Aerial Insulated Cable

Overhead cable for aerial distribution and service connection

Aerial Insulated Cable is prepared for preliminary product selection and quotation review. This product is used for overhead distribution routes where conductor arrangement, insulation, messenger or neutral support and installation environment determine cable selection.

VOLTAGE

10kV

CONDUCTOR

Copper conductor route, confirmed by technical table

TYPICAL USE

Aerial bundled cable systems

STANDARDS

GB/T 14049; IEC 60502-2; IEC 60228

DATA SCOPE

5 technical table(s) included for preliminary selection

SELECTION NOTE

Confirm voltage, conductor, core arrangement, messenger/neutral and installation span.

For quotation review, provide cable type, standard, size, quantity and project destination.

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Application & Selection Summary

Typical applications
- Aerial bundled cable systems
- overhead service drops
- rural and urban distribution networks
- utility line upgrade projects.

Selection logic
- Confirm voltage grade, conductor material, core arrangement, messenger/neutral requirement, installation span and applicable utility standard.

Construction Overview

Item	Website-ready content
Product route	Aluminum or copper conductor with insulation and optional messenger or bundled arrangement according to product type.
Voltage	10kV
Conductor	Copper conductor route, confirmed by technical table
Standards	GB/T 14049; IEC 60502-2; IEC 60228
Confirmation	Final structure, dimensions and packing should follow selected standard, quotation review and order specification.

Readable Data Index

Data route	Size / rating range	Construction	Diameter / OD	Resistance / weight / rating
Aerial Insulated Cable - Technical Table 1	10-400 mm2 - Per selected structure	Single-core route - Cross-linked route	See table	See table
Aerial Insulated Cable - Technical Table 2	10 - 150	6 - 18	See table	See table
Aerial Insulated Cable - Technical Table 3	185 - 400	30 - 53	See table	See table
Aerial Insulated Cable - Technical Table 4	10 - 400	6 - 53	See table	See table

Data boundary: these tables support website launch, quotation review and preliminary product selection. For project execution, final dimensions, electrical performance, packing and compliance documents should be confirmed against the selected project standard and order specification.

Aerial Insulated Cable - Technical Table 1

Reference table for preliminary selection and quotation review.

Structure	Conductor Option	Insulation	No. of Cores	Nominal Size Range	Support Core	Typical Use
Single-core route	Cu / AAC / AAAC	PE / XLPE	1	10-400 mm2	Not required	Basic 10 kV overhead insulated phase conductor
Three-core route	Cu / AAC / AAAC	PE / XLPE	3	25-400 mm2	Not required	Compact overhead distribution sections
Load-bearing route	s Cu / AAC / AAAC	PE / XLPE	3+k(A)	25-400 mm2; k:25-120	Steel carrying stranded wire	Overhead route requiring dedicated mechanical support core
Load-bearing route	Cu / AAC / AAAC	PE / XLPE	3+k(B)	25-400 mm2; k:25-120	Aluminum alloy carrying stranded wire	Overhead route using alloy support logic
Thermoplastic route	Cu / AAC / AAAC n	PE	1 / 3 / 3+k	Per selected structure	Per selected structure	Projects preferring PE weather- resistant construction
Cross-linked route	Cu / AAC / AAAC	XLPE	1 / 3 / 3+k	Per selected structure	Per selected structure	Projects preferring XLPE thermal route

Aerial Insulated Cable - Technical Table 2

Reference table for preliminary selection and quotation review.

Size (mm2)	Wires	Cond. Dia. (mm)	Cond. Screen (mm)	Insulatio n (mm)	Total Insul. (mm)	Insul. Screen (mm)	DC Res. (ohm/km)	Min. Break Load (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	8465
35	6	7.0	0.5	2.5	3.4	1.0	0.540	11731
50	6	8.3	0.5	2.5	3.4	1.0	0.399	16052
70	12	10.0	0.5	2.5	3.4	1.0	0.276	23461
95	15	11.6	0.6	2.5	3.4	1.0	0.199	31759
120	18	13.0	0.6	2.5	3.4	1.0	0.158	39911
150	18	14.6	0.6	2.5	3.4	1.0	0.128	49505

Aerial Insulated Cable - Technical Table 3

Reference table for preliminary selection and quotation review.

Size (mm2)	Wires	Cond. Dia. (mm)	Cond. Screen (mm)	Insulatio n (mm)	Total Insul. (mm)	Insul. Screen (mm)	DC Res. (ohm/km)	Min. Break Load (N)
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

Aerial Insulated Cable - Technical Table 4

Reference table for preliminary selection and quotation review.

Size (mm2)	Wires	Cond. Dia. (mm)	Cond. Screen (mm)	Insulation (mm)	Total Insul. (mm)	Insul. Screen (mm)	AAC Res. (ohm/k m)	AAAC Res. (ohm/k m)	AAC Break (N)	AAAC Break (N)
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

Aerial Insulated Cable - Technical Table 5

Reference table for preliminary selection and quotation review.

Selection Item	Standard Rule / Option	Practical Note
Voltage class	10 kV family page	Use this page for rated-voltage 10 kV aerial insulated cable quotations and datasheet alignment.
Conductor materials	Copper / AAC / AAAC	Material choice should be confirmed against conductivity, mechanical loading, and project preference.
Conductor screen	0.5 mm for smaller sizes; 0.6 mm from larger sections	The common public route shifts to 0.6 mm conductor screen from 95 mm2 upward.
Insulation thickness	3.4 mm total insulation route shown	This page uses the common public 10 kV route widely shown in market datasheets.
Insulation screen	Not shown for 10 and 16 mm2; 1.0 mm from 25 mm2 upward	Smaller sizes may be selected for special applications and should be confirmed case by case.
Structures	1 core / 3 core / 3+k(A) / 3+k(B)	3+k(A) uses steel support logic, while 3+k(B) uses aluminum-alloy support logic.
pplications Installation condition	Aerial only, on insulators or spacers	This family is intended for overhead installation, not for standard underground fixed-lay use.
Project confirmation	Recommended before production	Accessory compatibility, support layout, and final structure should be checked before release.