

## Railway Cables

### Thin Walled Flexible Electron Beam Irradiated Elastomeric Cables (ELRS/SPEC/ELC/0019 REV-4)

Electron beam irradiated thin walled flexible elastomeric cables with copper conductor, limited fire hazard, minimum flame spread, low smoke emission & limited toxic fumes emission.

**Application** : They are designed for fixed, protected internal use in power, auxiliary as well as control circuit of conventional tap changer electric locomotives, AC/DC EMU & BG AC EMU & MEMU / Coaching Stock.

They offer robust resistance to oil, fuel, ozone and temperature extremes. Critically, their construction ensures superior fire performance meeting ELRS / ELC / SPEC / 0019 requirements along with EN 45545-2 HL3

**Advantages** : It's construction provides extreme durability against mechanical stress, chemicals and temperature fluctuations

Halogen-free, fire safety by reducing flame spread, smoke and toxic gas emissions

Resistance to mineral oil, diesel oil, fluids & ozone

Thin-wall design allows for space-efficient installation

Robust build guarantees a long service life

Construction:	Single Core Cables		Multi Core Cables	
Component	up to 750 V	Above 750 & Up To 1.8/3 KV	Above 750 & Up To 1.8/3 KV	
Size (sq.mm)	1.5 sq. mm to 150 sq. mm	1.5 sq. mm to 300 sq. mm	19C X 2.5 sq. mm	19C X 4 sq. mm
Operating temperature	- 40° C to +120° C			
Electrolytic Flexible Annealed Tinned Copper (Class-5)	✓	✓	✓	✓
Insulation (Type EBXL EPDM )	✗	✓	✓	✓
Insulation (Type EBXL EVA )	✓	✗	✓	✓
Sheath (Type EBXL EVA)	✗	✓	✓	✓
HV Test	6 KV for 5min	8 KV for 15min		
HV Test-At room temp. at 90 ± 3° C	K ≥ 2000 MΩ-km K ≥ 30 MΩ-km	K ≥ 12000 MΩ-km K ≥ 200 MΩ-km		
Bending Radius:	3 X OD for cable diameter < 10mm 5 X OD for cable diameter > 10mm			

**Colors:** Various color options available as per customer requirement (Red, Yellow, Blue, Black, Grey, GNYE, Chocolate, White, etc.).

### Compliance & Fire Safety

Low Flame Spread / Flame Retardancy : IEC 60332-1-2, IEC 60332-3 (various parts)

Low Smoke Emission : ASTM D 2843 / IEC 61034-2

Corrosivity of Combustion of gases (on Sheath only) : IEC 60754-2

Toxicity of Combustion of gases (on Sheath only) : NES 713

### Key Features

RDSO Approved ELRS/SPEC/ELC/0019 REV-4 Compliant Electron Beam Irradiated (EBXL)

Halogen-Free, Low Smoke & Toxicity

High Temperature Rated - 40° C to +120° C Continuous Operation

Oil, Diesel & Chemical Resistant for Railway Environments

Flexible Tinned Copper Conductors (Class 5) for Easy Installation



Fire retardant



Good Chemical Resistance



Good Resistance to UV, humidity and ozone



High Flexible



Halogen Free



Low Corrosivity of combustion gases



Low toxicity



Operating temp.