



## Construction

<b>Conductor</b>	Bare copper wire Diameter: 0,9mm /1.3mm /1.4mm
<b>Insulation</b>	Solid polyethylene Identification: Colour code
<b>Assembly</b>	Star quadsa in concentric layers Envelope: Polyester tape
<b>Overall screen</b>	Aluminium/copolymer tape, longitudinally applied, overlapped an glued to the inner sheath
<b>Inner sheath</b>	Polyethylene
<b>Armour</b>	Corrugated steel tape with copolymer, longitudinally applied and overlapped
<b>Outer sheath</b>	Polyethylene (UV Resistant) Colour: Black

## Technical characteristics

<b>Conductor resistance</b>	- 0.9mm: 29 Ohm/Km Max. - 1.3mm: 13.9 Ohm/Km Max. - 1.4mm: 11.9 Ohm/Km Max.
<b>Resistance unbalance</b>	Average value: 1% Max. value: 2,5%
<b>Insulation resistance</b>	35000 MOhm*Km (500V, 20°C)
<b>Mutual capacitance</b>	Average value: 38±3 nF/km (0.9) / 41±4 nF/km (1.3) / 41±4 nF/km (1.4) Max. value: 45 nF/km (0.9) / 48 nF/km (1.3) / 48 nF/km (1.4)
<b>Capacitance unbalance</b>	Max. average value pair-pair: 35 pF/km Max. value pair-pair: 250 pF/m Max. average value pair-ground: 320 pF/km Max. value pair-ground: 1200 pF/m
<b>Dielectric strength</b>	Cond-Cond: 3000V Cond-Shield: 5000 V
<b>Nominal attenuation (dB/100m)</b>	- 1 kHz: 0.70 dB/km (0,9), 0.50 dB/km (1.3), 0.46 dB/km (1.4) - 10 kHz: 1.60 dB/km (0,9), 1.15 dB/km (1.3), 0.85 dB/km (1.4) - 30 kHz: 2.1 dB/km (0,9), 1.55 dB/km (1.3), 1.3 dB/km (1.4)
<b>Operating T<sup>a</sup></b>	-25°C a +75°C
<b>Min. bending radius</b>	15xD

## Application

Star quads railway signaling cables with EAPSP sheath, ADIF standard. They are used as telecommunication cables in track circuits, especially in railway infrastructures. External installation in ducts or directly buried, with special protection against rodents.

\* CPR:

Cable suitable for installation under the requirements of CPR (Construction Product Regulation (EU) No. 305/2011) according to the classification (Euroclass) specified in this document.

## Standards

Ref. standard for drawing

ADIF ET-03.365.052.4

CPR Classification (Euroclass)

Fca

(Según norma UNE-EN 50575)



electromagnetic protection



anti rodent



water resistant



UV resistant



direct burial



### Quads 0.9mm

Code	NxS (mm2)	Ø (mm)	Weight (kg/km)
21772900	1x4x0.9	14.3	190
21775400	3x4x0.9	17.8	327
21777700	5x4x0.9	20.2	450
21774600	7x4x0.9	22.1	530
21779200	10x4x0.9	25.5	700
21788200	14x4x0.9	28.5	860
21788300	19x4x0.9	31.5	1075
21788400	25x4x0.9	34.5	1350
21788500	28x4x0.9	36.1	1450

### Quads 1.3mm

Code	NxS (mm2)	Ø (mm)	Weight (kg/km)
21778100	1x4x1.3	15.7	260
21788700	3x4x1.3	20.2	455
21779000	5x4x1.3	23.9	670
21779300	7x4x1.3	26.6	810
21788800	10x4x1.3	30.1	1050
21789100	14x4x1.3	33.9	1400
21789200	19x4x1.3	37.3	1924
21789300	25x4x1.3	41.6	2148

### Quads 1.4mm

Code	NxS (mm2)	Ø (mm)	Weight (kg/km)
21774500	1x4x1.4	15.9	290
21777600	3x4x1.4	23.6	550
21778400	5x4x1.4	26.3	699
21779400	7x4x1.4	29.1	900
21789700	10x4x1.4	32.6	1200
21780000	14x4x1.4	37.2	1550
21789900	19x4x1.4	41.9	2000
	25x4x1.4	44.2	2447
	27x4x1.4	45.5	2610

#### Legend

<b>Code</b>	Cervi codification
<b>NxS (mm2)</b>	Number of conductors x Section (mm2)
<b>Ø (mm)</b>	Aprox. outer diameter (mm)
<b>Weight (kg/km)</b>	Approximate cable weight (kg/km)