



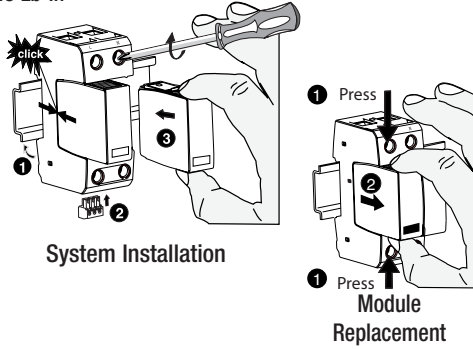
⚠ **DANGER**

**Hazardous Voltage**  
Will cause severe injury or death.

Working on or near energized circuits poses a serious risk of electrical shock. De-energize all circuits before installing or servicing this equipment and follow all prescribed safety procedures.

### Mounting

Torque to 5 N•m/  
45 Lb-In Phillips Head Driver



### UL 1449 3rd Edition, Two-Pole

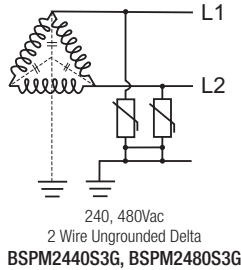
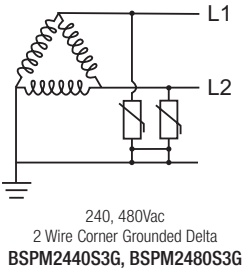
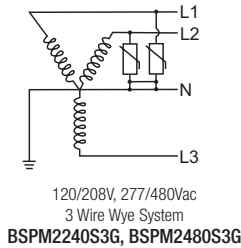
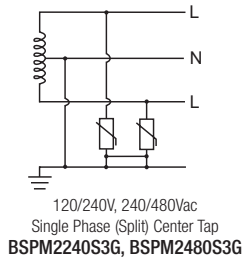
### Single-Phase & Three-Phase 2 Wire/3 Wire System Installation Instructions

#### BSPM2240S3G & BSPM2480S3G Technical Data

Nominal System Voltage	120/240 Vac	240/480Vac
MCOV (V <sub>c</sub> )	[L-G / L-L] 275/550Vac	385/770Vac
Catalog Numbers:	W/O Remote	BSPM2240S3G
	With Remote	BSPM2240S3GR
Replacement Module	BPM275UL	BPM385UL
Voltage Protection Rating (V <sub>pp</sub> ) [L-G/L-L]	1kV/1.8kV	1.5kV/2.5kV
SCCR	200kA	
Nominal Discharge Current I <sub>n</sub> (kA)	20kA	
Max. Discharge Current I <sub>max</sub> (kA)	40kA	
Degree of Protection	IP20 (finger-safe)	

## Installation Instructions

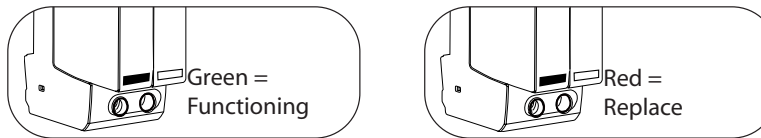
### Wiring



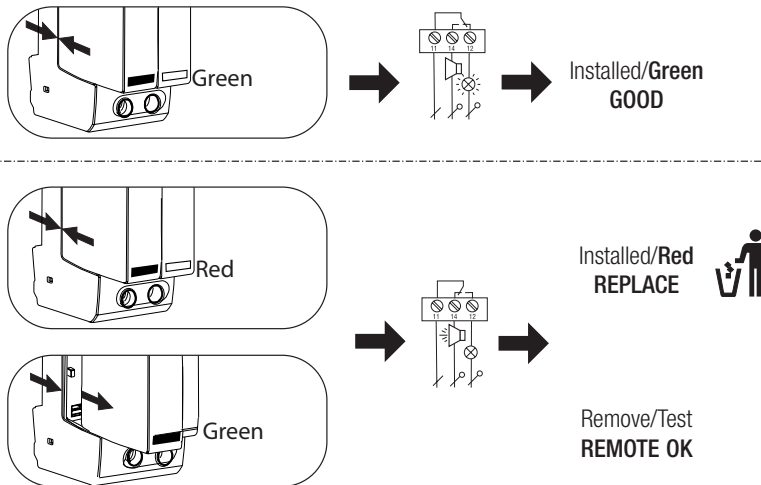
### Conductors and Busbars for Use in UL Systems

60/75°C Cu Conductors			
min. □, L, N, G, ⊥	1.5 mm <sup>2</sup> / 14AWG		
max. □, L, N, G, ⊥	25mm <sup>2</sup> / 4AWG	35mm <sup>2</sup> / 2AWG	
Busbar	16mm <sup>2</sup> Cu	≥15.5mm	

### Visual Indication Status



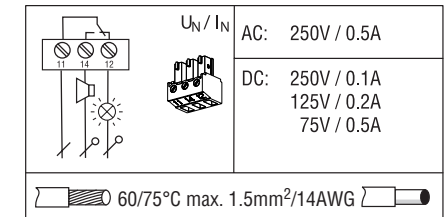
### Fault Indication with Remote Contact Signaling



**Warranty**  
See document 3A1502 at  
[www.cooperbussmann.com/surge](http://www.cooperbussmann.com/surge)  
for details of limited warranty.



