BSPA Type 1 and Type 2 surge protective devices

Contents

1. Introduction

1.1 Manual introduction

This installation manual describes the installation and operation of the Bussmann™ series BSPA surge protective device (SPD). This document covers most aspects of installation and operation and is a guide only for licensed/qualified electricians. If you require further information regarding a particular installation, application, or maintenance activity, please contact your Bussmann series product representative. These instructions do not cover all details, variations or combinations of the equipment, its storage, delivery, installation, check-out, safe operation or maintenance. Care must be exercised to comply with the prevailing electrical code requirements as well as with local, state, and national regulations, and the safety practices for this class of equipment.

Please read and understand ALL installation and operating instructions prior to installation and use of this equipment.

1.2 Product overview

The Bussmann series BSPA protects critical electrical and electronic equipment from damage by voltage transients and surges when properly installed. This is done by shunting high energy lightning surges (and other transient disturbances) away from the equipment being protected. It does this in nanoseconds by providing a low impedance surge path through thermally protected metal oxide varistors (MOV) while supporting power frequency voltage. The Type 2 BSPA models equipped with EMI filtering are designed to protect sensitive equipment from electrical noise. Proper installation is critical to ensure the BSPA unit operates as intended.

The Type 1 BSPA units are intended for installation between the secondary of the service transformer and the lineside of the service equipment overcurrent protective device; as well as the loadside, including watt-hour meter socket enclosures intended to be installed without an external overcurrent protective device.

The Type 2 BSPA units are intended for installation on the loadside of the service equipment overcurrent protective device, including branch panel locations and functions to protect sensitive electronic equipment from damaging voltage transients and surges.

The BSPA should be installed as close as possible to the equipment to be protected.

BSPA units are available in voltage ratings from 120 to 600 Vac, surge current ratings from 50 kA to 200 kA, and two sizes of NEMA 4X enclosures. Enclosure size is determined by voltage and peak surge current rating. See the dimension drawings for details.

BSPA units are available in five feature options covering Form C relays, audible alarms and EMI filtering. See section **12. Catalog numbering system** for details.

Powering Business Worldwide

2. Signal words

The signal words "**DANGER**," "**WARNING**," "**CAUTION**" and "**NOTICE**" (along with their assigned symbol) throughout this manual indicate the degree of hazard the user may encounter.

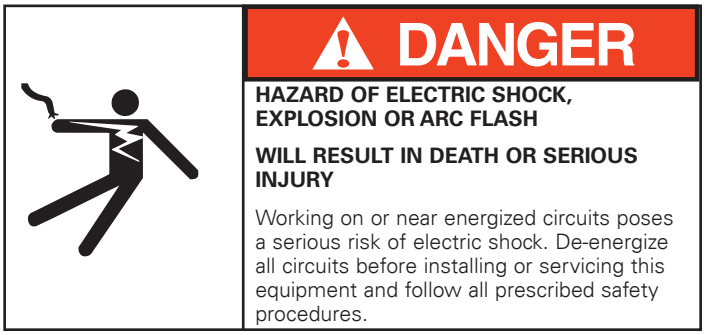
These symbols and words are defined as:

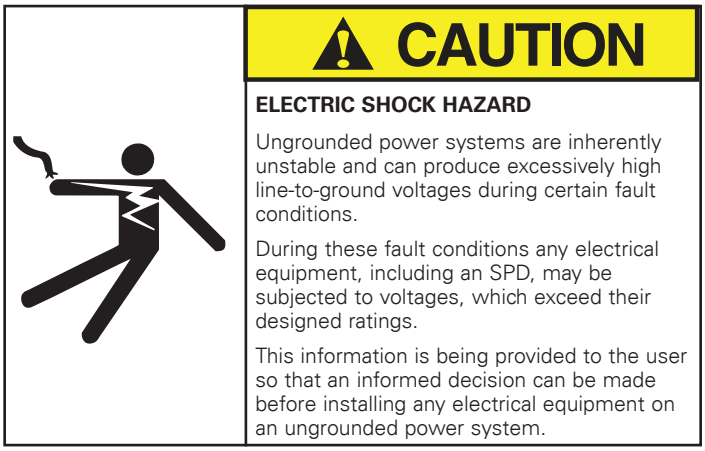
DANGER: Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE: Indicates a hazardous situation which, if not avoided, could result in property damage.





