

Technical Specification

T0505_(Formerly SE1047) Concentric Signalling Cables

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MAYOR OF LONDON

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1 Purpose

- 1.1 The purpose of this Technical Specification is to cover railway signalling cables, where each conductor pair shall be arranged in a concentric configuration.

Note: The cables are used in a safety critical application, where failure to meet the requirements of this specification, throughout the 40 year design life of the cables, could lead to death or serious injury.

2 Scope

- 2.1 The cables shall be installed in trackside bracket runs, but are not suitable for being laid directly onto ballast, nor in ground mounted troughing. The scope includes PVC and low smoke cables in screened and non-screened variants.

3 General Requirements

3.1 Delivery

All cable shall be delivered and unloaded by the Contractor to the address stated in the order. All cables shall be supplied in the lengths called for in the order, with a tolerance of $\pm 1.5\%$. Any cables delivered in lengths outside the above tolerance band will only be accepted with prior agreement. All cable shall be delivered on wooden drums, securely battened and giving 100% coverage. A suitable heatshrink cap shall be fitted over both cable ends to prevent ingress of water and dirt. Banding, of appropriate strength, shall be used as a means of securing battens to cable drums. Battens shall be secured in such a way as to prevent movement.

3.2 Cable Identification

- 3.2.1 All drums and reels shall be clearly and indelibly marked once on each flange, in a contrasting colour, with the London Underground stores list number, S-SG-1047 and Type number, London Underground's order number and the Contractor's batch number. In addition, Types 2 and 4 shall be identified by the initials LSC, denoting low smoke cable. Lettering shall not be less than 45mm in height, with the exception of the initials LSC, which shall not be less than 100mm in height.
- 3.2.2 Cable sheaths shall be marked with the London Underground stores list number, Contractor's name and T0505 (Formerly SE1047), together with the relevant Type number. Types 2 and 4 sheaths shall additionally be marked with the initials LSC. The sheath markings shall be embossed or printed and shall be repeated, at a minimum, every 2 metres along the cable length. All cable sheath marking characters shall be a minimum of 15% of the cable diameter or 3mm in height, depending upon which is greater and all lettering shall be in block capitals. If printing is used, the lettering shall be of a contrasting colour to that of the sheath.
- 3.2.3 The insulation, covering the individual concentric pairs, shall be sequentially marked 1-ONE, 2-TWO etc., with the marking repeated every 10cm along the length of each insulated pair. The height of the lettering shall not be less than 3mm. Where a central insulated concentric pair is used in the lay-up, this shall be marked 1-ONE.

3.3 Inspection

When the inner or bottom test end of the cable is cut off and sealed by the Contractor, sufficient cable (not less than 300mm) shall be left easily accessible to permit London