Class C/Type 2 Power Supply Surge Protection Box

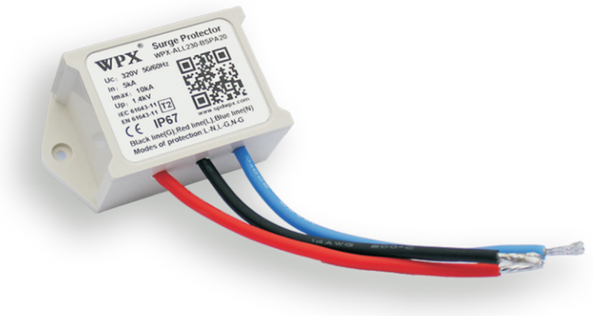
Protection/Power

BSPB Series 30kA/10kA 230V~All mode CE IP67 Surge Protection Class C/Type 2

Single-phase
Power Supply Surge Protector

Description of products

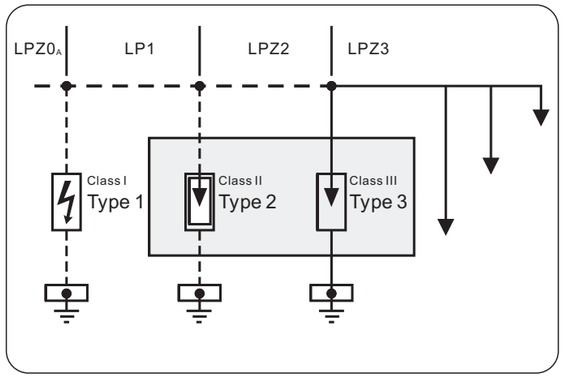
WPX's ALL230-BSP series Surge Protective Device(SPD) covers LED lighting fixtures, street light, critical gate motors, and other electrical equipment, ensuring secure access to guarded properties. It is designed to operate in indoor or outdoor environments (IP67), at the protected equipment.



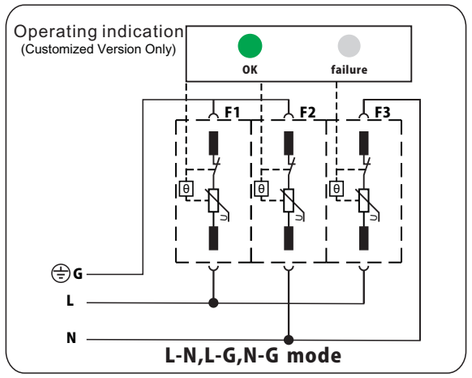
Features & Advantages

- **Easy, safe,** and maintenance-free operation.
- **Repeatable surge current** capability for long life.
- **Easily retrofits** on existing panelboards.
- **Compact Module** attaches directly to breaker panel. Dimensions: 54mm(L)×38mm(W)×27mm(H) Weight: 200g
- **Patented** WPX BSP-SPD Detection Circuitry monitors all modes of failure, including neutral to ground.
- Standard visible alarm function to indicate reduced protection.
- ANSI/IEEE C62.41 Category A, B, & C3 Compatible ANSI/IEEE C62.11, C62.45 Tested.
- **High-isolation dry contacts** for remote system integrity monitoring.
- **IEC 61643-11 Class II**.

Coordination



Circuit Diagram



Technical Parameters

Absolute Maximum Ratings

• For ratings of individual members of a series, see Device Ratings and Specifications chart

	WPX-BSP Series	Units
Continous:		
Steady State Applied Voltage:		
Max AC Voltage Range ($V_{M(AC)RMS}$)	150 to 510	V
Transient:		
Maximum Discharge Current 8/20μs Waveform (Imax)	10,000	A
Nominal Discharge Current 8/20μs Waveform (I_n)	5,000	A
Operating Ambient Temperature Range (T_A)	-45 to +85	°C
Storage Temperature Range (T_{STG})	-45 to +85	°C
Isolation Voltage Capability (When the thermal disconnect opens)	600	V
Insulation Resistance	>1,000	MΩ
Atmospheric Pressure	76 to 106	kPa
Response Time tA	< 25	ns

