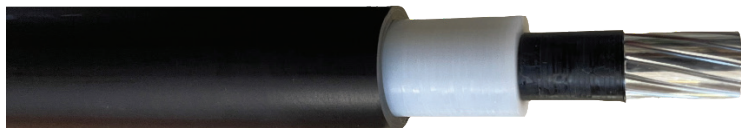


PowerGuard® 15kV Aerial Cable (Tree Wire and Spacer Cable) AAAC (Concentric Stranding) 3-Layer Track-Resistant XLPE – ICEA S-121-733



A 3-layer system used on a tree wire or spacer cable, manufactured, tested and marked in accordance with ICEA S-121-733, the standard for Tree Wire and Messenger Supported Spacer Cable. This 3-layer system consists of a conductor shield (layer #1), followed by a 2-layer covering (layers #2 and #3). For further information, please contact American Wire Group.

APPLICATIONS

PowerGuard® Aerial Cable (tree wire and spacer cable) is intended for use in overhead primary and secondary distribution systems rated 15 kV (nominal) typically to prevent faults due to contact or where space is limited. The track-resistant 3-layer system prevents short-circuits and flashovers in the case of contact with trees or wildlife. When installed correctly, this system is effective at preventing system outages, damage, or fires as a result of falling trees or branches.

Tree Wire

When used in a tree wire power system, it is installed in a flat configuration, in a similar manner and spacing on insulators as with bare overhead conductors. Self-supporting conductors, such as ACSR are typical in this type of installation.

Spacer Cable

When used in a spacer cable power system, it is installed with a uniform spacing in a diamond configuration maintained by spacer hardware. The spacer and cable assembly are supported by a bare messenger, such as bare aluminum-clad steel, ACSR, OPGW or galvanized steel wire. Spacer cable assemblies occupy minimal space, requiring the narrowest of right of way or corridor.

CONSTRUCTION

Single cable with an AAAC conductor, a 3-layer extruded shield and covering system, consisting of an extruded semiconducting thermoset conductor shield, and a 2-layer covering. The covering inner layer is a crosslinked polyethylene (XLPE), while the outer layer is track-resistant crosslinked polyethylene (TK-XLPE). All layers are bonded together.

Conductor:

AAAC (6201-T81, concentric stranded).

Conductor Shield:

Extruded semiconducting thermoset shield which is free stripping from the conductor and bonded to the covering.

Inner and Outer Covering:

2-layer crosslinked polyethylene covering (XLPE), where the outer layer is track-resistant (TK-XLPE). All layers are bonded together. The outer layer shall be black or gray, sunlight resistant and track resistant.

TEMPERATURE RATING

Normal	90°C
Emergency*	130°C
Short-Circuit	250°C

*Operation at the emergency overload temperature shall not exceed:

- 100 hours in any twelve consecutive months or 500 hours cumulative for tree wire, during the lifetime of the wire; or
- 100 hours in any twelve consecutive months or 1500 hours cumulative for spacer cable, during the lifetime of the cable.

STANDARDS

These cables are manufactured and tested to meet or exceed the following standards:

- ASTM B398 – Aluminum-Alloy 6201-T81 and 6201-T83 Wire for Electrical Purposes
- ASTM B399 – Concentric-Lay-Stranded Aluminum-Alloy 6201-T81 Conductors
- ASTM D2656 – Cross-linked Polyethylene Insulation for Wire and Cable Rated 2001 to 35 000 V
- ICEA S-121-733 – Tree Wire and Messenger Supported Spacer Cable



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Item #	Conductor				Conductor Shield Thickness (in)	Covering Thickness		Overall Diameter (in)	Weight		Rated Strength (lbf)
	Size (AWG or kcmil)	Equivalent AAC (AWG or kcmil)	Stranding	Diameter (in)		Inner Layer (in)	Outer Layer (in)		Conductor (lb / 1000 ft)	Net (lb / 1000 ft)	
A4-01AAAC7-15X	48.69	4	7	0.250	0.015	0.075	0.075	0.580	45.4	139	1760
A2-01AAAC7-15X	77.47	2	7	0.316	0.015	0.075	0.075	0.646	72.24	181	2800
A1/0-01AAAC7-15X	123.3	1/0	7	0.398	0.015	0.075	0.075	0.728	114.9	242	4270
A2/0-01AAAC7-15X	155.4	2/0	7	0.447	0.015	0.075	0.075	0.777	144.9	284	5390
A3/0-01AAAC7-15X	195.7	3/0	7	0.502	0.015	0.075	0.075	0.832	182.5	334	6790
A4/0-01AAAC7-15X	246.9	4/0	7	0.563	0.015	0.075	0.075	0.893	230.2	395	8560
A266.8-01AAAC19-15X	312.8	266.8	19	0.642	0.015	0.075	0.075	0.972	291.6	474	10500
A336.4-01AAAC19-15X	394.5	336.4	19	0.721	0.015	0.075	0.075	1.051	367.9	569	13300
A397.5-01AAAC19-15X	465.4	397.5	19	0.783	0.015	0.075	0.075	1.113	433.9	649	15600
A477-01AAAC19-15X	559.5	477	19	0.858	0.020	0.075	0.075	1.198	521.7	762	18800
A556.5-01AAAC19-15X	652.4	556.5	19	0.927	0.020	0.080	0.080	1.287	608.3	882	21900
A636-01AAAC37-15X	740.8	636	37	0.991	0.020	0.080	0.080	1.351	690.8	980	24400

NOTES

- Dimensions and weights are subject to standard manufacturing tolerances and are subject to change without notice.
- Cables are manufactured, tested and marked to meet or exceed the requirements in ICEA S-121-733 for tree wire and messenger supported spacer cable suitable for installation and use in systems rated 15 kV.



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