
☐ UIC541-5-PJ-9P-2000	9P Plug → M32 EMC Gland + Lugs	5×2.5 + 2×(2×1.5C)C	2,000	17.5	2.62	HL3 (R15/R16)
☐ UIC541-5-PJ-9P-2500	9P Plug → M32 EMC Gland + Lugs	5×2.5 + 2×(2×1.5C)C	2,500	17.5	3.02	HL3 (R15/R16)
☐ UIC541-5-REC-1500-KIT	9P Coach Receptacle + 1.5 m Tail	5×2.5 + 2×(2×1.5C)C	1,500	17.5	2.85	HL3 (R15/R16)

– UIC 541-5 standard pin functional allocation: Pin 1 = Apply ep-brake (+), Pin 2 = Release ep-brake (+), Pin 3 = Holding check, Pin 4 = Common return (–), Pin 5 = Door control (TB 0), Pins 6–9 = Screened pairs for NBÜ emergency brake override.

Standards and approvals

- ✓ UIC Leaflet 541-5 9-Pole Interoperability Compliant
- ✓ EN 45545-2 HL3 & EN 50264-3-1 Rolling Stock Certified

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

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Email

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Web

tebaoflex.com/cables/uic-541-5-electropneumatic-brake-door-control-inter-coach-railway-jumper-assembly



Typical values for this cable type, based on UIC 541-5 / EN 50264-3-1 / EN 45545-2 HL3 / IEC 61373. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.