1.6 Qualified person

For the purpose of this instruction manual, a qualified person:

(a) is familiar with the subject equipment and the hazards involved with their application, use, administration and maintenance.

(b) is trained and authorized to de-energize, clear, ground, and tag circuits and equipment in accordance with established safety practices.

(c) is trained in the proper care and use of personal protective equipment such as rubber gloves, hard hat, safety glasses or face shields, arc-flash clothing, etc., in accordance with established safety practices.

(d) is trained to render first aid.

(e) has received safety training to recognize and avoid the hazards involved.

(f) has the skills and knowledge pertaining to the construction and operation of this equipment and its installation.

IMPORTANT: These procedures do not claim to cover all possible details or variations encountered with the installation of a Surge Protective Device (SPD), nor do they provide for all possible conditions that may be encountered. If further information is desired or needed to address any particular issue not covered in this document, contact your Bussmann series product representative. The information in this document does not relieve the user from exercising good judgment, nor from using sound safety practices.

Note: Because Eaton has a policy of continuous product improvement, we reserve the right to change design specifications without notice. Should a conflict arise between the general information in this document and the contents of drawings or supplementary material, or both, the latter shall take precedence. For the latest version of this instruction manual, download Publication No. 10679 from Eaton.com/bussmannseries.

The contents of this installation manual are not part of, nor do they modify, any prior or existing agreement, commitment or relationship. The Bussmann Division terms and conditions of sale constitute the entire obligation of the Bussmann Division. The warranty in the terms and conditions of sale is the sole warranty from the Bussmann Division. Any statements in this document do not create new warranties or modify any existing warranty.

2.1 Safety concerns

This installation manual is not comprehensive. It is assumed the SPD installer will follow established safety procedures for working in an electrical environment. For more information on safety precautions and procedures, consult the following websites:

- National Fire Protection Association (NFPA) www.nfpa.org
- Underwriters Laboratories (UL) www.ul.com
- National Electrical Mfgrs. Association (NEMA) www.nema.org
- American National Standards Association (ANSI) www.ansi.org
- Institute of Electrical and Electronics Engineers (IEEE) www.ieee.org

3. Safety precautions

WARNING – SHOCK HAZARD – DO NOT OPEN

AVERTISSEMENT – RISQUE DE CHOC – NE PAS OUVRIR

WARNING NO SERVICEABLE PARTS

ATTENTION: AUCUNE PIÈCE REMPLACABLE OU RÉPARABLE.

A LICENSED/QUALIFIED ELECTRICIAN MUST COMPLETE ALL INSTRUCTIONS IN THIS MANUAL IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC®), CANADIAN ELECTRICAL CODE (CEC), STATE, AND LOCAL CODES, OR OTHER APPLICABLE COUNTRY CODES. ALL APPLICABLE LOCAL ELECTRICAL CODES SUPERSEDE THESE INSTRUCTIONS.

CHECK THE VOLTAGE-RATING LABEL LOCATED ON THE SIDE OF THE BSPA TO VERIFY THAT THE ELECTRICAL SYSTEM'S VOLTAGE AND WIRING CONFIGURATION ARE THE SAME AS THE BSPA.

CONDUCTING DIELECTRIC, MEGGAR, OR HI-POTENTIAL TESTING WITH THE SPD INSTALLED WILL CAUSE INTERNAL DAMAGE TO THE SPD. THE SPD WILL CAUSE THE TEST TO FAIL.

IMPROPER INSTALLATION COULD CAUSE DEATH, INJURY AND EQUIPMENT DAMAGE. FOLLOW ALL WARNINGS AND CAUTIONS. COMPLETELY READ AND UNDERSTAND THE INFORMATION IN THIS INSTALLATION MANUAL BEFORE ATTEMPTING TO INSTALL OR OPERATE THIS EQUIPMENT.

