

## QUADED RAILWAY SIGNALING CABLES, ARMOURED PE SHEATH WITH A Rf OF 0,1. ADIF SPECIFICATION



Telecommunication  
cable



Impact  
Resistant



UV Resistant



Rodent  
Resistant



Resistant to EM  
interferences



ROHS  
compliant

### SPECIFICATIONS

Construction: ADIF ET-03.365.051.6 2<sup>nd</sup> edition

### DESCRIPTION AND APPLICATION

Cables from 1 to 27 star quads, conductors of 0.9 & 1.4 mm, polyethylene insulated. Quads are stranded in layers to form the core which is then protected by an anti inductive sheath with reduction factor of 0.1. They are used in rail circuits or as telecommunication cables, especially in rail infrastructures, when protection is required against the induction of high voltage lines. For installation in ducts or directly buried. The cable is rodent resistant.

### CONSTRUCTION

- **Conductors:** Annealed cooper wire, 0.9 and 1.4 mm in diameter.
- **Insulation:** Solid polyethylene.
- **Cabling element:** Star quads
- **Core formation.** Stranded in Layers.
- **Core wrapping.** Dielectric tape longitudinally applied with overlap.
- **Cable screen.** Layer of copper wires.
- **Inner sheath:** Polyethylene.
- **Armour:** Two helically applied steel tapes with a thickness of 0.8 mm each.
- **Outer sheath:** UV resistant black polyethylene.
- **Sheath marks** : The sheath shall be marked, at a regular intervals, with the following information
  - *Name of manufacturer/ Year/ Length marks*
  - *Other type of marks according to the costumer*



All drawings, designs, specifications and particulars of weights, dimensions, etc. in this documentation are only indicative and must not be considered contractual.

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<b>ELECTRICAL CHARACTERISTICS (20°C)</b>	0,9 mm	1,4 mm
Conductor maximum resistance ( $\Omega/\text{km}$ )	29,0	11,90
Resistance unbalance (%) $100 \times (R_{max} - R_{min}) / (R_{max} + R_{min})$	Average: 1 % / Maximum 2 %	
Minimum insulation resistance ( $M\Omega \times \text{km}$ , 20°C, 500 V)	35000	
Mutual capacitance (nF/km, 1000 Hz)	Average: 38±3 / Maximum 45	Average: 41±4 / Maximum 48
Capacitance unbalance (pF/460m, 1000 Hz)		
Pair-pair	Average < 35 / Maximum < 250	
Pair-earth	Average < 320 / Maximum < 1200	
<i>*Note: average values are applied on cables of at least 7 quads.</i>		
Dielectric Strength (Vdc, 3 s)		
conductor – conductor	3000	
conductor - screen	5000	

<b>TRANSMISION CHARACTERISTICS (20°C)</b>	0,90	1,4
Nominal attenuation (dB/km)		
1 KHz	0.70	0.46
10 KHz	1.60	0.85
30 KHz	2.10	1.30

<b>REDUCTION FACTOR, R<sub>k</sub> (50 Hz)</b>	0,90	1,4
Induced Voltage (V/km)		
200	0.1	0.1
500	0.1	0.1

### MECHANICAL CHARACTERISTICS

Operating temperature range : from -25° C to +75° C

Minimum radius of curvature: 15 x R<sub>cable</sub>

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## EA5K0K0-Ed1

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## SIZE AND WEIGHT TABLES

Diameter : 0.90 mm					
Code	no. quads	Cable Diam. (mm)	Approx. weight (kg/km)	Delivery length (m)	Drum type

EA5K0K090000100N	1	24.5	1250	920	A4
EA5K0K090000300N	3	26.0	1375	920	A4
EA5K0K090000500N	5	28.5	1650	460	A4
EA5K0K090000700N	7	30.0	1750	460	A4
EA5K0K090001000N	10	33.0	2025	460	A4
EA5K0K090001400N	14	37.0	2400	460	A4
EA5K0K090001900N	19	40.0	2750	460	A4
EA5K0K090002500N	25	43.0	3125	460	A6
EA5K0K090002800N	28	44.5	3325	460	A6

Diameter : 1.40 mm					
Code	no. quads	Cable Diam. (mm)	Approx. weight (kg/km)	Delivery length (m)	Drum type

EA5K0K0A4000100N	1	26.0	1300	920	A4
EA5K0K0A4000300N	3	27.5	1550	920	A4
EA5K0K0A4000500N	5	31.5	1950	460	A4
EA5K0K0A4000700N	7	35.5	2325	460	A4
EA5K0K0A4001000N	10	39.0	2750	460	A4
EA5K0K0A4001400N	14	43.0	3300	460	A6

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Pág. 3/3