



## RT/ZHLS, A-2Y(L)2Y External Telephone Cables to NR/PS/TEL/00015

### Applications

The cables are designed primarily for trackside railway installation in non electrified area. For direct burial application, brass tape armoured or Zetabon type corrugated steel tape armoured can be offered against rodent attack.

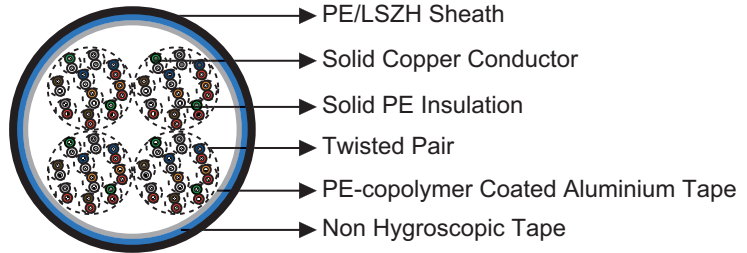


### Standards

- NR/PS/TEL/00015 (formerly RT/E/PS/00015 or GK/RT 0315)
- TS0886/BR1822
- BR892

### Construction

- Conductors: Solid plain copper conductor, 0.63 or 0.9 mm nominal diameter.
- Insulation: Solid polyethylene to BS 6234.
- Cabling Element: Two insulated conductors are twisted together to form a pair.
- Stranding: Pairs are helically stranded in 10 pair units.
- Core Wrapping: Plastic tape(s) with overlapping.
- Moisture Barrier: One laminated sheath made of aluminium tape (0.15mm) coated with PE-Copolymer on at least one side is applied with longitudinally overlap.
- Outer Sheath: Polyethylene to BS 6234. LSZH compound option can be offered upon request.



### Optional

Jelly Filled Cables: The cable core interstices are filled with petroleum jelly to avoid longitudinal water penetration within the cable. The water resistant filling compound is applied to the air space between non-hygroscopic tape and shield, shield and sheath within the cable core.

Armoured Cables: Corrugated steel tape armour coated on both sides with copolymer can be applied over an intermediate sheath. The steel tape thickness is 0.145mm. Brass tape armour can be offered as an option.

### Electrical Characteristics at 20°C

Nominal Conductor Diameter	mm	0.63	0.9
Maximum Conductor Resistance	Ω/km	60.0	30.0
Minimum Insulation Resistance @500 V DC (1min)	MΩ.km	1500	1500
Maximum Conductor Capacitance @1000Hz (AC)			



Maximum Average Value			
For 20 pairs or less	nF/km	70	79
More than 20 pairs	nF/km	67	75
Maximum Individual Value 99% of pairs			
Up to 20 pairs	nF/km	79.0	85.0
More than 20 pairs	nF/km	75.0	81.0
Maximum Capacitance Unbalance @1000Hz pair to pair (99% of pairs)			
For 2 pairs (1 quad)	pF/500m	800	800
All other sizes	pF/500m	275	275
Dielectric Strength, conductor to screen (DC voltage 2mins)			
	V	2000	2000
Maximum Average Attenuation			
@1.0KHz	dB/km	1.40	0.95
@2.4KHz	dB/km	2.15	1.46
@1.024MHz	dB/km	18.70	14.6
Minimum Average Near-end Crosstalk			
@1.0KHz	dB/km	70	70
@2.4KHz	dB/km	65	65
@1.024MHz			
Within Units	dB/km	40	40
Between Units	dB/km	47	47
High Voltage Breakdown Test			
DC for 2mins	V	2000	2000
AC for 2mins	V	1333	1333

## ➤ Mechanical and Thermal Properties

- Minimum Bending Radius: 7.5×OD (unarmoured); 10×OD (armoured)
- Temperature Range: -40°C to +70°C (during operation); -10°C +60°C (during installation)

## ➤ Core Identification

Colour scheme, unit binder colour and cable make-up according to NR/PS/TEL/00015

Pair Number	A Wire	B Wire	Unit Number	Binder Colour	Cable Size	Number and Pair Size of Unit	
						Centre	1st Layer
1	WHITE	BLUE	1	BLUE	2	1x2	-
2	WHITE	ORANGE	2	ORANGE	5	1x5	-
3	WHITE	GREEN	3	GREEN	10	1x10	-
4	WHITE	BROWN	4	BROWN	20	4x5	-
5	WHITE	GREY	5	GREY	20	2x10	-
6	RED	BLUE	6	WHITE	30	6x5	-
7	RED	ORANGE	7	RED	30	3x10	-
8	RED	GREEN	8	BLACK	50	5x10	-
9	RED	BROWN	9	YELLOW	50	1x10	4x10
10	RED	GREY	10	VIOLET	75	3x5	6x10
					100	2x10	8x10
					100	3x10	7x10
					100	4x5	8x10