WPX-BSPA Series Device Ratings & Specifications

Part Number	ALL120-BSPA20	ALL230-BSPA20	ALL230-BSPB20	ALL230-BSPC20
Modes of protection	L-N;L-G;N-G	L-N;L-G;N-G	L-N;L-G;N-G	L-N;L-G;N-G
Rated Working Voltage Uo	120V~	230V~,277V~	230V~	480V~
Max Continuous Operating Voltage U_c (L-G,N-G,L-N)	150V~	320V~	275V~	550V~
Total Discharge Current I_{total}(8/20μs) (L-G,N-G,L-N)	15,000A	15,000A	15,000A	15,000A
Max Discharge Current I_{max}(8/20μs) (L-G,N-G,L-N)	30,000A	30,000A	30,000A	30,000A
Nominal Discharge Current I_n(8/20μs) (L-G,N-G,L-N)	5000A	5000A	5000A	5000A
Max Discharge Current I_n(8/20μs) (L-G,N-G,L-N)	10,000A	10,000A	10,000A	10,000A
1kA, Voltage Protection Level U_p(L-G,N-G,L-N)	≤600V	≤900V	≤900V	≤1700V
5kA, In Voltage Protection Level U_p(L-G,N-G,L-N)	≤700V	≤1400V	≤1200V	≤2000V
10kA ,Imax Voltage Protection Level Up(L-G,N-G,L-N)	≤900V	≤1600V	≤1400V	≤2800V
Enclosure material	Ivory ABS	Ivory ABS	Ivory ABS	Ivory ABS
Degree of protection（IP code）	IP67/IEC 60529	IP67/IEC 60529	IP67/IEC 60529	IP67/IEC 60529
Operating indication**(Customized Version Only)**	LED and visible alarm	LED and visible alarm	LED and visible alarm	LED and visible alarm

Notes:

1. The maximum continuous operating voltage (Uc):The maximum operating voltage effective value which connecting to relevant SPD terminal. It's defined that the maximum voltage on SPD in non-conducting state, the SPD will return to non-conducting state after taking action and discharging.The value of Uc depends on the nominal voltage and installation instruction (IEC60364-5-534) of the protectedsystem.
2. Nominal Discharge Current (In)(A): The nominal discharge current is a measure of the SPDs endurance capability; 15 impulses of discharge current uses the 8/20us current waveform.
3. Maximum Discharge Current (Imax)(A): The maximum discharge current is a measure of the SPDs maximum capability; single impulse of discharge current uses the 8/20us current waveform.
4. Up – IEC 61643-11 Voltage protection level; the highest value of residual voltage measurements during the application of impulses of 8/20us nominal discharge current (In); a rounding voltage value of maximum measurement.

