Product Description

High Voltage Aerial Bundled Cable (HV ABC) is designed for overhead power distribution networks, including secondary overhead lines mounted on poles and feeders supplying residential premises. The cable assembly consists of three XLPE insulated aluminium phase conductors bundled around a galvanized steel support conductor.

Each phase conductor incorporates extruded semi-conductive conductor and insulation screen layers. Optional metallic screening is available in copper wire or copper tape configurations, with a semi-conductive swellable tape separator and HDPE outer sheath.

Qingzhou Cable offers HV Aerial Bundled Cables in 6.35/11 kV and 19/33 kV configurations, with different conductor sizes and support conductor arrangements available for overhead distribution applications.

Applications

- Secondary overhead power distribution lines
- Pole-mounted overhead distribution networks
- Residential power supply feeders
- Overhead distribution systems in urban and rural areas
- Power distribution infrastructure projects
- Overhead lines requiring bundled cable construction

Product Range

Voltage Rating	Cable Configuration	Support Conductor
6.35/11 kV	Three phase XLPE insulated bundled cable	Galvanized steel wires
19/33 kV	Three phase XLPE insulated bundled cable	Galvanized steel wires

Cable Construction

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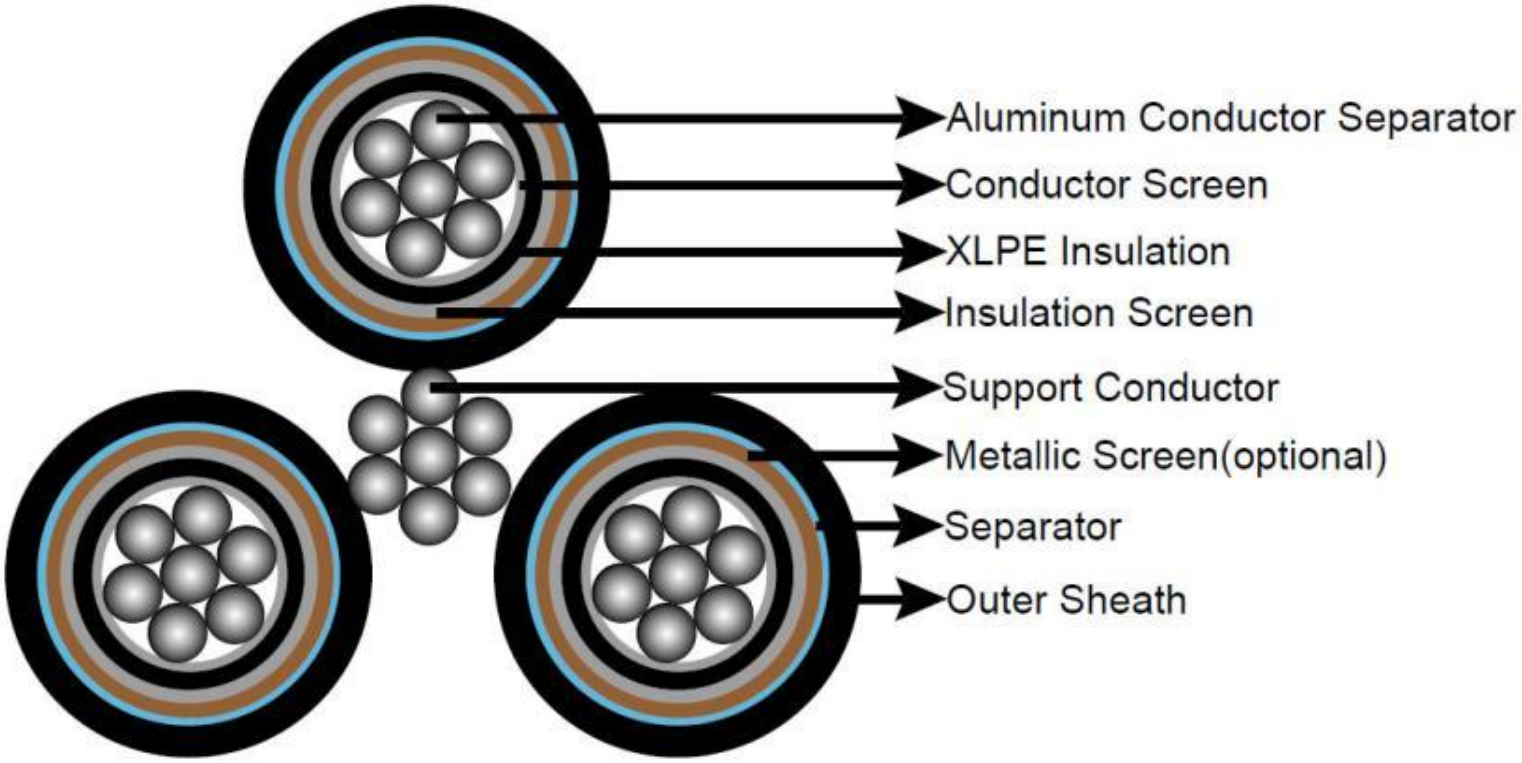

