

Technical Specification

T0504_(Formerly SE902) Cable for d.c. traction indications and rail connections

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Contents

1	Purpose	3
2	Scope	3
3	Construction and Specific Requirements	3
3.1	Construction	3
3.2	Operating and Environmental Requirements	4
4	Type Tests	4
4.1	Fire Performance	4
4.2	Electrical Performance	4
5	Mechanical, Ageing and Environmental Performance	5
6	Batch Tests	6
7	Identification, Delivery and Control	6
8	References	7
8.1	References	7
8.2	Abbreviations	7
8.3	Definitions	8
8.4	Technical content manager	8
8.5	Document history	8



1 Purpose

The purpose of this Technical Specification is to ensure that this cable is used for a variety of applications including signalling track circuit rail connections and d.c. traction indications. The cable therefore needs to be connected directly to both the running rails and the traction rails.

2 Scope

This specification defines the conditions for the manufacture of single core cable for use in d.c. traction indication circuits and rail connection circuits. The rated voltage for the cable shall be 3 kV conductor to earth. The normal operating voltage shall be 900 V, measured with respect to earth; and the normal operating current shall not exceed 10 A.

3 Construction and Specific Requirements

3.1 Construction

- 3.1.1 The conductor shall consist of 7 strands of 0.85 mm diameter tinned annealed copper wire (4.0 mm²) in accordance with BS 6360 (class 2).
- 3.1.2 The conductor shall be covered with an extruded polymeric material of the manufacturers choosing applied in accordance with BS 6004 clause 6.2. The insulation layer may consist of either a single or dual layer but in the case of the latter it is not a requirement that the two layers be separable. The overall diameter of the insulated conductor shall be in the range 10 mm – 12 mm.
- 3.1.3 The insulated conductor shall be sheathed with an LFH extruded material applied in accordance with BS 6004 clause 6.6 It is a requirement that the sheath shall be easily and cleanly separable from the insulation.
- 3.1.4 The insulation and sheath layers shall have a concentricity of not less than 70%.
- 3.1.5 The insulation and sheath shall display the following permanent colours in accordance with BS 6746C:
 - a) Sheath: Black
 - b) Insulation: Black
- 3.1.6 The overall diameter of the finished cable shall conform to the following tolerances:
 - Minimum: 21.0 mm;
 - Preferred: 22.0 mm;
 - Maximum: 23.0 mm