

RT/F3 E1/E2/E3 Type Axle Counter Cable

Applications

The cables are designed for transmission of signals up to 90 kHz in axle counter train detection systems.

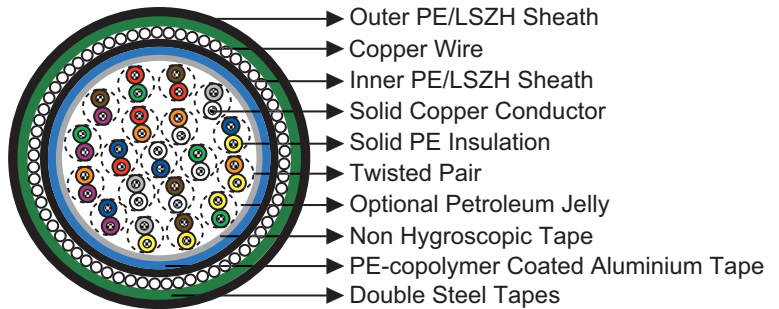


Standards

- RT/E/PS/00031

Construction

- Conductors: Tinned copper wire, 0.9 or 1.4 mm nominal diameter.
- Insulation: Solid polyethylene.
- Cabling Element: Two insulated conductors are twisted together to form a pair.
- Stranding: Pairs are helically stranded in concentric layers.



- Filling: Cable core interstices are filled with a low-permittivity compound. Unfilled cables option can be offered upon request.
- Core Wrapping: Plastic tape(s) with overlapping.
- Moisture Barrier: One laminated sheath made of aluminium tape coated with PE-Copolymer on at least one side is applied with longitudinally overlap.
- Inner Sheath: Polyethylene or LSZH fire retardant compound.
- Electrostatic Shield: One layer of helically applied copper wires.
- Electromagnetic Shield: Two helically applied steel tapes.
- Outer Sheath: Polyethylene or LSZH fire retardant compound. Ruggedised PE sheath compound can be offered upon request.

Type Codes

F1 class: Non LSZH cables

D type: Unarmoured types

S type: Steel tape armoured types

E1, E2 & E3 types: 3 different induction protection levels available.

F5 class: Unfilled cables

R type: Ruggedised PE sheath

B type: Brass tape armoured types

Electrical Characteristics at 20°C

Nominal Conductor Diameter	mm	0.9	1.4
Nominal Conductor Cross Section	mm ²	0.63	1.5
Maximum Conductor Resistance	Ω/km	30.0	12.5



Minimum Insulation Resistance @500 V DC (1min)	MΩ.km	5000	5000
Nominal Mutual Capacitance @800Hz/1000Hz (AC)	nF/km	42+3	47+3
Dielectric Strength, conductor to screen (DC voltage 2mins)	V	3000	3000
Maximum Average Attenuation			
@1.0KHz	dB/km	0.73	0.45
@2.4KHz	dB/km	1.10	0.62
@40KHz	dB/km	2.88	1.77
@90KHz	dB/km	3.70	2.41
@1.024MHz	dB/km	11.2	7.45
Minimum Average Near-end Crosstalk Attenuation			
@1.0KHz	dB/km	60	60
@2.4KHz	dB/km	60	60
@40KHz	dB/km	50	50
@90KHz	dB/km	50	50
@1.024MHz	dB/km	35	35
Maximum Reduction Factor @100V/km,50Hz			
EMI RF 1 (modest level)		0.65	0.65
EMI RF 2 (medium level)		0.45	0.45
EMI RF 3 (high level)		0.20	0.20

➤ Mechanical and Thermal Properties

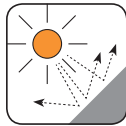
- Minimum Bending Radius: 7.5×OD (unarmoured); 10×OD (armoured)
- Temperature Range: -30°C to +60°C (during operation); -10°C to +60°C (during installation)

➤ Dimensions and Weight

Cable Code	Number of Pairs	Nominal Sheath Thickness mm		Nominal Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
0.9mm Conductor , 1.8mm Insulated Wire					
RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-2P0.9	2	2.2	2.4	23.4	1300
RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-10P0.9	10	2.2	2.4	31.8	1650
RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-12P0.9	12	2.2	2.4	35.0	1760
RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-19P0.9	19	2.2	2.4	41.4	2275
RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-24P0.9	24	2.2	2.4	44.0	2450
1.4mm Conductor, 2.7mm Insulated Wire					
RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-2P1.4	2	2.2	2.4	33.6	1480
RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-10P1.4	10	2.2	2.4	40.2	2200
RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-12P1.4	12	2.2	2.4	42.2	2325
RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-19P1.4	19	2.2	2.4	47.5	2975
RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-24P1.4	24	2.2	2.4	52.5	3150



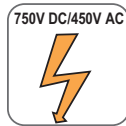
Anti Induction



UV Resistant



Water Resistant



Rated voltage



Impact Resistant

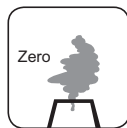


Buried in Ground



Laid In Ducts

PE Sheath



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

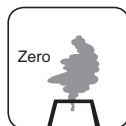
LSZH Sheath



Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1



Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266



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



Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073



Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453



Low Toxicity

