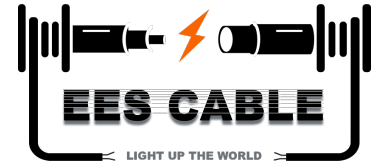
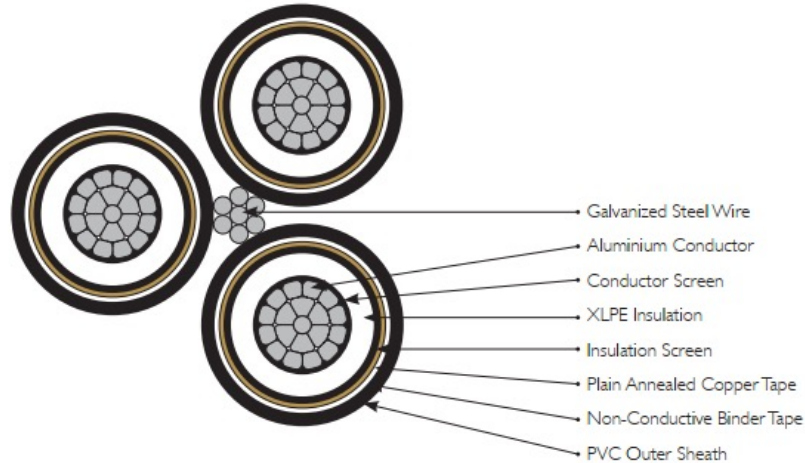


# IEC 60502 & TNB

Aerial Bundled Cables Medium Voltage  
(ABC MV)



## IEC 60502 & TNB Specification



### DESCRIPTION

Circular compacted stranded aluminium conductor, XLPE insulated, copper tape screened and PVC outer sheathed cable. The three XLPE insulated and copper tape screened single core cables are bundled around the galvanized steel wires in a right hand lay.

### CONSTRUCTION

- 1 Conductor Phase conductors are circular compacted stranded H68 aluminium to BS2627.
- 2 Conductor screen Extruded layer of semi-conductive compound.
- 3 Insulation XLPE (cross-linked polyethylene) rated at 90°C.
- 4 Insulation screen
  - a Non-metallic part  
Extruded layer of semi-conductive compound.
  - b Metallic part  
Copper tape screen ( SCT ).
- 5 Colour for core identification Red, yellow and blue tapes shall be applied between non metallic and metallic part of insulation screen.
- 6 Separator Polypropylene laminated tape.
- 7 Outer sheath PVC type ST2 to IEC 60502 colour black. The outer sheath shall be embossed with figures 1, 2, 3 corresponding to red, yellow, blue phase.
- 8 Support wire The support wire shall comprise a stranded galvanized steel wires
- 9 Assembly The three XLPE insulated and copper wire screened single core cables are bundled around the galvanized steel steel wires in a right hand (Z) lay.

# IEC 60502 & TNB

Aerial Bundled Cables Medium Voltage  
(ABC MV)



## IEC 60502 & TNB Specification

6.35/11 (12) kV

Phase conductor

Nominal cross-sectional area	mm <sup>2</sup>	50	70	95	120	150	185	240
Number of cores		3	3	3	3	3	3	3
Minimum number of wires		6	12	15	15	15	30	30
Nominal diameter of conductor	mm	8.1	9.7	11.5	12.9	14.3	16.1	18.4
Nominal thickness of XLPE insulation	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Metallic screening approx. thickness of copper tape	mm	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nominal thickness of outer sheath	mm	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Nominal diameter over sheathing	mm	23.0	24.6	26.3	27.8	29.2	30.9	33.3
Max. dc resistance at 20°C	ohm/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125
Earth fault current carrying capacity of metallic screen at								
-1 second ( 1 Core )	kA	1.57	1.72	1.88	2.01	2.14	2.30	2.52
-3 seconds ( 1 Core )	kA	0.90	0.99	1.08	1.16	1.23	1.33	1.45

Messenger - Galvanized steel wire

Nominal cross-sectional area	mm <sup>2</sup>	50	50	50	50	50	50	50
Stranding	No./mm	7/3.15	7/3.15	7/3.15	7/3.15	7/3.15	7/3.15	7/3.15
Direction of the outermost layer		Right-hand ( Z )						
Overall diameter	mm	9.45	9.45	9.45	9.45	9.45	9.45	9.45
Minimum breaking load	kg	6270	6270	6270	6270	6270	6270	6270
Completed cable								
Approx. overall diameter	mm	55	59	62	65	67	71	75
Approx. weight of cable	kg/km	2540	2890	3300	3660	4040	4540	5290
Packing length	m/drum	500	500	500	500	500	500	500

## IEC 60502 & TNB Specification

12.7/22 (24) kV

Phase conductor

Nominal cross-sectional area	mm <sup>2</sup>	50	70	95	120	150	185	240
Number of cores		3	3	3	3	3	3	3
Minimum number of wires		6	12	15	15	15	30	30
Nominal diameter of conductor	mm	8.1	9.7	11.5	12.9	14.3	16.1	18.4
Nominal thickness of XLPE insulation	mm	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Metallic screening approx. thickness of copper tape	mm	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nominal thickness of outer sheath	mm	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Nominal diameter over sheathing	mm	27.2	28.8	30.5	32.0	33.4	35.1	37.5
Max. dc resistance at 20°C	ohm/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125
Earth fault current carrying capacity of metallic screen at								
-1 second ( 1 Core )	kA	1.96	2.11	2.26	2.40	2.53	2.68	2.90
-3 seconds ( 1 Core )	kA	1.13	1.21	1.31	1.38	1.46	1.55	1.67

Messenger - Galvanized steel wire

Nominal cross-sectional area	mm <sup>2</sup>	50	50	50	50	50	50	50
Stranding	No./mm	7/3.15	7/3.15	7/3.15	7/3.15	7/3.15	7/3.15	7/3.15
Direction of the outermost layer		Right-hand ( Z )						
Overall diameter	mm	9.45	9.45	9.45	9.45	9.45	9.45	9.45
Minimum breaking load	kg	6270	6270	6270	6270	6270	6270	6270
Completed cable								
Approx. overall diameter	mm	64	67	70	73	75	78	83
Approx. weight of cable	kg/km	3150	3540	3980	4360	4770	5300	6100
Packing length	m/drum	500	500	500	500	500	250	250