

PVC INSULATED MULTIPAIR LIGHT CURRENT CONTROL CABLES TO ENA TS 09-6 – SHIELDED AND ARMoured, GENERATION



Signaling cable



UV resistant



Flame retardant



Fire retardant



Rodent resistant



Impact resistant



ROHS compliant

STANDARDS

ENA TS 09-6 issue 8 2012 / BS 7870-8-4: 2003

Flame propagation: BS EN 50265-2-1 and BS 7870-2

DESCRIPTION AND APPLICATION

Cables from 2 to 200 pairs with 0.8 mm copper conductors. PVC insulation, twisted into pairs, stranded in layers or units. Collective screen of aluminium tape, bedding of PVC, steel wires or steel tapes armouring and external black PVC sheath.

These cables are primarily intended for use indoors or outdoors for fixed installations on walls and metallic structures. They may be used where there is a high risk of fire propagation along cable runs, especially where cabling density is high. They operate at tensions up to 110 Vac or 150 Vdc but should not be used for direct connection to low impedance sources, e.g. public mains electricity supply.

CONSTRUCTION

- **Conductors:** Annealed copper single strand of 0.80 mm nominal diameter.
- **Insulation:** PVC type TI X. Nominal thickness 0.3 mm.
- **Cabling elements:** Colour coded pairs as per BS 7870-4 table 1.
- **Lay-up:** 2-pair cable shall be laid-up as a quad. 5-pair and 10-pair cables shall be laid up to form a compact and symmetrical cable. 20-pair to 200-pair cables shall be constructed from the required number of cabling units. Unit identification by numbered tapes.
- **Core wrapping:** Plastic tape, longitudinally applied with overlap.
- **Collective screen:** Longitudinal 0,15 mm thick aluminium screen with a backing adhered to the bedding and a 0.8 mm tinned copper drain wire.
- **Bedding:** PVC compound type TI 1, conforming to the requirements of BS 7655 3.1. Thickness as per ENA TS 09-06 table E3(c).
- **Armour:** Cables up to 10 pairs are armoured with a single layer of galvanized steel wires helically applied. Cables from 20 pairs are armoured with a double layer of galvanized steel tapes.
- **Outer sheath:** Black PVC compound type TM 1 to BS 7655-4-1. Thickness as per ENA TS 09-06 table E3(c).
- **Sheath marking :** The outer sheath shall be embossed, at regular intervals of about 500 mm, in one line (cables with $d \leq 15$ mm) or two lines (cables with $d > 15$ mm) with the following legend:
 - *ELECTRIC CABLE – 100 V – BS 7870-8-4 – CABLESCOM – (year of manufacture)*
 - *Length markings in white ink can also be printed at the option of the client*
 - *Other type of markings is also possible according to the customer.*



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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ELECTRICAL CHARACTERISTICS (20°C)	0.8
Maximum loop Resistance (Ω/km)	73.6
Minimum insulation resistance (20°C, 500 V, $\text{M}\Omega\cdot\text{km}$)	
• Between conductors	80
• Between the shield and the armour	1
Maximum mutual capacitance (nF/km , 100 Hz)	150
Maximum capacitance unbalance ($\text{pF}/500\text{m}$, 1000 Hz)	
• 2-pair cable	800
• Above 2-pairs. Any pair combination	400
Dielectric strength (Vdc, 1 min)	
• Pair to pair and pairs to screen	3000

MECHANICAL CHARACTERISTICS

Temperature range: from -20° C to +70° C

Bending radius: $15 \times R_{\text{cable}}$

DIMENSIONS AND WEIGHTS

Diameter : 0.80 mm						
Code	No. Pairs	steel wires diam (mm)	steel tape thickness (mm)	Cable Diam (mm)	Aprox. Weight (kg/km)	Length (m)
EA4Y1CF80000202N	2 (1Q)	0.90	-	12,8	310	1000
EA4Y1CF80000502N	5	0.90	-	17,0	500	1000
EA4Y1CF80001002N	10	1.25	-	19,0	740	1000
EA4Y1CF80002002N	20	-	0,5	22,5	920	1000
EA4Y1CF80004002N	40	-	0,5	29,3	1490	1000
EA4Y1CF80006002N	60	-	0,5	34,7	2040	1000
EA4Y1CF80010002N	100	-	0,5	41,3	2840	1000
EA4Y1CF80020002N	200	-	0,5	54,7	4920	500

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