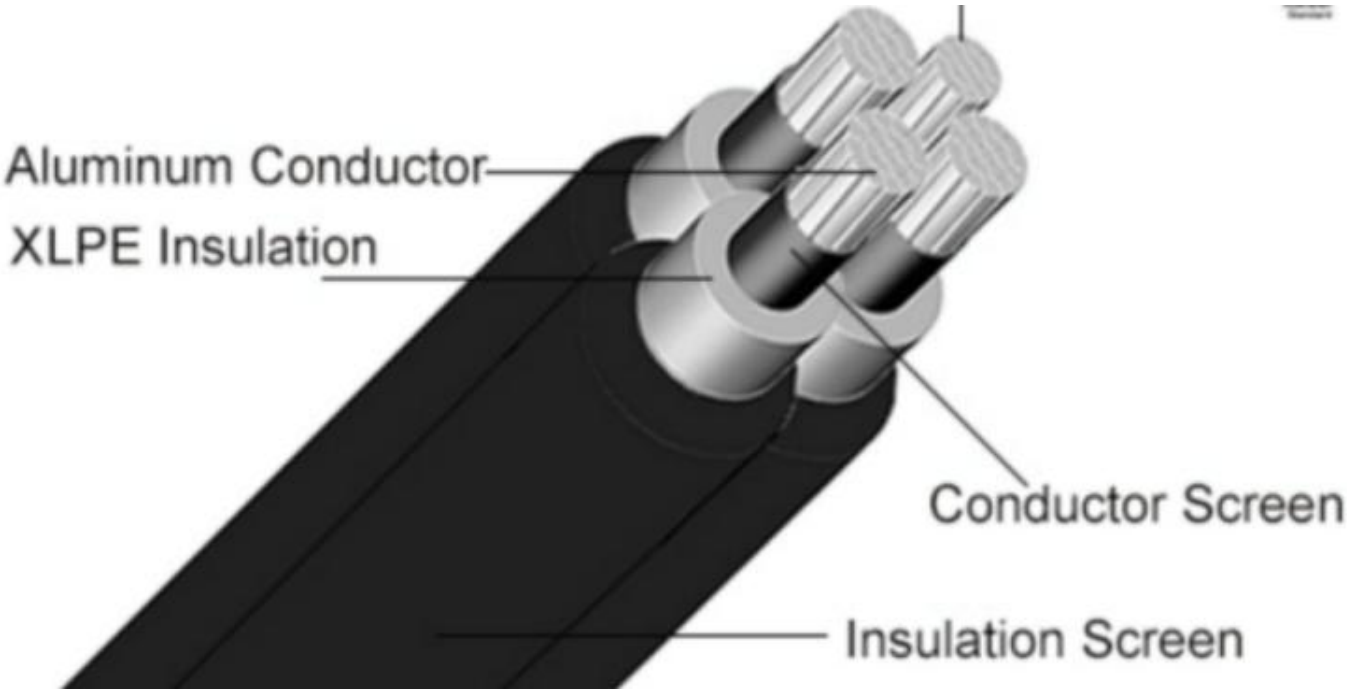

Component	Description
Phase Conductor	Circular compacted stranded H68 aluminium to BS 2627
Conductor Screen	Extruded semi-conductive layer
Insulation	XLPE (Cross-Linked Polyethylene)
Insulation Screen	Extruded semi-conductive layer
Metallic Screen (Optional)	Copper wire screen or copper tape screen
Separator	Semi-conductive swellable tape

