

Application

The cable is designed primarily for external deployment in railway environments as the interconnecting cable for Solid State Interlocking (SSI) Systems. It is manufactured in accordance with Network Rail Specification BR1932 (Dec 1987). The cable is deployed in troughing or by direct burial. In the latter case, the thickness of the outer sheath is increased.

Construction

The cable core comprises one two plain anneal copper conductors, insulated with solid polyethylene and forming a twisted pair with regular lay. The cable core is then covered with a polyester core wrap and a polyethylene inner sheath or bedding. A polymer-coated aluminium tape is applied longitudinally over the cable core wrap acting as a moisture barrier. The moisture barrier is bonded to the polyethylene outer sheath.

A second variant includes a 5 mm outer polyethylene sheath to facilitate direct burial.

Further variants are available including LSZH Sheath and Rodent Resistant outer sheath incorporating a corrugated steel tape bonded to a polymeric sheath.

Physical Parameters

BTCL Part No.	No. of Pairs	Conductor Diameter (mm)	Insulated Conductor Diameter (mm)	Nominal Inner Sheath Diameter (mm)	Nominal Overall Diameter (mm)	Nominal Cable Weight (kg/km)	Application
10189500	1	1.27	2.60	8.3	13.6	136	DUCT
10189501	1	1.27	2.60	8.3	18.3	270	DIRECT BURIAL

Electrical Parameters

Conductor Resistance @ 20°C (ohms/km)	Maximum Impedance (ohm @ 10 MHz)	Mutual Capacitance @10 kHz (nF/km)
14.0	100 ± 10	55

Insulation Resistance

Insulation resistance measurement of each conductor shall be made with not less than 500 volts D.C. After steady electrification for five minutes the insulation resistance measured (with the remaining conductor and moisture barrier connected together) shall not be less than 40 Gohm per 1000 metres at 20°C.

Capacitance Un-balance

The capacitance measure between each conductor and the moisture barrier shall be balanced within 4 pF/m.

Pair Colour Scheme

Cabling Element No.	a-wire	b-wire
1	RED	BLUE