

BT Cables Network Rail Telecommunications Cable Low Smoke Zero Halogen (LSZH) Corrugated Steel Tape Armoured

PACW/solid polyethylene insulation/moisture barrier /Low Smoke Zero Halogen Sheathed
Bonded Corrugated Steel Tape/ Low Smoke Zero Halogen sheathed
External Telephone Cable (Complies with Specifications Network Rail
Specification NR/PS/TEL/00015)

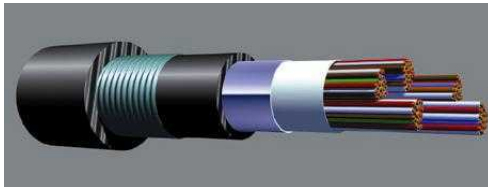
Application

The cable is designed primarily for underground railway installation. It is suitable for installation in ducts and on cable trays in tunnel walls and incorporates a bonded aluminium moisture barrier. The cable protected against crushing and rodent attack by the inclusion of a bonded Corrugated Steel Tape armour. The cable is compliant with Network Rail Specification NR/PS/TEL/00015 (formerly RT/E/PS/00015 & BR1916/BR1822).

Construction

Twisted pairs in 10 Pair Units. The pair range is 2 – 100.

Number Pairs	Nominal Cdr Size (mm)	Minimum Elongation (%)	Nominal Ins. Diameter (mm)	Inner Sheath Cable		Armoured Cable		Min Bend Radius (mm)	Cable Weight (kg/km)
				Min. Radial (mm)	Diameter Max. (mm)	Min. Radial (mm)	Diameter Max. (mm)		



Product Description

Plain annealed solid copper wire, solid polyethylene insulation, twisted pairs, fire retardant core wrap, a black low smoke non-halogen sheath incorporating a longitudinally applied aluminium/polyethylene moisture barrier, bonded corrugated steel tape and a black low smoke zero halogen sheath.

2	0.63	15	1.15	2.5	12.3	2.0	18.3	366	381
5	0.63	15	1.15	2.5	13.8	2.0	21.8	436	469
10	0.63	15	1.15	2.5	15.6	2.0	23.3	466	574
20	0.63	15	1.15	2.5	18.1	2.0	26.1	522	738
30	0.63	15	1.15	2.5	20.4	2.0	28.4	568	882
50	0.63	15	1.15	2.5	24.2	2.0	32.2	644	1131
75	0.63	15	1.15	2.5	28.2	2.0	36.2	724	1425
100	0.63	15	1.15	2.5	31.0	2.0	39.0	780	1692

2	0.90	15	1.35	2.5	13.3	2.0	28.5	570	405
5	0.90	15	1.35	2.5	18.1	2.0	29.3	586	532
10	0.90	15	1.35	2.5	18.0	2.0	33.0	660	674
20	0.90	15	1.35	2.5	21.9	2.0	37.0	740	918
30	0.90	15	1.35	2.5	25.2	2.0	40.0	800	1135
50	0.90	15	1.35	2.5	30.0	2.0	45.0	900	1525
75	0.90	15	1.35	2.5	35.8	2.0	51.0	1020	1980
100	0.90	15	1.35	2.5	39.1	2.0	54.0	1080	2411

Electrical Properties

Conductor Diameter (mm)	Mutual Capacitance (nF/km)		Conductor Resistance @ 20°C (ohms)	
	Max Average	99%	Max Average	99%
0.63	61	68	58.0	60.0
0.90	65	70	28.0	30.0

BT Cables Limited, Delaunays Road, Blackley, Manchester, M9 8FP, United Kingdom
Telephone: +44 (0) 161 740 9151 Facsimile: +44 (0) 161 795 8393 www.btcables.com
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Attenuation & Near –End Crosstalk	Cu Size (mm)	Measurement Frequency		
		1.0 kHz	2.4 kHz	1.024 MHz
Attenuation dB/km (Max Ave)	0.63	1.40	2.15	18.70
	0.90	0.95	1.46	14.60
NEXTA (dB Minimum)		70.00	65.00	Within Unit
				Between Units
				40.00
				47.00

Insulation Resistance

Insulation resistance measurements are made with not less than 500 volts D.C. After steady electrification for one minute the insulation resistance is measured between each conductor and the remaining conductors connected together and is not less than 1500 megohms per 1000 metres when corrected to 20°C.

Capacitance Unbalance

Not more than 1% of the corrected capacitance unbalance measurements between adjacent pairs shall exceed the following values:

Two-Pair (Quad) Cable:- 800pF. All other sizes:- 275pF.

Fire Test Performance

Smoke Emission Compliant with BS 6853, Appendix B, and IEC 61034.

Flammability Sheath material has Temperature Index $\geq 260^{\circ}\text{C}$ (BS 6853 Appendix A).

Low Smoke Sheath $\leq 0.05\%$ Halogenated material

Pair Colour Scheme, Unit Binder Colours and Cable Make-up

Cabling Element No.	a-wire	b-wire	Unit Number	Binder Colour	Cable Size	No. and Pair Size of Unit in Centre and 1 st Layer	
						Centre	1 st layer
1	WHITE	BLUE	1	BLUE	2	1 x 2	-
2	WHITE	ORANGE	2	ORANGE	5	1 x 5	-
3	WHITE	GREEN	3	GREEN	10	1 x 10	-
4	WHITE	BROWN	4	BROWN	20	4 x 5	-
5	WHITE	GREY	5	GREY	30	2 x 10	-
6	RED	BLUE	6	WHITE	50	6 x 5	-
7	RED	ORANGE	7	RED	75	3 x 10	-
8	RED	GREEN	8	BLACK	100	5 x 10	-
9	RED	BROWN	9	YELLOW		1 x 10	4 x 10
10	RED	GREY	10	VIOLET		3 x 5	6 x 10
						2 x 10	8 x 10
						3 x 10	7 x 10
						4 x 5	8 x 10

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