AERIAL BUNDLED CABLES (ABC)

AB Cables is also called Aerial Bundled Cable or is simply referred to as AB Cable. Aerial Bundled Cables (ABC) is a very novel concept for overhead Power Distribution System. When compared to the conventional bare Conductor Overhead Distribution System, ABC provides higher safety and reliability, lower power losses and ultimate system economy by reducing installation, maintenance and operative cost.

Aerial Bundled Cables, 1100 volt Grade, are used for distributing power to individual consumers by utility service providers like Electricity Distributing Authorities. The Cable is kept supported on poles. The line is tapped intermittently from any required position which enables to be used in urban as well as rural areas alike.

AERIAL BUNDLED CABLE FOR LT LINES

In the ABC system, the insulated conductors (3 or 4 numbers as required) are twisted around a high strength Aluminium or Aluminium Alloy Bare Wire or insulated core, which carries the main weight and also serves as the earth-cum-neutral wire. The phase conductors are not under tension. The system is very safe and LT faults are practically eliminated.

MANUFACTURING SIZES:

- 1CX25SQMM+1CX25SQMM.
- 3CX25SQMM+1CX25SQMM.
- 3CX50SQMM+1CX35SQMM.
- 3CX95SQMM+1CX70SQMM.
- 3CX120SQMM+1CX70SQMM.
- 3CX150SQMM+1CX70SQMM.

TECHNICAL CHARACTERISTICS OF **AERIAL BUNDLED CABLE (ABC)**

AB Cable Type (sq.mm.)	Minimum Number of Strands		Minimum thickness of insulation (mm)		Max. DC resistance at 20 °C (Ω/km)		Minimum Tensile strength of messenger (kN)	Approx. Overall Diameter of Cable (mm)	Approx. weight of cable (kg/mm)	Current Carrying Capacity at 45 Deg. Cel. (A)
	Phase	Messenger	Phase	Messenger	Phase	Messenger				
3x150+1x70	19	7	1.8	1.5	0.206	0.492	19.7	50	1791	98
3x120+1x70	19	7	1.7	1.5	0.243	0.492	19.7	46	1482	145
3x95+1x70	19	7	1.6	1.5	0.320	0.492	19.7	42.7	1237	235
3x50+1x35	7	7	1.5	1.2	0.641	0.986	9.8	32.3	692	270
3x25+1x25	7	7	1.2	1.2	1.2	1.38	7.0	25	390	295
1x25+1x25	7	7	1.2	1.2	1.2	1.38	7.0	22.4	195	295

Note: The current carrying capacity of conductors depends on environmental factors such as wind speed, solar radiation, ambient temperature, and installation conditions.

TECHNICAL DATA: **SELF SUPPORTING LV ABC**

Nominal cross sectional area, mm2	25	50	95
Number of Core	4	4	4
Form of conductor	Stranded	Compacted	Stranded
Number of wires in conductor	7	7	19
Min. diameter of conductor, mm	5.8	8.0	11.3
Max. dc resistance of conductor at 20 deg.C, Ohm/km	1.200	0.641	0.320
Min. breaking load of conductor, kN	3.5	7.0	13.3
Min. average thickness of inuslation excluding ribs, mm	1.3	1.5	1.7
Min. thickness of insulation at any point, mm	1.07	1.25	1.43
Min. breaking load of cable, kN	14.0	28.0	53.0