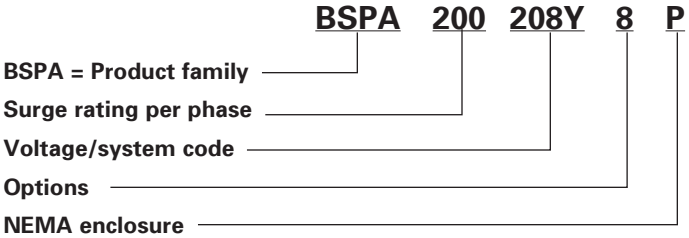
ARC FLASH DURING INSTALLATION COULD CAUSE INJURY OR DEATH. USE APPROPRIATE SAFETY PRECAUTIONS AND EQUIPMENT FOR ARC FLASH PROTECTION.

INSTALLING A PROTECTION DEVICE WHICH IS UNDER RATED FOR THE ELECTRICAL SYSTEM VOLTAGE CAN CREATE A POTENTIALLY HAZARDOUS CONDITION.

CHECK THE FACILITY'S GROUNDING SYSTEM. ALL GROUNDING, BONDING AND EARTHING PRACTICES MUST MEET NEC, CEC AND LOCAL APPROVED PRACTICES. A POOR GROUND, OR A GROUNDING / BONDING VIOLATION WILL SERIOUSLY AFFECT THE SPD'S ABILITY TO FUNCTION AS SPECIFIED

4. BSPA catalog number

Each Bussmann series BSPA unit is identified by a catalog number (see example below). The catalog number identifies the unit's specifications and permits specifying any combination to meet requirements.



For example, BSPA unit catalog number **BSPA200208Y8P**, where:

BSPA = BSPA series

200 = peak surge current rating (50 kA – 200 kA)

208Y = voltage code and system configuration

8 = feature option (1 – 8)

P = enclosure type (NEMA 4X)

See section **12. Catalog numbering system** for additional surge current kA ratings, voltage codes and feature options.

5. BSPA product nameplate

Each BSPA unit has a nameplate affixed to its side that identifies the catalog number and specifications. The catalog number consists of letters and numbers that identify the BSPA unit's kA rating, voltage code, feature option and enclosure type as shown in Figure 1.

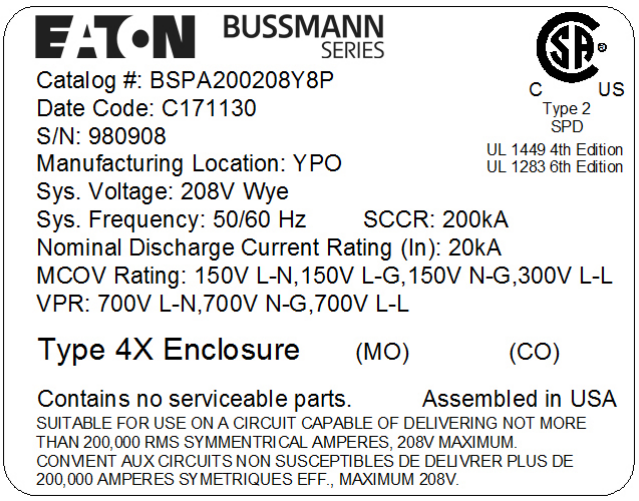


Figure 1. BSPA product nameplate.

6 Installation

WARNING

A LICENSED/QUALIFIED ELECTRICIAN MUST COMPLETE ALL INSTRUCTIONS IN THIS MANUAL IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), CANADIAN ELECTRICAL CODE (CEC), STATE, AND LOCAL CODES, OR OTHER APPLICABLE COUNTRY CODES. ALL APPLICABLE LOCAL ELECTRICAL CODES SUPERSEDE THESE INSTRUCTIONS.

INSTALLING AN SPD THAT IS IMPROPERLY RATED FOR THE ELECTRICAL SYSTEM VOLTAGE COULD CREATE A POTENTIALLY HAZARDOUS CONDITION, RESULTING IN INJURY OR EQUIPMENT DAMAGE.

CHECK THE VOLTAGE-RATING LABEL LOCATED ON THE SIDE OF THE SPD TO VERIFY THAT THE ELECTRICAL SYSTEM'S VOLTAGE AND WIRING CONFIGURATION ARE THE SAME AS THE SPD.

TO PROVIDE THE BEST PROTECTION FOR SENSITIVE ELECTRICAL EQUIPMENT THE 10 AWG WIRES SHOULD BE LESS THAN 14" IN LENGTH, TWISTED TOGETHER AND THEN BOUNDED.

