Product Overview

AAC (All Aluminium Conductor), also designated as AL1, is a bare overhead conductor widely used in electrical distribution, regional power networks, and transmission systems.

Manufactured from aluminium wires, AAC conductors offer excellent electrical conductivity and corrosion resistance. These characteristics make them particularly suitable for urban distribution networks, coastal regions, and environments exposed to harsh weather conditions.

AAC is primarily used in applications where high electrical conductivity and relatively short span lengths are required. Due to its comparatively low strength-to-weight ratio, it is less commonly selected for overhead lines requiring long spans.

For enhanced corrosion protection and extended service life, AAC conductors can also be supplied with grease filling applied during the stranding process, subject to project requirements.

Construction

AAC conductors are manufactured from concentrically stranded aluminium wires.

- **Conductor Material:** Aluminium
- **Material Designation:** AL1
- **Construction:** Concentric-lay stranded aluminium wires
- **Surface:** Bare aluminium
- **Optional Protection:** Grease filling during the stranding process

Different conductor sizes and stranding configurations can be supplied according to applicable standards and project specifications.

Applications

AAC conductors are typically used in:

- Urban overhead power distribution networks
- Regional electricity distribution systems
- Overhead transmission networks
- Short-span overhead power lines
- Coastal power distribution networks
- Electrical networks in environments exposed to harsh weather conditions

AAC is particularly suitable for urban distribution applications where high conductivity and short spans are important considerations.

For long-span transmission and rural distribution lines, other conductor types with higher mechanical strength may be more suitable.

Key Features & Benefits

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- **High Electrical Conductivity:** Aluminium provides efficient electrical current transmission.
- **Excellent Corrosion Resistance:** Suitable for coastal regions and various outdoor environments.
- **Lightweight Construction:** Aluminium conductor construction offers relatively low conductor weight.
- **Urban Distribution Applications:** Well suited to overhead networks with relatively short spans.
- **Optional Grease Filling:** Additional corrosion protection can be provided during the stranding process.
- **Multiple Configurations:** Available in different conductor sizes and stranding arrangements according to project requirements.

Applicable Standards

AAC (AL1) conductors can be manufactured in accordance with:

- **SS EN 50182:** Conductors for overhead lines – Round wire concentric lay stranded conductors.

The applicable standard and technical requirements should be confirmed according to the destination market and project specifications.

Technical Specifications

Name	Old code	Cross section	Number of strands	Strand diameter	Conductor diameter	Total weight	Maximum breaking load	DC resistance
Vitsippa	VITSIPPA	62 mm²	7	3.37 mm	10.1 mm	167 kg/km	10.3 kN	0.4577 Ω/km
Kattfot	KATTFOT	94 mm²	7	4.25 mm	12.8 mm	271 kg/km	15.9 kN	0.2878 Ω/km
Gullviva	GULLVIVA	158 mm²	19	3.26 mm	16.3 mm	435 kg/km	26.2 kN	0.1812 Ω/km
Vallmo	VALLMO	241 mm²	19	4.02 mm	20.1 mm	662 kg/km	38.6 kN	0.1192 Ω/km
Renfana	RENFANA	330 mm²	37	3.37 mm	23.6 mm	910 kg/km	54.5 kN	0.0874 Ω/km
Akleja	AKLEJA	454 mm²	61	3.08 mm	27.7 mm	1257 kg/km	75 kN	0.0637 Ω/km
Hampdân	HAMPDÀN	593 mm²	61	3.52 mm	31.7 mm	1630 kg/km	95 kN	0.0487 Ω/km
Stormhatt	STORMHATT	774 mm²	61	4.02 mm	36.2 mm	2142 kg/km	123.9 kN	0.0374 Ω/km
Solros	SOLROS	910 mm²	61	4.36 mm	39.2 mm	2519 kg/km	145.7 kN	0.0318 Ω/km
1095-AL1	AAC1095	1094 mm²	61	4.78 mm	43 mm	3028 kg/km	175.1 kN	0.0264 Ω/km

Detailed technical data can be provided based on the required conductor size and project specifications.

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