

SPECIFICATION**For****15KV-CC**

15kV

All Aluminium Spaced Aerial Cable

(15kV, Al/XLPE/XLPE)

BY



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CUSTOMER

Rev.	Date	Description
0	30/3/2023	Issued specification
1	25/7/2024	Update Table 1
2	16/5/2025	- Add year of manufacture in marking - Change conductor diameter

Customer Document	Rev.

Remark:

This document is based on the Customer Document for the structure and properties of electric wire and cable only. If there are different points, will be shown in deviation table.

1. Scope

This specification covers 15000V aluminum conductor cross-linked polyethylene (XLPE) insulated cross-linked polyethylene (XLPE) sheathed spaced aerial cable.

The cable shall be based on ICEA S-93-639 : 2006.

2. Conductor

The conductor shall be compacted concentric stranded hard drawn aluminum conductor in accordance with IEC 60228 : 2004, Class 2.

The direction of lay shall be right-hand (Z) in the outer most layers.

3. Conductor Shield

The conductor shield shall be a layer of extruded semi-conducting compound.

The thickness of the conductor shield shall be approximate 0.5 mm.

4. Insulation

The insulation shall be cross-linked polyethylene (XLPE) compound meet the requirements of ICEA S-93-639 : 2006.

The average thickness of the insulation shall be not less than that given in Table 1.

The minimum thickness shall not less than 90% of the value in Table 1.

The thickness of the insulation shall be not be included that of conductor shield.

The color of the insulation shall be white.

(White color is natural color of XLPE insulation)

5. Sheath

The sheath shall be filled carbon black cross-linked polyethylene (XLPE) compound with track resistance, meet the requirements of ICEA S-93-639 : 2006.


The average thickness shall be not less than that given in Table 1.

The minimum thickness shall be not less than 80% of the value in Table 1.

The color of the sheath shall be black.

6. Marking on Cable

The marking items shall be marked by printed at intervals not exceeding 1 meter with suitable means throughout the length of cable.

1. Manufacturer's name and/or trade mark "  YAZAKI.....: TYE"
2. Year of manufacture
3. Rated circuit voltage "15KV"
4. Type of conductor "AL"
5. Type of insulation and sheath "XLPE/XLPE"
6. Type of cable "SPACED AERIAL CABLE"
7. Size of conductor
8. The continuous reel length marking (in figure) shall be made on the sheath every 1 meter

7. Test and Properties


The test and properties of cables shall be carried out in accordance with ICEA S-93-639 : 2006 and IEC 60228 : 2004.

8. Packing

The cable shall be placed on non-returnable wooden reels.

The reels shall be covered with suitable covering to provide the cable with physical protection during transportation and during ordinary storage and handling operations.

Each reel shall be clearly marked as follows.

1. Designation "15KV-CC"
2. Size of cable
3. Cable length
4. Net and gross weight
5. Manufacturer's name and/or trade mark "  YAZAKI "
6. Rolling direction of reel

Test and Inspection

Routine Tests

- Maximum conductor resistance, Ohm/km specified in Table 1
- AC test voltage for 5 minutes, kV..... 27

Definition concerning the tests

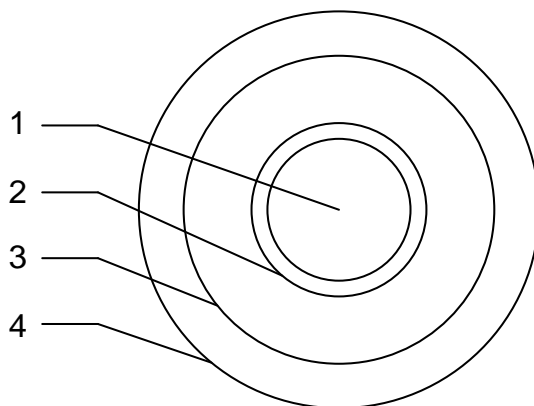
Routine tests: Tests made by the manufacturer on each manufactured length of cable to check that each length meets the specified requirements.

Sample tests: Tests made by the manufacturer on samples of completed cable or components taken from a completed cable, at a specified frequency, so as to verify that the finished product meets the specified requirements.

Type tests: Tests made before supplying, on a general commercial basis, a type of cable covered by this standard, in order to demonstrate satisfactory performance characteristics to meet the intended application.

Cable structure

Cross-sectional (Not scale)



No.	Structure	Material
1	Conductor	Stranded hard drawn aluminum
2	Conductor shield	Semi-conducting compound
3	Insulation	Cross-linked polyethylene (XLPE) compound
4	Sheath	Cross-linked polyethylene (XLPE) compound

Application: For aerial power transmission and distribution line.

Table 1

No. of core	Size (mm ²)	Conductor (wires/type)	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Weight of cable approx. (kg/km)	Standard packing length (m)
1	35	7/Compacted	6.95	1.91	1.91	16.5	0.868	255	500
1	50	7/Compacted	8.01	1.91	1.91	18.0	0.641	305	500
1	70	19/Compacted	9.73	1.91	1.91	19.5	0.443	385	500
1	95	19/Compacted	11.40	1.91	1.91	21.5	0.320	477	500
1	120	19/Compacted	12.95	1.91	1.91	23.0	0.253	570	500
1	150	19/Compacted	14.27	1.91	1.91	24.0	0.206	662	500
1	185	34/Compacted	15.98	1.91	1.91	26.0	0.164	792	500
1	240	34/Compacted	18.47	1.91	1.91	28.5	0.125	988	500