AVOID USING 90° CONDUIT ELBOWS AND KEEP THE CONDUIT RUN AS SHORT AND STRAIGHT AS POSSIBLE. SEE FIGURES 2 AND 3.

WHEN MOUNTING THE SPD OUTDOORS, USE WEATHERPROOF CONDUIT AND FITTINGS TO MAINTAIN THE ENCLOSURE'S NEMA TYPE 4X RATING.

FOR USE ON CIRCUITS DELIVERING UP TO 5000 RMS AMPS. CONVIENT Á DES CIRCUITS PRODUCISANT AU PLUS 5000 A EFF.

Before installing a BSPA unit:

1. Verify that the area is clear of any dirt, debris or clutter that may hamper the installation process.
2. Verify that there is enough space to install the BSPA. See Figures 4 and 5 for dimensions.
3. Confirm that the system voltage and wiring configuration is the same as the BSPA you are installing. See Section 7**. Wiring Diagrams**.
4. Check the facility grounding system. All grounding, bonding and earthing must meet the NEC, CEC and any other national, state and local electrical codes.
5. An insulated grounding conductor that is identical in size and insulation material and thickness to the grounded and ungrounded circuit supply conductors, except that it is green with or without one or more yellow stripes, is to be installed as part of the circuit that supplies the BSPA unit.
6. Refer to Table 250-122 of the NEC to select the appropriate grounding conductor size. This grounding conductor is to be grounded to earth at the service equipment or other acceptable building earth ground such as the building frame in the case of a high steel-frame structure.

6.1 Mounting

ALL CONNECTIONS IN THIS PROCEDURE MUST BE MADE IN ACCORDANCE WITH NEC, CEC, STATE, COUNTY AND LOCAL CODES FOR ALL SAFETY RATINGS.

TO ENSURE MAXIMUM EFFECTIVENESS AND PROVIDE THE BEST POSSIBLE PROTECTION FOR SENSITIVE ELECTRICAL EQUIPMENT, MOUNT IN SUCH A WAY AS TO MINIMIZE THE CABLE LENGTH AND ELIMINATE ANY SHARP BENDS IN THE WIRING CONDUIT. SEE FIGURE 2.

WHEN USING CONDUIT, AVOID USING 90° ELBOWS AND KEEP THE CONDUIT RUN AS SHORT AND STRAIGHT AS POSSIBLE. SEE FIGURE 3.

6.2 Panel mounted

The preferred mounting of the BSPA is directly to the electrical panel with its integrated male connector hub and the supplied 3/4" trade-size conduit locknut. Insert the wires through the panel wall being careful not to damage the wire insulation. Install the provided locknut and tighten to 20.3 lb-in (2.3 N•m). If the installation requires the NEMA 4X rating, install the supplied mounting feet to the enclosure and securely mount the unit using #8 flat head screws (not included). Be sure to use the appropriate gasket/liquid-tight fitting (not included) between the unit and the panel wall. Liquid-tight conduit torque should not exceed 200 lb-in (22.5 N•m).

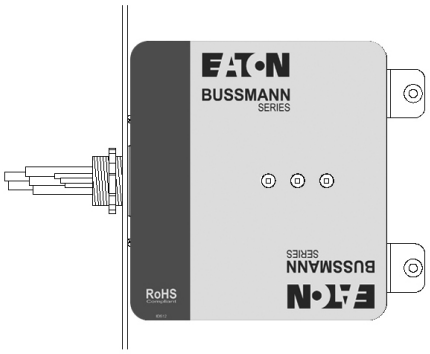


Figure 2. Preferred installation.

6.3 Panel mounted with conduit

In situations where the preferred, direct mounting cannot be employed, optional conduit mounting can be utilized. In this case mount the BSPA as close as possible to the electrical panel using 3/4" trade-size conduit, 3/4" trade-size coupling, 3/4" trade-size connector and the supplied 3/4" trade-size conduit locknut.

Note: To maximize the BSPA's performance, 10 AWG wire length should be less than 14" (35 cm) twisted and bound together.

Attach the conduit coupling, conduit and connector. Then insert the wires through the conduit and through the panel wall, being careful not to damage the wire insulation. Install the provided locknut and tighten to 20.3 lb-in (2.3 N•m). If mounting requires the NEMA 4X rating, install the provided four mounting feet to the enclosure and be sure to use the appropriate gasket/liquid-tight fittings (not included) between the unit and the panel wall. Liquid-tight conduit torque should not exceed 200 lb-in (22.5 N•m).

