Shihlin Electric

SURGE PROTECTIVE DEVICE

SHIHLIN ELECTRIC & ENGINEERING

Surge Protective Device

Feature

1. Suitable for AC220V/380V, 50/60Hz power system.
2. Low residual voltage and low leakage current.
3. Thermal trip/fuse function for fast response.
4. Plug-in modular design for easy installation and replacement.
5. Standard 35mm din-rail installation.
6. Status window display
7. Additional alarm switch can be added.
8. Comply with IEC61643 standard

Electrical Characteristics

1. SPD structure: Inner core part is a metal oxide varistor made with zinc oxide.
2. Rated voltage (Un): The rated voltage of SPD device will be the same with rated voltage of the device being protected.
3. Maximum continuous operating voltage (Uc): 275VAC, Uc should be 15% greater than Un.
4. Frequency: 50/60 Hz
5. Time: MOV≦25ns, NPE≦100ns
6. Voltage protection level (Up): Less than rated impulse withstand voltage of the device being protected.
7. Life expectancy: It takes voltage surge 10000 times within rated discharge current
8. Operating temperature: -5˚C ~ +40˚C, relative humidity: 30~99%, operating altitude: 2000 meter below.

Operating Principle

1. Voltage limiting type SPD: Having high impedance when no surges occur and as the surge voltage and current increase, the impedance decrease. By using varistor and transient voltage suppressor (TVS). Leakage current is limited, with fast response time and low residual voltage.
2. Voltage switching type SPD: Having high impedance when no surges occur and become low impedance when surges occur. Use discharge gap and gas discharge tube type parts. Voltage discharge capability is high.

Recommended SPD Disconnector

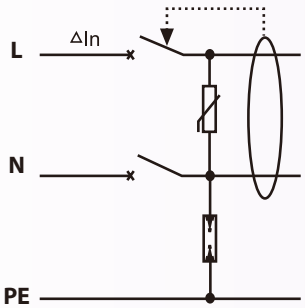
Model	Recommended SPD Disconnector (Max. Rating)
BHP20M2 1P+1	100 A gL/gG Fuse
BHP20M2 3P+1	100 A gL/gG Fuse
BHP40M2 1P+1	100 A gL/gG Fuse
BHP40M2 3P+1	100 A gL/gG Fuse
BHP65M2 1P+1	100 A gL/gG Fuse
BHP65M2 3P+1	100 A gL/gG Fuse
BHP80M2 3P+1	100 A gL/gG Fuse

Specification

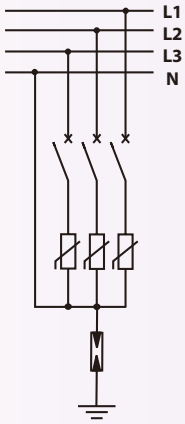
- Class II

Model	Type	Uc	In	Imax	Up	tA	Pole	Alarm Switch
BHP20M2 1P+1 BHP20M2 3P+1	MOV	275Vac	10kA	20kA	1.2kV	≦25ns	1P+NPE 3P+NPE	250V 0.25A
	NPE	255Vac				≦100ns		
BHP40M2 1P+1 BHP40M2 3P+1	MOV	275Vac	20kA	40kA	1.3kV	≦25ns	1P+NPE 3P+NPE	250V 0.25A
	NPE	255Vac			1.5kV	≦100ns		
BHP65M2 1P+1 BHP65M2 3P+1	MOV	275Vac	30kA	65kA	1.5kV	≦25ns	1P+NPE 3P+NPE	250V 0.25A
	NPE	255Vac				≦100ns		
BHP80M2 3P+1	MOV	275Vac	40kA	80kA	1.7kV	≦25ns	3P+NPE	250V 0.25A
	NPE	255Vac			1.5kV	≦100ns		

Wiring Diagrams



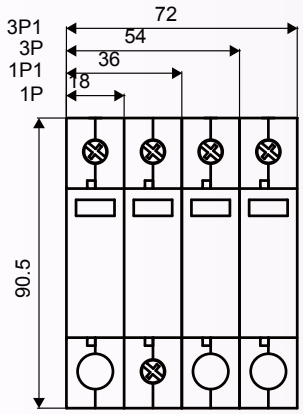
1P+1
(1 x L-N + 1 x N-PE)