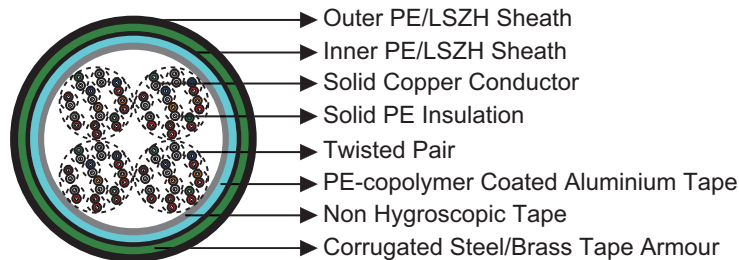
## ➤ Dimensions and Weight

A-2Y(L)2Y n × 2 × 0.63/0.9

Cable Code	Number of Pairs (n)	Nominal Sheath Thickness mm	Maximum Overall Diameter mm	Nominal Weight kg/km
0.63mm Conductor, 1.15mm Insulated Wire				
RS/RT/ZHLS-2Y(L)2Y-2P0.63	2	2.7	12.3	103
RS/RT/ZHLS-2Y(L)2Y-5P0.63	5	2.7	13.8	155

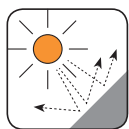


Cable Code	Number of Pairs (n)	Nominal Sheath Thickness mm	Maximum Overall Diameter mm	Nominal Weight kg/km
RS/RT/ZHLS-2Y(L)2Y-10P0.63	10	2.7	15.6	212
RS/RT/ZHLS-2Y(L)2Y-20P0.63	20	2.7	18.1	309
RS/RT/ZHLS-2Y(L)2Y-30P0.63	30	2.7	20.4	403
RS/RT/ZHLS-2Y(L)2Y-50P0.63	50	2.7	24.2	574
RS/RT/ZHLS-2Y(L)2Y-75P0.63	75	2.7	28.2	779
RS/RT/ZHLS-2Y(L)2Y-100P0.63	100	2.7	31.0	974
0.9mm Conductor, 1.5mm Insulated Wire				
RS/RT/ZHLS-2Y(L)2Y-2P0.9	2	2.7	13.3	131
RS/RT/ZHLS-2Y(L)2Y-5P0.9	5	2.7	15.6	208
RS/RT/ZHLS-2Y(L)2Y-10P0.9	10	2.7	18.1	305
RS/RT/ZHLS-2Y(L)2Y-20P0.9	20	2.7	21.9	477
RS/RT/ZHLS-2Y(L)2Y-30P0.9	30	2.7	25.2	639
RS/RT/ZHLS-2Y(L)2Y-50P0.9	50	2.7	30.0	951
RS/RT/ZHLS-2Y(L)2Y-75P0.9	75	2.7	35.8	1325
RS/RT/ZHLS-2Y(L)2Y-100P0.9	100	2.7	39.1	1688



## A-2Y(F)(L)2YB2Y n x 2 x 0.63/0.9 Jelly Filled & Armoured Cables

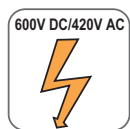
Cable Code	Number of Pairs (n)	Nominal Sheath Thickness mm		Maximum Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
0.63mm Conductor, 1.15mm Insulated Wire					
RS/RT/ZHLS-2Y(F)(L)2YB2Y-2P0.63	2	1.6	1.6	18.0	222
RS/RT/ZHLS-2Y(F)(L)2YB2Y-5P0.63	5	1.6	1.6	19.5	296
RS/RT/ZHLS-2Y(F)(L)2YB2Y-10P0.63	10	1.6	1.6	20.3	383
RS/RT/ZHLS-2Y(F)(L)2YB2Y-20P0.63	20	1.6	1.6	23.8	504
RS/RT/ZHLS-2Y(F)(L)2YB2Y-30P0.63	30	1.6	1.6	26.1	606
RS/RT/ZHLS-2Y(F)(L)2YB2Y-50P0.63	50	1.6	1.6	29.9	903
RS/RT/ZHLS-2Y(F)(L)2YB2Y-75P0.63	75	1.6	1.6	33.9	1202
RS/RT/ZHLS-2Y(F)(L)2YB2Y-100P0.63	100	1.6	1.6	36.7	1463
0.9mm Conductor, 1.5mm Insulated Wire					
RS/RT/ZHLS-2Y(F)(L)2YB2Y-2P0.9	2	1.6	1.6	19.0	250
RS/RT/ZHLS-2Y(F)(L)2YB2Y-5P0.9	5	1.6	1.6	21.3	370
RS/RT/ZHLS-2Y(F)(L)2YB2Y-10P0.9	10	1.6	1.6	23.8	508
RS/RT/ZHLS-2Y(F)(L)2YB2Y-20P0.9	20	1.6	1.6	27.6	782
RS/RT/ZHLS-2Y(F)(L)2YB2Y-30P0.9	30	1.6	1.6	30.9	1000
RS/RT/ZHLS-2Y(F)(L)2YB2Y-50P0.9	50	1.6	1.6	35.7	1402
RS/RT/ZHLS-2Y(F)(L)2YB2Y-75P0.9	75	1.6	1.6	41.5	2055
RS/RT/ZHLS-2Y(F)(L)2YB2Y-100P0.9	100	1.6	1.6	44.8	2550



UV Resistant



Water Resistant



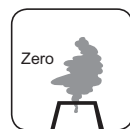
Rated Voltage



Laid In Ducts



Buried in Circuit



Zero Halogen

IEC 60754-1/NF C20-454  
EN 50267-2-1