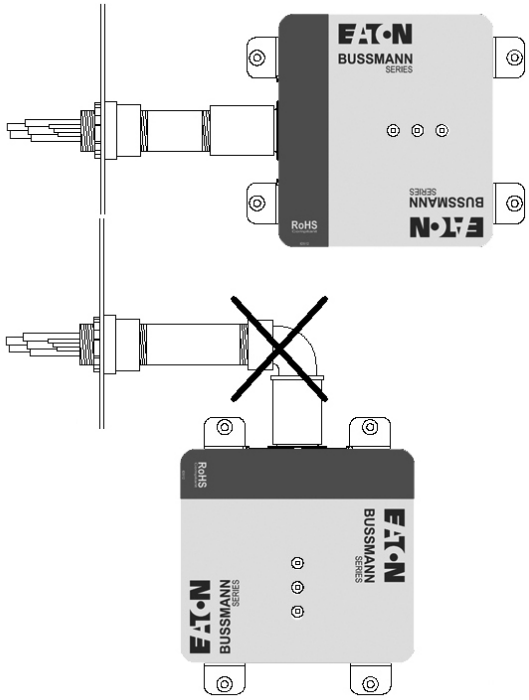


Figure 3. Alternate installation.

When mounting the BSPA outdoors, use the supplied mounting feet, weatherproof conduit and fittings to maintain the enclosure's NEMA 4X rating.

6.4 Enclosure mounting feet and dimensions

The mounting feet attach to the bottom of the enclosure with the provided screws (hardware to mount the feet to wall are not included). See Figures 4 and 5 below.

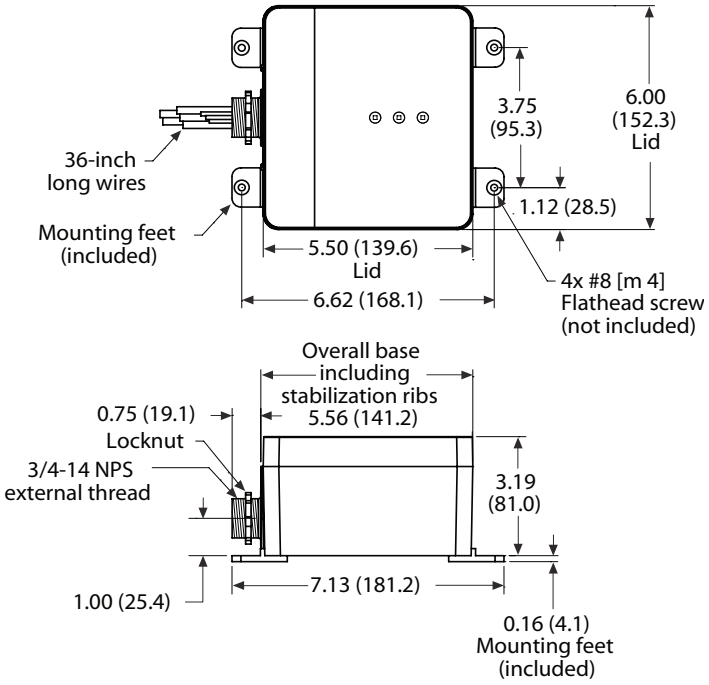


Figure 4. P1 enclosure with mounting feet dimensions.

