AzLM Axle Counter Cable

Compliant with NR/L2/SIG/30060 - Network Rail certificate of acceptance PA05/06474

HFFR sheathed cable types

Application
Signalling in railway networks. Axle counter system for traffic management.

Family
Railway Signalling cables

Design

1. Conductor
Tinned copper wire

2. Insulation
Solid polyethylene

3. Twisting
Construction in pairs. Two pairs cable construction in quads

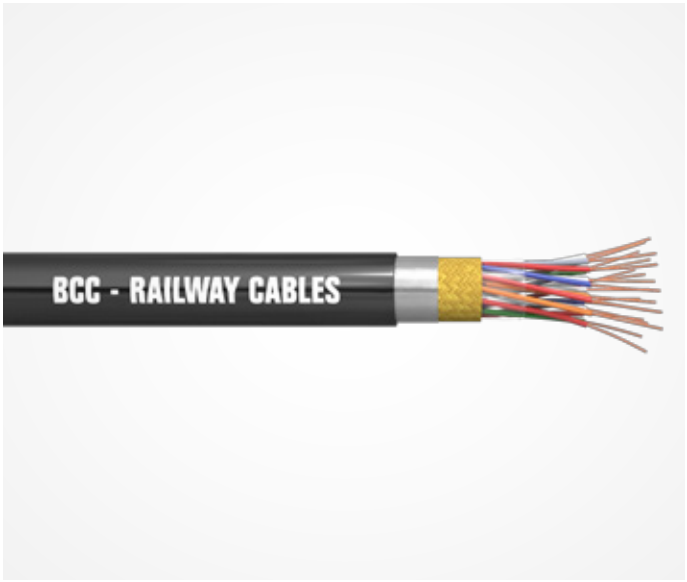
4. Stranding
Concentric Layers

5. Core wrapping
Plastic tape(s) with overlapping

6. Antirodent protection
glassfibre tape

7. Moisture barrier
Aluminiumpolymer laminate tape (incl Drain/continuity wire)

8. Sheath
ZHL5 Compound



Standards: NR/L2/SIG/30060 (March 2009)

Fire Performance: Only HFFR Versions

Flame Propagation IEC 60332-3

Halogen free IEC 60754

Flame retardant IEC 60332-1

Smoke Emission IEC 61034

Physical characteristics

Cable Code	No. of Pairs	Conductor Diameter (mm)	Nominal Sheath Radial Thickness (mm)	Maximum Overall Diameter (mm)	Approximate Weight (kg/km)
XPZ0902	2	0.9	2.5	13.8	260
XPZ0910	10	0.9	2.5	24.7	530
XPZ0912	12	0.9	2.5	26.4	590
XPZ0919	19	0.9	2.5	61.4	805
XPZ0924	24	0.9	2.5	34.5	950
XPZ1402	2	1.4	2.5	19.5	390
XPZ1410	10	1.4	2.5	31.4	950
XPZ1412	12	1.4	2.5	33.8	1055
XPZ1419	19	1.4	2.5	40.8	1500
XPZ1424	24	1.4	2.5	45.0	1810
XQZ0902*	2	0.9	2.5	11.8	240
XQZ1402*	2	1.4	2.5	16.4	350

N.B. * Star Quad variant

Construction Characteristics

Colour code for pair cable types

Pair Number	Insulation Colour	
	a - conductor	b - conductor
1	White	Blue
2	White	Orange
3	White	Green
4	White	Brown
5	White	Grey
6	Red	Blue
7	Red	Orange
8	Red	Green
9	Red	Brown
10	Red	Grey
11	Yellow	Blue
12	Yellow	Orange

Pair Number	Insulation Colour	
	a - conductor	b - conductor
13	Yellow	Green
14	Yellow	Brown
15	Yellow	Grey
16	Violet	Blue
17	Violet	Orange
18	Violet	Green
19	Violet	Brown
20	Violet	Grey
21	Turquoise	Blue
22	Turquoise	Orange
23	Turquoise	Green
24	Turquoise	Brown

Colour code for quad cable types

Pair Number	Insulation Colour	
	a - conductor	b - conductor
1	Orange	White
2	Green	Black

Core make-up

No. of Pairs in Cable	Pair No. in Each Layer		
	Centre	1st Layer	2nd Layer
2	1 &2	-	-
10	1 & 2	8	-
12	3	9	-
19	1	6	12
24	2	8	14

Electrical characeristics @ 20°C

Parameter	Unit	Frequency (kHz)	Value	
Conductor Diameter, nominal	mm	d.c.	0.90	1.40
Conductor Resistance, maximum average	Ω/km	d.c.	30	11.5
Resistance Unbalance, maximum	%	d.c.	5	
Insulation Resistance, 1 minute, 500 Vdc, minimum	MΩ.km	d.c.	5000	
Dielectric Strength, between conductors, 1 minute	kV	d.c.	2	
Mutual Capacitance, maximum average	nF/km	1.0	45 5	0
Attenuation, maximum average	dB/km	40	2.6	2.0
Characteristic Impedanace	Ω	90	135±10	

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