### Remote Contact Signaling



## 1. Application of the Cooper Bussmann BSP UL Series

The modular Cooper Bussmann BSP UL Series of Surge Protective Devices (SPDs) sets new standards of safety and user-friendliness. They are intended for protecting against overvoltage surges generated by remote lightning strikes or localized switching surges in up to 600V class applications.

Typical installation locations include the main service entrance, distribution panels, sub-distribution panels, branch circuit panels or directly associated with a panel for specific electrical equipment such as PLC, drives or other sensitive equipment.

Integrated mechanical coding between the modules and base ensures against installing an incorrect replacement module. Modules can be easily replaced without tools by simply depressing the release buttons. The protection modules are firmly fixed to the base part of the device. Neither vibration nor the electromagnetic forces of discharge can loosen the protection modules.

The dual Thermo Dynamic Control monitoring in each module is based on the intensity of the discharge current and the surface temperature of the heavy-duty varistor. The visual indicators show the state of each module at a glance. Green if the module is good and Red if the module has reached the end of its operating life and needs replacement. Remote signaling of module status is possible with an optional three-pole terminal (not field configurable; must be ordered with SPD). A floating changeover contact can be used as a make or break contact according to the monitoring circuit design.

## 2. Safety Instructions

The Cooper Bussmann BSP UL Series is to be installed only by qualified personnel in compliance with all local and National Electrical Code requirements. Consideration must be made for proper system protection coordination with other SPDs. Contact our Application Engineers for additional information or assistance.

Always de-energize the system and follow prescribed safety procedures while installing and connecting the SPD. SPD ratings must be compliant with the application and must not be installed in a more severe environment that subjects the SPD to higher voltages, currents or energy levels than allowed for in its technical specifications. The SPD is designed for indoor applications. If installed in a harsh environment, the SPD must be placed in a suitably rated NEMA enclosure. Opening or tampering with the protection modules may damage the effective operation of the SPD and will void the warranty.

## 3. General Installation Instructions

*Consult Articles 250 and 285 of the NEC® and IEEE Green Book, Standard 142. Also consider the requirements of the Canadian Electrical Code, if applicable.*

**No Additional Fusing Needed:** The Cooper Bussmann BSP UL Series is designed to be installed without additional fuses per UL 1449 3rd Edition. It is suitable for use on a circuit with maximum SCCR and Nominal Voltage according to Technical Data. This device features an internal protection system that will disconnect the surge protective module at the end of its useful life, but will maintain power-to-load, now unprotected from an overvoltage condition. If this situation is undesirable for the application, the plug-in module must be replaced.

**System Voltage:** Make sure that the SPD is correctly rated for the application. The maximum continuous operating voltage (MCOV) must not be exceeded.

**Mounting:** The SPD should be installed as close as possible to the device it is protecting. Good installation practice is to keep conductor length as short and straight as possible. The SPDs mount on a 35mm DIN-rail that should be securely mounted to the back of the panel's interior using ¼ inch bolts every 8 inches (200mm). The SPDs can be mounted onto the DIN rail by sliding in from either open end, or directly on by compressing the spring-loaded clamping device. The SPD's location shall permit sufficient clearance for conductor power and signaling connections.

**Conductor Connections:** Phase connections to the SPD and Ground side connections from the SPD to the ground bus must use the wire size indicated in the technical specifications. Insulation should be stripped back ½ inch as shown. All conductor terminal screws shall be tightened to 45 Lb-In (5 N•m). If the SPDs are installed with conductor lengths from the main bonding jumper (usually service entrance) longer than six feet (two meters), then an additional SPD must be installed between neutral and ground.

**Grounding:** For proper operation, the SPD must be connected to a low impedance ground. Good installation practice is to make sure the SPD grounding conductors are as short and straight as possible using the specified wire size. Use a local equipotential bonding bar if possible. Contact our Application Engineers for additional information or assistance.

**Remote Contact Signaling:** If using the optional remote contact signaling, torque terminals to 1.7 Lb-In (0.2 N•m). Contacts are rated at 250Vac/0.5A or 250Vdc/0.1A, 125Vdc/0.2A, 75Vdc/0.5A.

**Problem Diagnostics:** If there should be any problem please contact your local Cooper Bussmann representative.