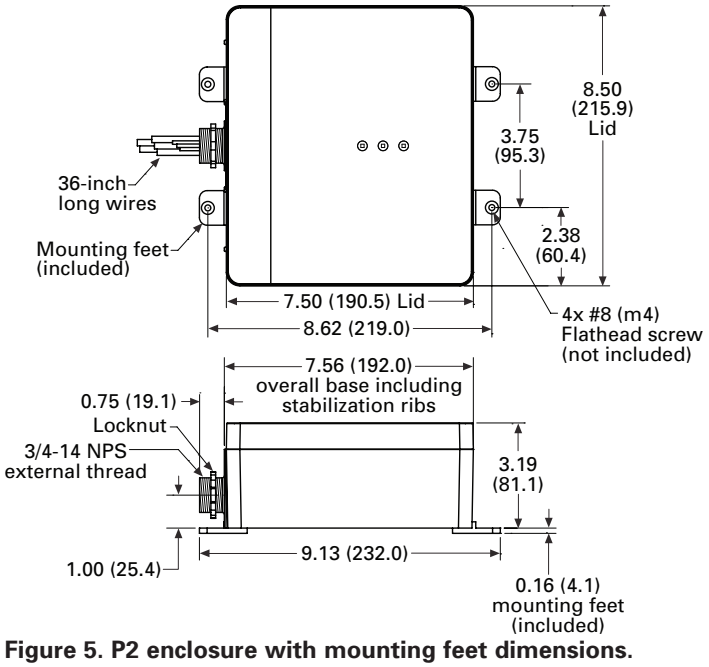


Figure 5. P2 enclosure with mounting feet dimensions.

6.5 Optional flush mount plate and dimensions

Optional flush mount plates are available for both the P1 and P2 enclosure sizes. See Figures 6 and 7 below.

Catalog No. **BSPA-FLUSHPLT1** – P1 enclosure flush mount plate

Catalog No. **BSPA-FLUSHPLT2** – P2 enclosure flush mount plate

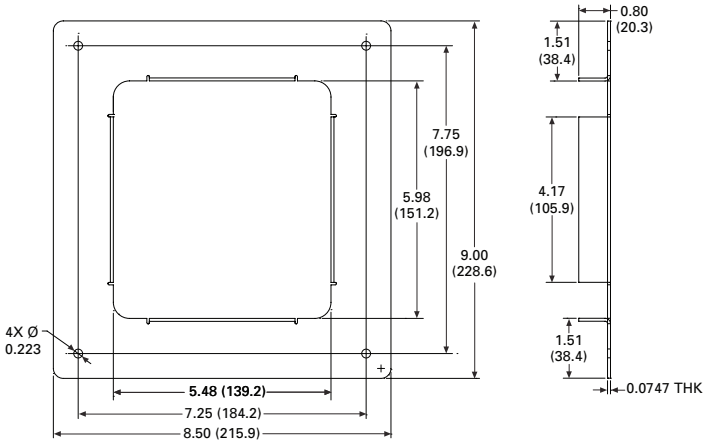


Figure 6. Optional P1 enclosure flush mount plate. Catalog No. BSPA-FLUSHPLT1.

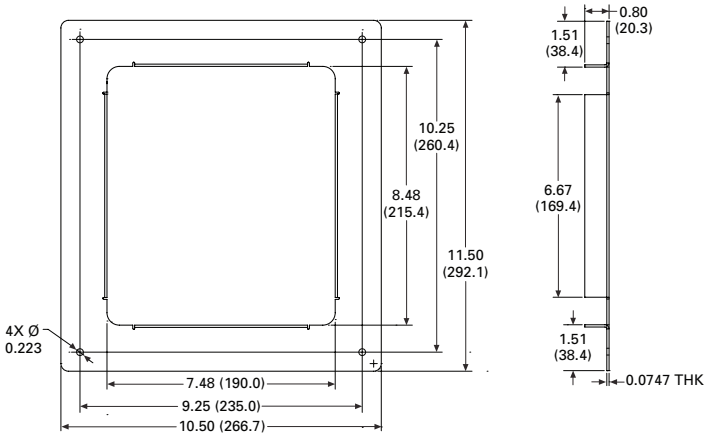


Figure 7. Optional P2 enclosure flush mount plate. Catalog No. BSPA-FLUSHPLT2.

6.6 Wiring installation

IMPROPER WIRING COULD CAUSE DEATH, INJURY AND/OR EQUIPMENT DAMAGE. ONLY LICENSED/QUALIFIED ELECTRICIANS WHO ARE TRAINED IN THE INSTALLATION AND SERVICE OF ELECTRICAL SERVICES ARE TO INSTALL AND SERVICE THIS EQUIPMENT.

TO MAXIMIZE THE SPD'S PERFORMANCE, TWIST AND BIND THE WIRES TOGETHER TO REDUCE THE IMPEDANCE OF THE WIRE.

ARC FLASH DURING INSTALLATION COULD CAUSE INJURY OR DEATH. USE APPROPRIATE SAFETY PRECAUTIONS AND EQUIPMENT FOR ARC FLASH PROTECTION.

