

Technical Specification

T0501
(Formerly SE260)

Pigtail Rail Connections for Both Underground and Surface Locations

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1 Purpose

- 1.1 The purpose of the pigtail connections detailed in this Technical Specification is to allow electrical connections to be made to the running rails for signalling purposes. The insulation layer, although giving a degree of electrical protection, is primarily to resist corrosion to the conductor.

2 Scope

- 2.1 This specification covers the requirements of three types of 'pigtail' connections for connections and bonds to running rails:
- Type A for use in surface locations
 - Type B for use in underground or tunnel locations
 - Type C for use in 25KV immunised areas

3 Construction

3.1 General

The cable conductor shall consist of 19 strands of tinned copper (19/1.04 or 16mm²) to BS EN 60228. The completed cable diameter shall not exceed 11mm. The conductor insulation shall provide electrical integrity up to a voltage rating of 1000V dc.

3.2 Type A (Surface Locations)

Insulation and sheath shall be of the Contractor's choosing, and shall be of contrasting colours. The outer sheath shall be grey to BS 6746C.

3.3 Type B (Underground and Tunnel Locations)

Design as detailed for Type A, but the outer sheath shall be black to BS 6746C and the composite cable shall comply with the fire performance requirements of London Underground Category 1 Standard 1-085.

3.4 Type C (25KV Immunised Areas)

Design as detailed for Type B, but the outer sheath shall be red to BS 6746C.

3.5 Terminations

Terminations shall be provided at both ends. At one end a bond terminal manufactured to London Underground drawing AS1826, stores list number 72S1 shall be used. An agreed heavy duty crimp termination shall be supplied fitted to the other end of the rail connection. The crimping operation shall be undertaken using 16mm² dual hexagon dies, which leave die identification marks for inspection purposes. The crimped joint shall be inspected for full insertion of the conductor into the termination barrel. Conductor stranding shall be visible through the inspection hole in the lug and shall be free of damage.

On Central Line tuning units, pigtail connections should have a 45° angled crimp, S/L no. 10s115 (See Work Instruction EES-WI-122764).