MV ABC Cable Application

11KV 33KV Aerial Bundled Cable is a new type of aerial cable for power transmitting. It is extensively used in overhead power transmission line. Used as bare overhead transmission cable and as primary and secondary distribution cable. ACSR offers optimal strength for line design. Variable steel core stranding enables desired strength to be achieved without sacrificing ampacity. It improves the safety and reliance of electrified wire netting. The products primarily used for the distribution of electrical energy under normal conditions of overhead (aerial) installations.The conductors must be installed on insulators and/or spacers adequate for the service voltage. The user may want to give consideration to the dielectric compatibility of the covering, insulator, spacer etc.

Aerial Insulated Cable Description

The conductors are stranded,circular compressed aluminum, aluminum-alloy, copper. The conductor screen is the extruded Semi-conducting conductor shield in Black. And the outer Insulation is mainly thermoplastic polyethylene (PE) or cross-linked polyethylene (XLPE) in Black with Weather or UV resistant. This standard covers both thermoplastic and cross linked polyethylene constructions, rated for 75°C or 90°C normal service temperature.

Screened MV ABC Cable Construction

Phase Conductor	Circular Compacted Stranded H68 Aluminium (Class 2)
Conductor Screen	Extruded Semi-conductive Layer.
Insulation	XLPE.
Insulation Screen	Extruded Semi-conductive Layer.
Metallic Screen	Copper wire screen or copper tape screen
Separator	Semi-conductive swellable tape.
Outer Sheath	HDPE.
Support Conductor	Galvanized steel wires.
Assembly	XLPE insulated screened cores are bundled around the galvanized steel wires in a right hand lay

MV Overhead insulated Cable Specifications

6.35/11 kV ABC for Overhead Distribution Lines

Number of Cores xNominal Cross Section	Phase Conductor			Messenger Suspension Unit			Continuous current rating at 300C ambient temp
	Stranding	Nominal Sectional Area	Maximum Conductor Resistance	Stranding	Nominal Sectional Area	Breaking Load	
No.×mm^2	No.×mm	mm^2	Ω/Km	No.×mm	mm^2	KN	A
3X50 + 1X25	19/1.78	50	0.641	7/3.0	50	60	116
3X70 + 1X50	19/.14	70	0.443	7/3.15	50	62	210
3X95+ 1X50	19/2.52	95	0.32	7/3.0	50	60	173
3X185+1X120	37/2.52	185	0.164	7/4.67	120	150	259
3X150 +1X50	37/2.25	150	0.206	7/3.15	50	62	365
3X240 +1X50	61/2.25	240	0.125	7/3.15	50	62	500

Other cross-sections can be offered upon request.

IEC 60502 19/33 kV ABC for Overhead Distribution Lines

Number of Cores xNominal Cross Section	Phase Conductor			Messenger Suspension Un	
	Stranding	Nominal Sectional Area	Maximum Conductor Resistance	Stranding	Nomina

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No.×mm^2	No.×mm	mm^2	Ω/Km	No.×mm	mm^2
3X50 + 1X50	19/1.78	50	0.641	7/3.0	50
3X150+ 1X50	37/2.25	150	0.206	7/3.0	50
3X185+1X70	37/2.52	185	0.164	7/3.57	70
3X70 +1X50	19/2.14	7	0.443	7/3.15	50
3X150 +1X50	37/2.25	150	0.206	7/3.15	50

Other cross-sections can be offered upon request.

GB/T 14049 (Equal to IEC 60502-2) Aerial Insulated Cables For Rated Voltage of 10kV

Type	No. of Cores	Nominal size mm2
CU/XLPE,AAC/XLPE,AAAC/XLPE	1	10 ~ 400
	3	25 ~ 400
	3+k(A) or 3+k(B)	25 ~ 400 ; k:25~120
CU/PE,AAC/PE,AAAC/PE,CU/XLPE,AAC/XLPE,AAAC/XLPE	1	10 ~ 400
AAC/XLPE,AAAC/XLPE	3	25 ~ 400
	3+k(A) or 3+k(B)	25 ~ 400 ; k:25~120
The k is a load-bearing core. (A) means steel carrying stranded wire, (B) means aluminum alloy carrying stranded wire.		