Locate the electrical system's applicable wiring schematic in Section **7. Wiring diagrams**.

Turn **OFF** power to the electrical equipment being connected to the BSPA in accordance with NEC, CEC, state, county and local codes for all safety ratings.

The BSPA units covered in this manual are designed with internal overcurrent protection and do not require an external overcurrent protective device (OCPD) unless otherwise required by NEC, UL, and local electrical requirements to protect electrical conductors. NEC Article 310.15 (B) (16) defines the maximum rating of the OCPD required to protect the electrical conductors.

NEC shows 10 AWG conductors at 60°C typically requiring a 1-pole (for single-phase systems), 2-pole (for split-phase systems) or 3-pole (for 3-phase systems) 30 A branch circuit breaker to protect BSPA conductors.

Twist and bind the wires of the BSPA unit tightly together. To optimize BSPA performance, minimize overall lead length. To maximize performance for wire lengths longer than four inches, phase wires should be twisted once for each four inches of wire length.

Note: To maximize the BSPA's performance, 10 AWG wire length should be less than 14" (35cm) twisted and bound together.

If remote monitoring is required, connect the Form C relay contact wiring to an alarm or building monitoring system. These relay contacts are rated 2 A at 30 Vdc/250 Vac

Refer to Table 1 – BSPA Form C wire color codes for color codes of relay wires (shown in the energized state).

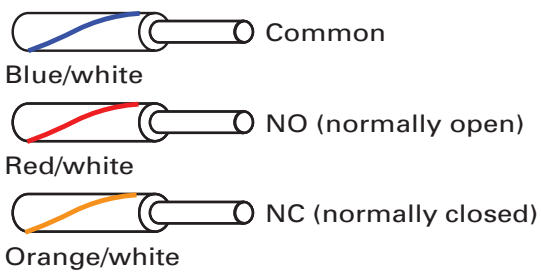
Note: Utilization of Form C contacts is optional. Connecting Form C wires is not required for the proper BSPA operation.

Tighten and recheck all connections and mounting.

Contact	Color coding
COM	Blue/white
NO	Red/white
NC	Orange/white

Table 1. BSPA Form C wire color code.

Form C Contact relay wire color codes



7. Wiring diagrams

Phase wire	Color code
L1 (Phase A)	Black
L2 (Phase B)	Black
L3 (Phase C)	Black
Neutral	White
Ground / protected earth	Green with yellow stripe

Table 2. BSPA phase wire color codes.

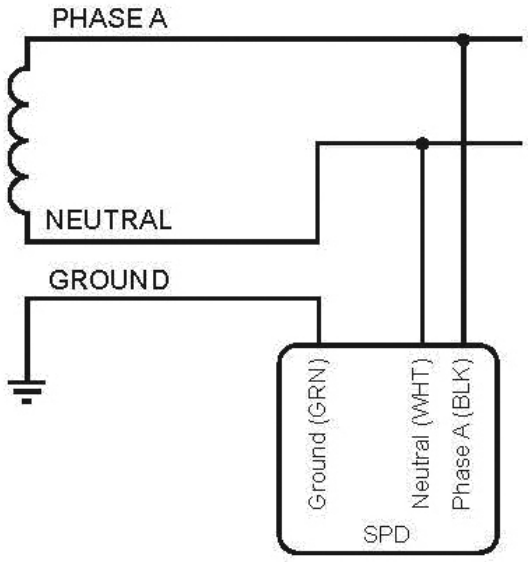


Figure 8. Single-phase (2W+G).

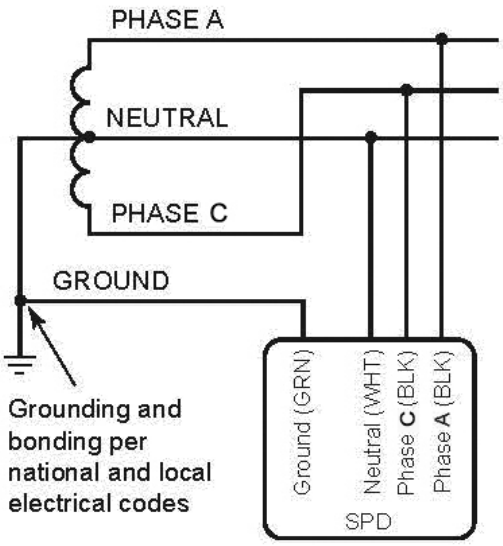


Figure 9. Split-phase (3W+G).

