

Product Overview

ANTI-POLLUTION TYPE INSULATOR

Applicable Models: U70BSA, U70BLA, U100BSA, U100BLA, U120BLA, U160BSA, U160BMA, U210BA, U240BA, U300BA



OVERVIEW

Anti-pollution type insulators are engineered with extended sheds, increased creepage distance, and optimized contour geometry to prevent flashover under industrial, coastal, or desert pollution conditions. These insulators deliver enhanced self-cleaning capability and stable electrical performance in areas with high contamination levels.

CODE AND IMPLICATION

U XX BP / BPA / BMA / BLA (kN)

Pollution-resistant shed/profile type (BP = Anti-pollution; BPA = Enhanced Anti-pollution; BMA/BLA = Extended aerodynamic-pollution hybrid profiles)

Mechanical strength rating (kN): 70, 100, 120, 160, 210, 240, 300

Material: U = Toughened glass insulator

INTRODUCTION

Anti-pollution type insulators feature enlarged sheds and increased creepage distance to suppress leakage currents and ensure reliable performance in polluted environments.

Manufactured using high-strength toughened glass, these insulators provide uniform mechanical characteristics, high dielectric properties, and natural self-cleaning surface performance.

APPLICATION

These insulators are suitable for:

- ◆ High-voltage transmission lines in pollution-prone regions.
- ◆ Coastal and marine environments with salt fog exposure.
- ◆ Heavy industrial zones with chemical or particulate contamination.
- ◆ Desert regions subject to wind-blown sand and dust.
- ◆ Long-term operation requiring enhanced creepage distance and flashover resistance.

STRUCTURE FEATURES

- ◆ Enlarged anti-pollution sheds with extended creepage distance.
- ◆ Toughened glass body ensures stable mechanical performance.
- ◆ Enhanced hydrophobicity for reduced surface leakage current.
- ◆ Self-cleaning characteristics under rain or natural wind.
- ◆ Strong resistance to industrial pollution and marine salt fog.
- ◆ High mechanical failing load that meets or exceeds IEC requirements.

SERVICE CONDITIONS

- ◆ Ambient temperature: -40°C to +55°C
- ◆ Altitude: ≤ 2000 m (higher ratings available on request)
- ◆ Heavy pollution conditions (industrial, coastal, desert)
- ◆ Maximum wind pressure: 700 Pa or as specified
- ◆ Frequency: 50/60 Hz
- ◆ Suitable for AC overhead transmission lines

MAIN TECHNICAL NOTES

- ◆ Complies with GB/T 7253-2005 and JB/T 9683-2012 (IEC 60305:1995, MOD).
- ◆ Mechanical failing load verified according to international standards.
- ◆ Creepage distance significantly increased to prevent pollution flashover.
- ◆ Electrical performance tested under wet and polluted conditions.
- ◆ Custom creepage distance and pollution grade configurations available.
- ◆ Anti-pollution coatings can be supplied as an option.

PRODUCT SPECIFICATION

Normal value for mechanical and electrical performance and dimension of **Antipollution-type Insulator**

| TYPE | | U70BLP | U70BLP1 | U100BLP | U100BLP1 | U120BLP | U120BLP1 | U160BMP | U160BMP 1 | U160BLP | U160BLP1 | U210BP | U240BP | U300BP | U300BP1 | U300BP2 | U420BP | |
|--------------------------------------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Minimum Mechanical Failing Load (kN) | | 70 | 70 | 100 | 100 | 120 | 120 | 160 | 160 | 160 | 160 | 210 | 240 | 300 | 300 | 300 | 420 | |
| Dimension ^s | Nominal Diameter D (mm) | 280 | 320 | 280 | 320 | 280 | 320 | 280 | 280 | 320 | 320 | 320 | 320 | 380 | 390 | 340 | 300 | |
| | Nominal Spacing H (mm) | 146 | 146 | 146 | 146 | 146 | 146 | 155 | 170 | 170 | 155 | 170 | 170 | 195 | 195 | 195 | 205 | |
| | Nominal Creepage Distance (mm) | 450 | 550 | 450 | 550 | 450 | 550 | 450 | 450 | 550 | 550 | 550 | 550 | 635 | 690 | 550 | 620 | |
| | Standard Coupling | 16 | 16 | 16 | 16 | 16 | 16 | 20 | 20 | 20 | 20 | 20 | 20 | 20/24 | 24 | 24 | 24 | 28 |
| Electrical Data | Wet Power Frequency Withstand Voltage (kV) | 50 | 55 | 50 | 55 | 50 | 55 | 50 | 50 | 55 | 55 | 55 | 55 | 60 | 60 | 55 | 55 | |
| | Dry Lightning Impulse Withstand Voltage (kV) | 125 | 140 | 125 | 140 | 125 | 140 | 125 | 125 | 140 | 140 | 140 | 140 | 155 | 155 | 140 | 140 | |
| | Power Frequency Puncture Voltage (kV) | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 140 |
| | Radio Interference Voltage μ V(10kV,1MHz) | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| | Corona Visual Test (P/CKV) | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 | 18/22 |
| | Power Frequency Electric Arc Voltage (kV) | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A | 0.12s/20k A |
| | Impulse Puncture Voltage (P.U) | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| Net Weight (kg) | | 5.8 | 9.2 | 5.8 | 9.2 | 5.8 | 9.2 | 7.1 | 7.2 | 9.6 | 9.5 | 10 | 10 | 15 | 15 | 13 | 16 | |

NOTES:

- 1) Product Model: Conforms to GB/T 7253-2005, JB/T 9683-2012 (IEC 60305:1995, MOD).
- 2) Strength Class:
 - a) 420 kN includes 400 kN.
 - b) 550 kN includes 530 kN.
- 3) Locking Pin:
 - c) Type W or type R, depending on customer requirements.
 - d) Type W for U70-U120, type R for U130 and above, unless otherwise specified.

NOTE: For additional product dimension drawings, please leave us a message.