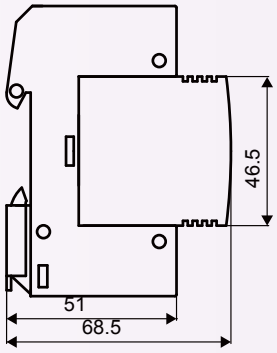


Gap discharge

3P+1
(3 x L-N + 1 x N-PE)

Dimensions (mm)

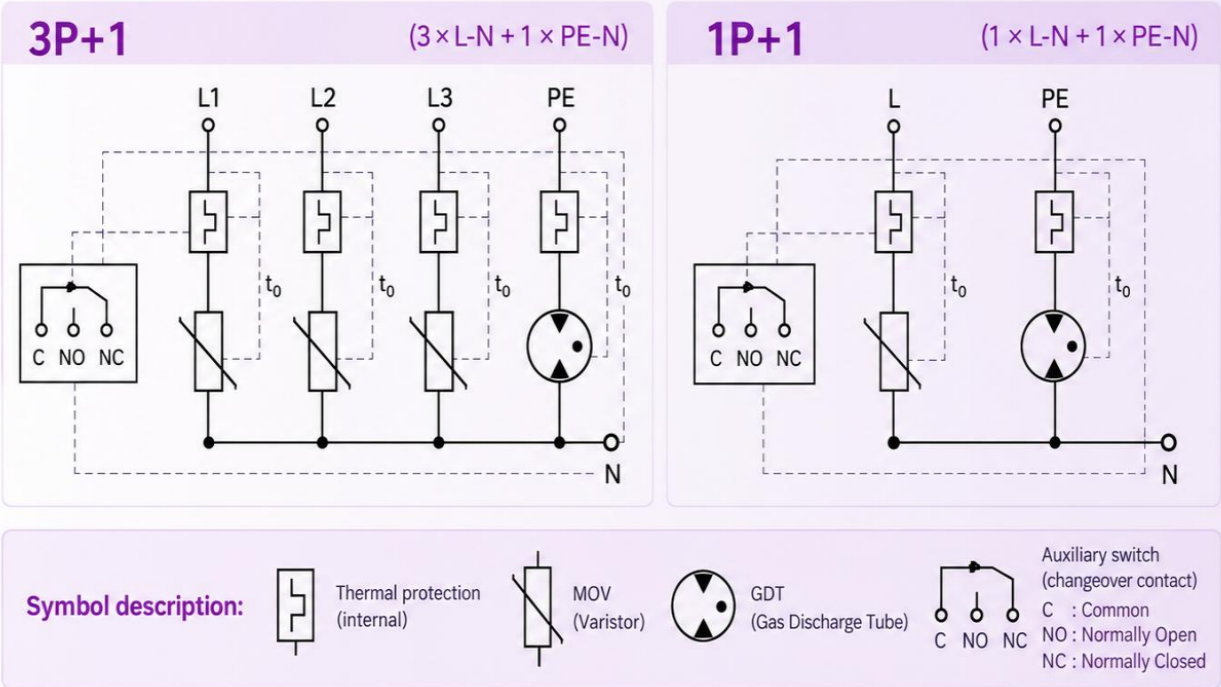




BHP20M2 1P+1 **BHP20M2 3P+1**
BHP40M2 1P+1 **BHP40M2 3P+1**
BHP65M2 1P+1 **BHP65M2 3P+1**
BHP80M2 3P+1

Wiring Example

MOV (Internal protection)



BHP20M2 1P+1 **BHP20M2 3P+1**
BHP40M2 1P+1 **BHP40M2 3P+1**
BHP65M2 1P+1 **BHP65M2 3P+1**
BHP80M2 3P+1

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MOTOR CONTROL (CONTACTOR/ MS/ MMS), CIRCUIT BREAKER (MCCB/ ELCB/ EMCCB/ MCB), AIR CIRCUIT BREAKER, AUTOMATIC TRANSFER SWITCHES (Panel Board Type/ Residential Unit Use), SURGE PROTECTIVE DEVICE, LOW VOLTAGE POWER CAPACITORS, SMART METER, INVERTER

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