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Component	Description
Outer Sheath	HDPE
Support Conductor	Galvanized steel wires
Assembly	Three XLPE insulated screened cores are bundled around the galvanized steel wires in a right-hand lay

Applicable Standard

- IEC 60502 – Basic design reference, as specified in the supplied technical information

Technical Data

6.35/11 kV ABC for Overhead Distribution Lines

Construction Parameters – IEC 60502

Cable Construction (mm²)	Phase Conductor Stranding	Nominal Phase Conductor Area (mm²)	Maximum Conductor Resistance (Ω/km)	Messenger Stranding	Messenger Nominal Area (mm²)	Messenger Breaking Load (kN)	Continuous Current Rating (A)
3×50+1×25	19/1.78	50	0.641	7/3.0	50	60	116
3×70+1×50	19/.14	70	0.443	7/3.15	50	62	210
3×95+1×50	19/2.52	95	0.32	7/3.0	50	60	173
3×185+1×120	37/2.52	185	0.164	7/4.67	120	150	259
3×150+1×50	37/2.25	150	0.206	7/3.15	50	62	365
3×240+1×50	61/2.25	240	0.125	7/3.15	50	62	500

Other cross-sections can be offered upon request.

19/33 kV ABC for Overhead Distribution Lines

Construction Parameters – IEC 60502

Cable Construction (mm²)	Phase Conductor Stranding	Nominal Phase Conductor Area (mm²)	Maximum Conductor Resistance (Ω/km)	Messenger Stranding	Messenger Nominal Area (mm²)	Messenger Breaking Load (kN)	Continuous Current Rating (A)
3×50+1×50	19/1.78	50	0.641	7/3.0	50	60	165
3×150+1×50	37/2.25	150	0.206	7/3.0	50	60	315
3×185+1×70	37/2.52	185	0.164	7/3.57	70	91	355
3×70+1×50	19/2.14	7	0.443	7/3.15	50	62	250
3×150+1×50	37/2.25	150	0.206	7/3.15	50	62	370

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Other cross-sections can be offered upon request.

Manufacturing & Customization

Qingzhou Cable manufactures overhead high-voltage aerial bundled cables for distribution networks, offering different voltage ratings and conductor configurations to meet project requirements.

Available options include:

- 6.35/11 kV and 19/33 kV
- Three-phase aerial bundled cable configurations
- Circular compacted stranded aluminium phase conductors
- XLPE insulation
- Extruded semi-conductive conductor and insulation screen layers
- Optional copper wire or copper tape metallic screen
- Semi-conductive swellable tape
- Galvanized steel support conductors
- HDPE outer sheath

Custom conductor sizes and cable configurations are available upon request.

Frequently Asked Questions (FAQ)

1. What is HV Aerial Bundled Cable?

HV Aerial Bundled Cable is a high-voltage overhead distribution cable consisting of insulated aluminium phase conductors bundled around a supporting conductor. It is designed for overhead distribution networks, including pole-mounted lines and residential feeders.

2. What voltage ratings are available?

The supplied technical data covers 6.35/11 kV and 19/33 kV cable configurations.

3. What conductor material is used in HV ABC cables?

The phase conductors are circular compacted stranded H68 aluminium conductors, according to the supplied BS 2627 reference.

4. What insulation material is used?

The phase conductors use XLPE insulation, with extruded semi-conductive conductor and insulation screen layers.

5. Is metallic screening available?

Yes. Optional metallic screening is available in copper wire screen or copper tape screen configurations, according to the cable design.

6. What is the support conductor material?

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The support conductor consists of galvanized steel wires.

7. What is the function of the semi-conductive swellable tape?

The semi-conductive swellable tape is included in the cable construction as a separator layer. Its water-blocking function should be confirmed according to the actual material specification.

8. What outer sheath material is used?

The cable is specified with an HDPE outer sheath.

9. What applications are suitable for HV ABC cables?

HV ABC cables are used in secondary overhead lines, pole-mounted distribution systems and residential feeders in overhead power distribution networks.

10. Can other conductor sizes be manufactured?

Yes. Other cross-sections and project-specific configurations can be offered upon request.

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