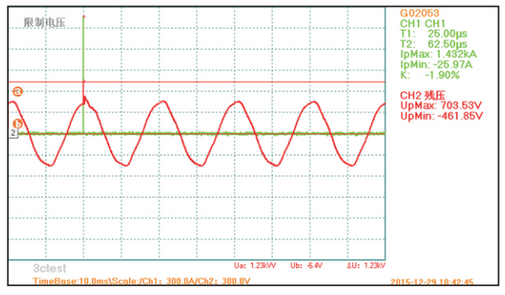


Figure 1: Limiting Voltage Value under 320VAC, Rated impulse current

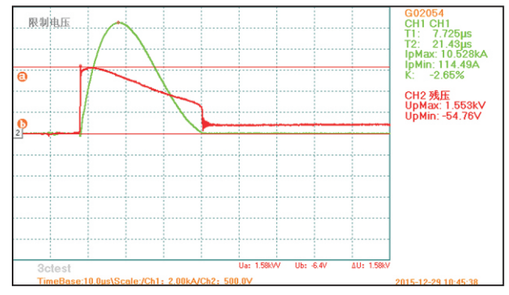


Figure 2: Limiting Voltage Value under 10kA max discharging current

Single-phase
Power Supply Surge Protector

Repetitive Surge Capability for WPX-BSP Series

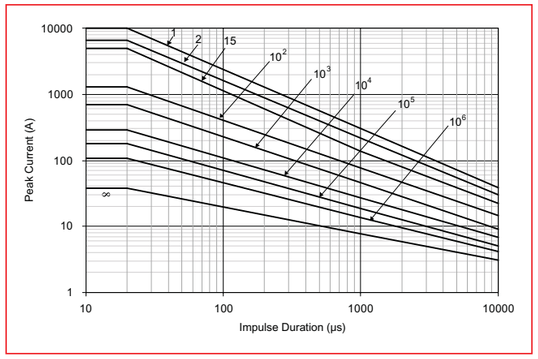
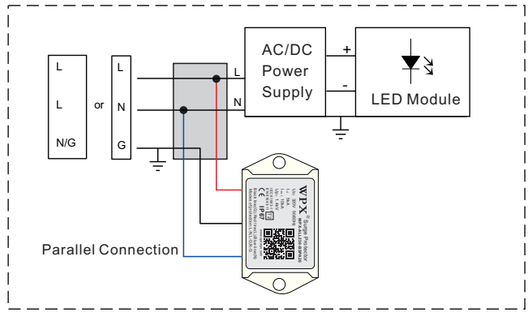
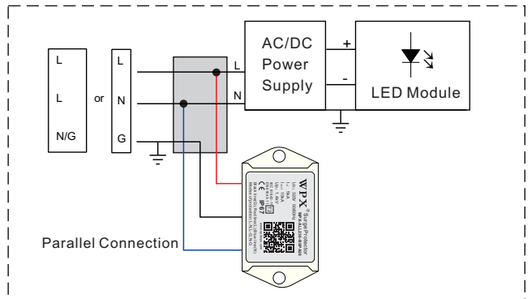


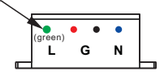
Figure 3: Pulse Rating Curves for 8/20μs types

Application/Installation Schematic





Operating indication (Customized Version Only)
Green: OK,
OFF:Failure



Notes:
After wiring, checked it is correct, then turn on the power supply; at this time the indicator of the power surge protector will be “green”,means this power surge protector working normally.
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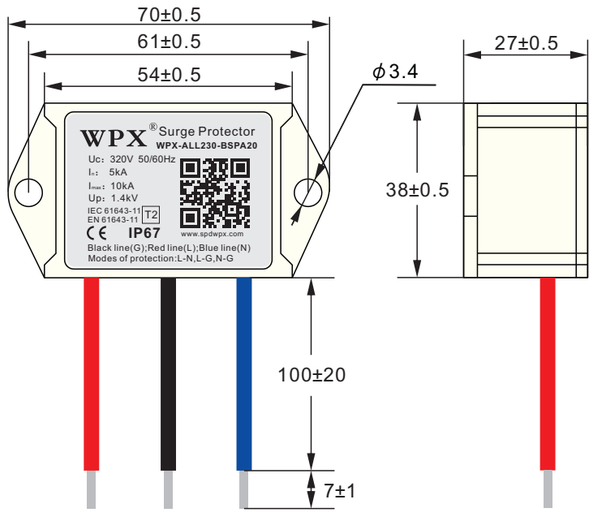
Notes:Installation and Maintenance

1 Before installation, check the surface of power surge protector whether have damage, and then measure the resistance is normal or not between terminal L,N,G of power surge protector with a multimeter (tramegger is prohibited) : Resistance between L, N to G should be infinite ; Resistance between L to N should be more than 1MΩ.

2 After fixed the Power surge protector, connected it to power supply system in the front end of the protected device according to the wiring's marking. Red line-L line,Blue line-N line, Black line-G line; Among them,Black line as short as possible, less than 0.5m.

3 When the surge protector in the process of normal use, especially in thunderstorm season, should check the earthing system of the power surge protector, make it keep good earthing. Otherwise, the protection effect of the power surge protector will be affected differently. If grounding line PE in open circuit status, power surge protector will lose protection function.

Dimension:mm



Notes:
1. Red: Line; Blue: Neutral; Black: Ground
2. Wire Gauge: AWG14 wire Line in, ; Wire Length: 100mm or customized

Caution

DO NOT DISASSEMBLE THE PRODUCT IN CASE THE ELECTRICITY INSIDE!!

Warranty

Kindly Note: The warranty will be void if the products have been disassembled, repaired or modified without WPX's authorization.

Contact Us

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