CATEGORY: SECTION INSULATOR

FYFH-1.6AT-S Shuttle Section Insulator (25kV AC)

Reference URL: https://en.chuangwit.com/sectioning-insulator/fyfh-16at-shuttle-typea.html

1. Product Overview

Shuttle-type Type A section insulator per TB/T 3036-2016 for in-phase sectioning of 25kV AC railway OCS, up to 160 km/h. Download Technical Datasheet (PDF) Technical Specifications | The FYFH-1.6AT shuttle-type section insulator (Type A) is designed and manufactured in accordance with TB/T 3036-2016, the Chinese railway industry standard for section insulators used in electrified railway overhead contact systems (OCS). It provides reliable in-phase electrical separation between adjacent OCS sections on 25kV AC 50Hz single-phase traction power networks, while maintaining smooth mechanical passage for the pantograph. | The shuttle-type profile guides the pantograph carbon strip across the insulating zone with minimal dynamic disturbance. A high-strength aluminum alloy body carries the contact wire tensile load, and arc-resistant insulating elements (silicone rubber or porcelain) isolate the two electrical sections. The design is rated for a system voltage of 27.5kV and design speeds up to 160 km/h, with an operating temperature range of -40 deg C to +70 deg C and altitudes up to 4,000 m. |

2. Published Technical Specifications & Parameters

Parameter	Published Value / Specification
Model	FYFH-1.6AT-S
Standard	TB/T 3036-2016 Section Insulators for Electrified Railway OCS
Rated Voltage	27.5kV rated (25kV AC 50Hz single-phase traction supply)
Design Speed	Up to 160 km/h (depending on sub-model)
Operating Temperature	-40 deg C to +70 deg C
Altitude	<= 4,000 m
Materials	High-strength aluminum alloy body; arc-resistant insulating elements (silicone rubber / porcelain)
Installation	In-line series suspension on the contact wire; both ends mechanically connected to the contact wire
Model	FYFH-1.6AT-S (Air Clearance >=300mm)
Application	In-phase electrical sectioning for power-frequency single-phase AC electrified railway catenary
Rated Operating Voltage	27.5kV (System Voltage 25kV AC)
Altitude	<=4000m
Ambient Temperature	-40 deg C~+70 deg C
Environmental Conditions	Suitable for high humidity, high salt-deposit density, heavy pollution, coastal, and tunnel sections
Max. Design Speed	<=160km/h
Max. Tensile Working Load	>=16.5 kN
Tensile Failure Load	>=52 kN

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Parameter	Published Value / Specification
Initial Slipping Force at Contact Wire Clamp	<=3.0kN, without slippage
Lightning Impulse Withstand Voltage (1.2/50us)	>=160kV
Power-Frequency Wet Flashover Voltage	>=87kV
Artificial Pollution Withstand Voltage (ESDD 0.4mg/cm^2, NSDD 2.0mg/cm^2)	>=37kV
Creepage Distance	>=1600mm
Air Clearance	>=300mm

3. Operating Conditions

Application In-phase electrical sectioning of power-frequency single-phase AC electrified railway overhead contact systems Rated Working Voltage 27.5 kV Altitude <= 4,000 m Ambient Temperature -40 deg C to +70 deg C Environmental Conditions Suitable for high-humidity, high-salt-density, heavily polluted, coastal and tunnel sections Max. Permissible Passing Speed <= 160 km/h

4. Mechanical Performance

Max. Working Tensile Load >= 16.5 kN Tensile Failure Load >= 52 kN Initial Slip Force at Contact Wire Joint <= 3.0 kN, no slippage

5. Electrical Performance

Lightning Impulse Withstand Voltage (1.2/50 us) >= 160 kV Power-Frequency Wet Flashover Voltage >= 87 kV Artificial Pollution Withstand Voltage (SDD 0.4 mg/cm^2, NSDD 2.0 mg/cm^2) >= 37 kV Creepage Distance >= 1600 mm Air Insulation Clearance >= 300 mm

6. Typical Applications

Mainline Railways | In-phase sectioning on conventional and mixed-traffic trunk lines up to 160 km/h (Type A per TB/T 3036-2016; use Type B models up to 200 km/h). | Stations & Depots | Electrical separation at station throats, depot entrances and stabling sidings. | Humid & Rainy Regions | Arc-resistant insulation maintains performance in high-humidity and heavy-rainfall areas. | Cold Regions | Rated for -40 deg C low-temperature operation in severe winter climates.

Engineering & Quality Compliance Notice

Manufactured under ISO 9001 and CRCC product certification rules where applicable. All values mirror published site specifications.
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