Product Overview

QZ Cable offers ALUS-D (ABC-D) type 1 kV aluminium aerial bundled cables for low-voltage power distribution networks.

The cable consists of stranded aluminium conductors with individual halogen-free polyethylene (PE) insulation. The insulated cores are twisted together to form a compact aerial bundled cable designed for fixed outdoor installation.

With UV-resistant PE insulation and halogen-free material properties, ALUS-D is suitable for overhead power distribution and service connection applications. Its flexible installation design also allows short sections to be routed underground inside suitable protective conduits, such as when continuing from the final pole to a connection box.

The cable is designed for low-voltage distribution systems requiring lightweight aluminium conductors, weather-resistant insulation, and installation flexibility.

Cable Construction

1. Conductor

- Material: Aluminium
- Construction: Stranded conductor
- Conductor class: Class 2 according to IEC 60228
- Cross-sections: Available according to project requirements

2. Insulation

- Material: Halogen-free polyethylene (PE)
- UV-resistant for outdoor installation
- Individual insulation applied to each conductor core
- Typically black, with a yellow identification stripe on the neutral conductor where specified

3. Cable Assembly

- Individually insulated cores twisted together
- Aerial bundled configuration
- Designed for fixed installation in outdoor environments

Key Characteristics

- **Halogen-Free Construction:** Uses halogen-free insulation materials to avoid the release of halogen-containing corrosive gases during fire exposure.
- **UV-Resistant Insulation:** PE insulation is designed for long-term outdoor exposure.
- **Class 2 Aluminium Conductors:** Stranded aluminium conductors provide a lightweight solution for low-voltage power distribution.
- **Weather Resistance:** Suitable for fixed outdoor aerial installations.
- **Flexible Installation:** Can be routed through suitable protective conduits for short underground sections where installation conditions permit.

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- **Compact Bundled Design:** Individually insulated cores are twisted together for convenient overhead installation.
- **Customized Supply:** Conductor cross-sections, core identification, and cable specifications can be manufactured according to project requirements.

Applications

ALUS-D (ABC-D) 1 kV cable is designed for:

- Low-voltage overhead power distribution
- Aerial service connections
- Building and residential power supply connections
- Downlead installations from the final utility pole to a connection box
- Fixed outdoor cable installations
- Short underground sections inside protective conduits

Installation note: Underground installation should be limited to suitable short sections inside protective conduits, as specified by the installation design. This application should not be interpreted as approval for direct burial.

Technical Specifications

Parameter	Description
Product Name	ALUS-D (ABC-D)
Product Type	Aluminium Aerial Bundled Cable
Rated Voltage	0.6/1 kV or 1 kV class, subject to specification
Conductor Material	Aluminium
Conductor Construction	Stranded
Conductor Class	Class 2
Conductor Standard	IEC 60228
Insulation Material	Halogen-Free Polyethylene (PE)
Insulation Properties	UV-Resistant
Core Configuration	Multi-Core Twisted Bundle
Typical Core Configuration	4-Core
Maximum Conductor Temperature	65°C
Minimum Installation Temperature	-15°C
Installation	Fixed outdoor aerial installation
Additional Installation	Short underground sections in protective conduits
Packing	Cable drums or coils, subject to order

Note: The above describes a typical product configuration. Final conductor sizes, number of cores, voltage designation, insulation thickness, and dimensional data must be confirmed against the approved product specification.

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Name	Construction	Cross section [mm²]	Conductor diameter [mm]	Core diameter [mm]	Insulation thickness [mm]	Outer diameter [mm]	Maximum breaking load [kNj	Total weight [kg/km]	Installation Current in open air, ambient temperature 30°C [A]
ALUS-D 4x25	4x25	25	5.9	9.5	1.8	23.3	16.8	425	87
ALUS-D 4x25	4x25	25	5.9	9.5	1.8	23.3	16.8	425	87
ALUS-D 4x25	4x25	25	5.9	9.5	1.8	23.3	16.8	425	87
ALUS-D 4x50	4x50	50	8.2	12	1.9	29.4	29.6	720	131
ALUS-D 4x50	4x50	50	8.2	12	1.9	29.4	29.6	720	131
ALUS-D 4x50	4x50	50	8.2	12	1.9	29.4	29.6	720	131
ALUS-D 4x95	4x95	95	11.9	16.1	2.1	39.7	56	1360	205
ALUS-D 4x95	4x95	95	11.9	16.1	2.1	39.7	56	1360	205
ALUS-D 4x120	4x120	120	13.1	18.1	2.5	44.3	70.7	1735	239
ALUS-D 4x120	4x120	120	13.1	18.1	2.5	44.3	70.7	1735	239

Applicable Standards

IEC 60228 – Conductors of Insulated Cables

- Class 2 stranded conductors for fixed installations.

Additional construction references appearing in ALUS-D product documentation include:

- HD 626-3L
- HD 626-7H

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The applicability and current edition of these construction references should be confirmed against the target market and final cable design.

Important: Halogen-free material selection does not automatically establish flame-retardant or low-smoke performance. Such claims require the relevant test methods and supporting test reports.

Frequently Asked Questions About ALUS-D (ABC-D) 1 kV

1. What is ALUS-D (ABC-D) cable?

ALUS-D (ABC-D) is a 1 kV aerial bundled cable designed for low-voltage power distribution. It is intended for fixed outdoor installation in air and can also be used in short underground sections inside suitable protective conduits.

2. What is the rated voltage of ALUS-D (ABC-D)?

ALUS-D (ABC-D) is designed for low-voltage applications with a rated voltage of 1 kV.

3. Is ALUS-D (ABC-D) a halogen-free cable?

Yes. The cable is specified as halogen-free. Its construction helps reduce smoke emissions and avoids the release of corrosive halogen gases during combustion.

4. Where is ALUS-D (ABC-D) commonly used?

Typical applications include low-voltage overhead distribution networks, downlead connections from the last utility pole to a connection box, and short underground sections installed in protective conduits.

5. Can ALUS-D (ABC-D) be installed underground?

It may be installed underground over short distances when routed through suitable protective conduits, subject to the approved cable construction and local installation requirements. It should not automatically be treated as a direct-burial cable.

6. Can the cable run from the last pole to a connection box?

Yes. Its design allows the installation to continue down from the final overhead pole to a connection box, providing a practical transition between overhead lines and connection points.

7. What conductor standard does ALUS-D (ABC-D) follow?

The conductor complies with IEC 60228 Class 2, which specifies the requirements for stranded conductors.

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8. Is ALUS-D (ABC-D) suitable for outdoor installation?

Yes. It is designed for fixed outdoor installation in air as part of low-voltage power distribution networks.

9. What technical information is needed to request a quotation?

Customers should provide the rated voltage, conductor material, number of cores, conductor cross-sectional area, required cable construction, applicable standards and project quantity.

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