

**Technical specification for telephone armoured cables, to be installed in air, ducts, pipes, in ground with or without protection.**

**Copper conductors having nominal diameter 0.8 mm, HF Polyolefin insulation, electrostatic shield/armouring of steel wires or steel tapes and PVC jacket.**

Telephone cable with armouring for indoor/outdoor use

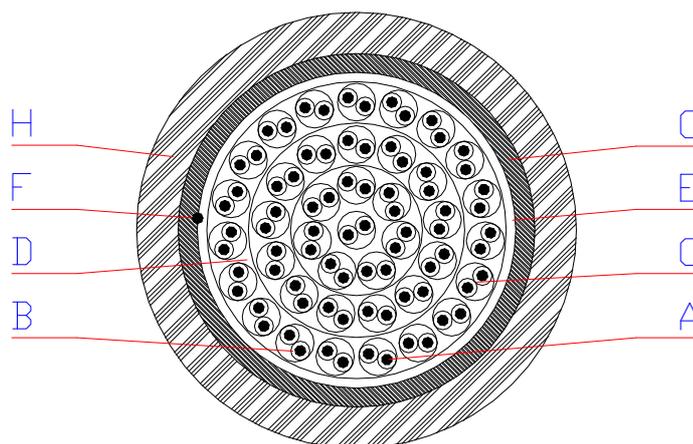
**TWAVB-F2 ..x2x0.8 Eca**

according to CENELEC HD 627 and NBN C32-121 standards, as far as applicable

## 1. Application

The cables are designed for use in telephone systems. They are suitable for fixed installation in indoor or outdoor environment. They have a reinforcing armouring, consisting of steel wires or steel tapes, and can be installed in air, ducts, pipes or directly in ground. Technical characteristics according to: Cenelec HD 627 and NBN C32-121, as far as applicable

## 2. Cable section and makeup



Cable designation : **TWAVB-F2 40x2x0.8 Eca**

- A) Conductor: solid bare copper wire, nominal diameter 0.8 mm
- B) Insulation: HF Polyolefin, nominal insulation thickness 0.4 mm
- C) Basic element: two insulated wires, appropriately coloured, uniformly twisted together to form a pair (2 pairs cable formed in a star quad)
- D) Core assembling: pairs stranded in concentric layers (40 pairs = 1+7+13+19)
- E) Common core covering: plastic tapes or PVC inner jacket
- F) Drain wire (only for steel tape armoured cables): solid bare copper wire, nominal diameter 0.8 mm
- G) Screening/Armouring: two Zinc coated steel tapes, helically applied; the second tape covering the gap of the first tape
- H) Outer jacket: Flame Retardant PVC compound, colour GREY

## 3. Cable marking

The outer jacket is marked in contrasting colour with the Producer - Cable designation according to Clause 4 - EN50575:2014+A1:2016 Class Eca - Month/Year of production - CE mark + sequential metric marking.

Example:

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#### 4. Construction, diameter, weight and delivery length

Cable designation	Core construction (pairs)	Armouring		Nominal thickness of jacket (mm)	Nominal cable diameter (mm)	Approx. weight (kg/km)	Delivery length (m)
		Steel wire diameter	Steel tape thickness				
TWAVB-F2 1x2x0.8 Eca	1	1.2	-	1.8	10.5	235	1000
TWAVB-F2 1x4x0.8 Eca	1 star quad	1.2	-	1.8	11	250	1000
TWAVB-F2 4x2x0.8 Eca	4	1.2	-	1.8	13.5	340	1000
TWAVB-F2 5x2x0.8 Eca	5	1.2	-	1.8	15	430	1000
TWAVB-F2 7x2x0.8 Eca	1+6	1.2	-	1.8	16	450	1000
TWAVB-F2 10x2x0.8 Eca	2+8	1.2	-	1.8	17	550	1000
TWAVB-F2 12x2x0.8 Eca	3+9	1.2	-	1.8	18	600	1000
TWAVB-F2 16x2x0.8 Eca	5+11	-	0.3	2.0	19	550	1000
TWAVB-F2 19x2x0.8 Eca	1+6+12	-	0.3	2.0	20	620	1000
TWAVB-F2 21x2x0.8 Eca	1+7+13	-	0.3	2.0	21.5	630	1000
TWAVB-F2 27x2x0.8 Eca	3+9+15	-	0.3	2.0	23.0	750	1000
TWAVB-F2 30x2x0.8 Eca	4+10+16	-	0.3	2.0	24.0	800	1000
TWAVB-F2 40x2x0.8 Eca	1+7+13+19	-	0.3	2.2	28	1150	1000
TWAVB-F2 48x2x0.8 Eca	3+9+15+21	-	0.3	2.2	30,2	1330	1000
TWAVB-F2 50x2x0.8 Eca	3+9+16+22	-	0.5	2.4	30,7	1380	500
TWAVB-F2 52x2x0.8 Eca	4+10+16+22	-	0.5	2.4	31	1400	500
TWAVB-F2 61x2x0.8 Eca	1+6+12+18+24	-	0.5	2.4	32	1560	500
TWAVB-F2 102x2x0.8 Eca	2+8+14+20+26+30	-	0.5	2.6	41	2300	500

#### 5. Electrical characteristics at 20° C

Characteristic	U.M.	0.8 mm conductor diameter
Conductor loop resistance	Ohm/km	≤ 73.6
Insulation resistance (1 min.)	MOhm * km	≥ 5000
Nominal mutual capacitance at 800 Hz:	nF/km	55
Unbalance capacitance at 800 Hz:	pF/230m	≤ 450 <sup>(1)</sup>
Test voltage	wire-wire	V c.c.
	wire-shield	V c.c.
Operating voltage – peak value	V	500

#### 6. Mechanical characteristics and behaviour in the case of fire

Test	Test method to IEC	Test method to NBN
No fire propagation	IEC 60332-1	NBN C30-004-F1
No flame propagation	IEC 60332-3-24 (Cat.C)	NBN C30-004-F2

Classification according to EN 50575:2014+A1:2016 - Class Eca ( DoP IT20170046)

Minimum admissible bending radius: 15 x D (where D is the cable diameter according to Clause 4)

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## 7. Color code

Code identification for the pair	Color of conductors in the pair
R (counting)	Orange – Blue
D (directional)	Orange – Green
A (recurrent)	Yellow – Blue
B (recurrent)	Red – Green

Cable **1x4x0.8** formed in a star quad:

Pair 1 conductor A – Orange / conductor B – Blue

Pair 2 conductor C – Red / conductor D – Green

Identification in each cable layer

Pair Number	1	2	3	4	5	6	7	8	9	10	11
Pair code	R	D	A	B	R	A	B	A	B	R	A

The 5<sup>th</sup>, 10<sup>th</sup>, 15<sup>th</sup> etc. pair in each layer is “type R”. When a layer has a number of pairs equal to 5 or a multiple of 5, the last pair “type R” is replaced by a pair of “type A”.

03	09/07/2018	Modificata marcatura e norme / modified marking + standards	G. Maiorani	G. Di Censo
02	11/12/2017	Modificata marcatura e norme / modified marking + standards	G. Maiorani	G. Di Censo
<b>Rev.</b>	<b>Data / Date:</b>	<b>Descrizione modifiche / Changes description</b>	<b>Emesso / Issued</b>	<b>Approvato / Approved</b>