EA2Y0P6-Ed1

RAILWAYS BALISE CABLES (ERTMS) WITH LSZH FIRE RETARDANT SHEATH


Signaling cable


Fire Retardant


Low smoke emission

Zero Halogen


Impact Resistant


UV Resistant


Rodents Resistant


EM interferences resistant

ROHS Compliant

STANDARDS

Construction: Own design for ERTMS balises.

Other complementary standards: EN 50266-2-4 cat. C, EN 50268-2-2, EN 50268-2 and NF C-20454

DESCRIPTION AND APPLICATION

Armoured cable of 1 or 2 pairs for connexion of the balise signalling system. Solid coloured polyethylene insulation. Formation in pairs. Inner protection with an ATI sheath and armoured with two galvanized steel tapes placed helically with 0.3 mm of thickness. Outer sheath of green LSZH material. This cable is protected against external inductions of the catenary with a reduction factor of 0,7, special protection against rodents and zero halogen, fire retardant and low smoke emission sheath. Cable destined for connexion of the balise signalling system RTMS. For installation in ducts or directly buried in tunnels. The cable is rodent resistant too.

CONSTRUCTION

- ***Conductors***: Annealed copper, 1,4 mm nominal diameter.
- ***Insulation***: High density solid polyethylene.
- ***Cabling elements***: Pairs.
- ***Core wrapping***: Dielectric tape longitudinally applied with overlap.
- ***Protection sheath:*** LSZH material (only for one pair cable).
- ***Cable Screen***: Copolymer coated aluminium tape longitudinally applied with overlap and bonded to the inner sheath.
- ***Intermediate sheath***: LSZH material
- ***Armour***. Two 0.3 mm thick galvanized steel tapes, helically applied.
- ***Outer sheath***: UV resistant LSZH material coloured green RAL 6018.
- ***Sheath marking***: The outer sheath shall be marked in white ink, at regular intervals, with the following information:
  - *Name of manufacturer/ Year/ Length marks*
  - *Other type of marks according to the costumer*

ELECTRICAL CHARACTERISTICS (20ºC)	1,4
Conductor resistance (Ω/km)	11.9
Loop Resistance unbalance (%) $100x(R_{max}-R_{min})/(R_{max}+R_{min})$	2.5 %
Minimum insulation resistance (MΩxkm, 20ºC, 500 V)	10000
Mutual capacitance (nF/km, 1000 Hz)	45
Pair to ground capacitance unbalance (pF/km, 1000 Hz)	2625
Dielectric strength (Vdc, 3 s)	
conductor – conductor	1000
conductor – shield	3000

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

Cables de Comunicaciones Zaragoza, SL.
Polígono de Malpica, calle D, nº 83. 50016 Zaragoza - España
+34 976 729 900 | +34 976 729 974
www.cablescom.com | comercial@cablescom.com
Certified Company **ISO 9001** - **ISO 14001**

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TRANSMISION CHARACTERISTICS (20ºC)	1,4	
Nominal attenuation (dB/km)		
8,8 KHz	0.85	
560 KHz	4.5	
Characteristic impedance (Ω)		
8,8 KHz	140 ± 10%	
560 KHz	120 ± 10%	
Far-end crosstalk (dB/km)	Minimum	Typical
8,8 KHz	66	105
560 KHz	45	75

REDUCTION FACTOR, R_k (50 Hz)	1,4									
Induced voltage (V/km)	100	200	300	400	500	600	700	800	900	1000
R_k	0.63	0.68	0.76	0.82	0.86	0.88	0.92	0.93	0.94	0.95

MECHANICAL CHARACTERISTICS

Temperature range: from -25º C to +75º C

Bending radius: 15 x R_{cable}

DIMENSIONS AND WEIGHTS

Diameter : 1,4 mm					
Code	no. pairs	Cable Diam. (mm)	Aprox weight. (kg/km)	Length (m)	Drum type
EA2Y0P6A4000102N	1	16.0	340	3000	A4
EA2Y0P6A4000202N	2	18.0	500	3000	A6

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