10kV Aerial Copper Insulated Cables

Nominal Size	Min. No. of Wires	Approx. Diameter of Conductor	Min. Thickness of Conductor screen (Approx.)	Nominal Thickness of Insulation		Nominal Thickness of Insulation Screen	Max. DC Resistance at 20 0C		Min. Breaking Load
				Reduced	Nominal		Hard Copper	Soft Copper	Hard Copper
mm2	No.	mm	mm	mm	mm	mm	Ω/km	Ω/km	N
10	6	3.8	0.5	-	3.4	-	-	1.830	-
16	6	4.8	0.5	-	3.4	-	-	1.150	-
25	6	6.0	0.5	2.5	3.4	1.0	0.749	0.727	8465
35	6	7.0	0.5	2.5	3.4	1.0	0.540	0.524	11731
50	6	8.3	0.5	2.5	3.4	1.0	0.399	0.387	16052
70	12	10.0	0.5	2.5	3.4	1.0	0.276	0.268	23461
95	15	11.6	0.6	2.5	3.4	1.0	0.199	0.193	31759
120	18	13.0	0.6	2.5	3.4	1.0	0.158	0.153	39911
150	18	14.6	0.6	2.5	3.4	1.0	0.128	-	49505
185	30	16.2	0.6	2.5	3.4	1.0	0.1021	-	61846
240	34	18.4	0.6	2.5	3.4	1.0	0.0777	-	79823
300	34	20.6	0.6	2.5	3.4	1.0	0.0619	-	99788
400	53	23.8	0.6	2.5	3.4	1.0	0.0484	-	133040

10kV Aerial Aluminium Insulated Cables

Nominal Size	Min. No. of Wires	Approx. Diameter of Conductor	Min. Thickness of Conductor Screen (Approx.)	Nominal Thickness of Insulation		Nominal Thickness of Insulation Screen	Max. DC Resistance at 20 0C		Min. Breaking Load	
				Reduced	Nominal		AAC	AAAC	AAC	AAAC
mm2	No.	mm	mm	mm	mm	mm	Ω/km	Ω/km	N	N

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10	6	3.8	0.5	-	3.4	-	3.080	3.574	-	-
16	6	4.8	0.5	-	3.4	-	1.910	2.217	-	-
25	6	6.0	0.5	2.5	3.4	1.0	1.200	1.393	3762	6284
35	6	7.0	0.5	2.5	3.4	1.0	0.868	1.007	5177	8800
50	6	8.3	0.5	2.5	3.4	1.0	0.641	0.744	7011	12569
70	12	10.0	0.5	2.5	3.4	1.0	0.443	0.514	10354	17596
95	15	11.6	0.6	2.5	3.4	1.0	0.320	0.371	13727	23880
120	18	13.0	0.6	2.5	3.4	1.0	0.253	0.294	17339	30164
150	18	14.6	0.6	2.5	3.4	1.0	0.206	0.239	21033	37706
185	30	16.2	0.6	2.5	3.4	1.0	0.164	0.190	26732	46503
240	34	18.4	0.6	2.5	3.4	1.0	0.125	0.145	34679	60329
300	34	20.6	0.6	2.5	3.4	1.0	0.100	0.116	43349	75411
400	53	23.8	0.6	2.5	3.4	1.0	0.0778	0.0904	55707	100548

22.9kV ACSR/AW-OC Aerial Insulated Cables

Size (mm2)	No. and Dia. of Wires		Conductor Diameter	Insulation Thickness	Cable Diameter	Rated Strength	Weight
	AL	St					
	No.	No. /mm	mm	mm	mm	kgf	kg/km
22.9 kV ACSR/AW-OC/XLPE							
32	6/SB	1/2.6	7.2	3.0	13.2	1090	210
58	6/SB	1/3.5	9.7	3.0	15.7	1900	330
95	6/SB	1/3.5	12.0	3.5	19.0	2360	530
160	18/SB	1/3.2	15.4	4.0	23.4	3080	730
240	18/SB	1/4.0	18.9	4.0	27.0	4500	1040

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