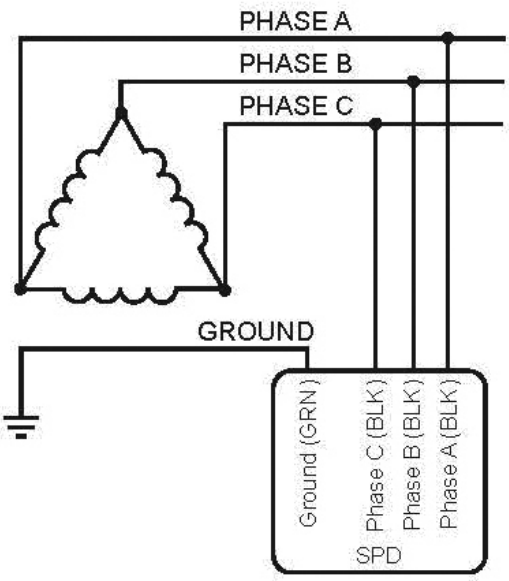


Figure 10. Three-phase Delta (3W+G).

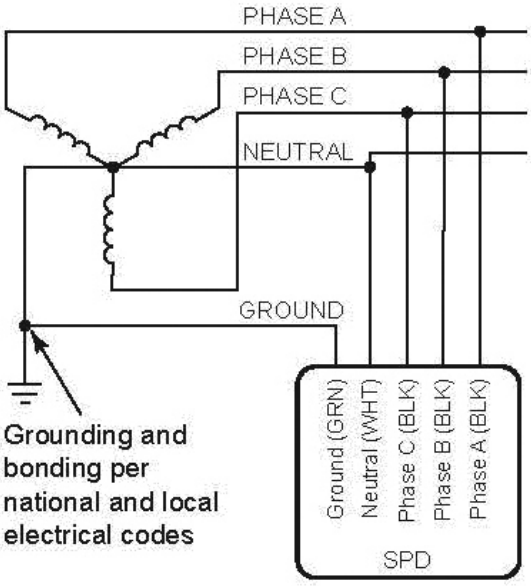


Figure 11. Three-phase Wye (4W+G).

8. Operation

8.1 Power up and system checkout

Switch main panel power to **ON** and then switch BSPA's branch circuit breaker to **ON**. One LED should light for each phase voltage being protected. Single-phase electrical systems will light only one LED, split-phase systems light two LEDs, and three-phase systems will light all three LEDs.

If the connected LEDs do not light, remove power, re-check connections, and test again. If the LEDs still do not light, contact your local authorized Bussmann series product distributor or Bussmann series product representative, as the SPD may be damaged.

8.2 LED color states

The LEDs located on the BSPA have three LED color states:

Green – fully protected

Yellow – loss of Neutral-to-Ground protection

Red – loss of phase protection

If the electrical system is single-, split- or 3-phase, the BSPA will have either one, two or three LEDs illuminated green, respectively. Each LED will illuminate when its associated phase voltage is present.

If any of these LEDs are yellow or red, a problem may exist with incoming power, wiring, branch circuit breaker wiring or within the BSPA itself. Disconnect power, check connections and test again. If the LEDs are still yellow or red, disconnect power to the BSPA and contact your local authorized Bussmann series product distributor or Bussmann series product representative, as the SPD may be damaged.

8.3 Options: audible alarm and Form C relay

Note: Using Form C contacts is optional. Connection is not required for the proper BSPA operation.

The audible alarm and Form C relay are tied to the phase LEDs on the BSPA enclosure. If protection to one or more phases is lost, the following will occur:

- Single-, split- and 3-phase devices - If all voltage is lost to the BSPA, the green LED(s) will go out, the alarm will not sound and the relay will not be energized
- Split- and 3-phase devices - If voltage to one phase is lost to the BSPA, that one green LED will go out, the alarm will not sound and the relay will stay energized (if there is another phase voltage present)
- 3-phase Wye devices - If voltage to one or two phases is lost to the BSPA, one or two green LEDs will go out, the alarm will not sound and the relay will stay energized (if there is another phase voltage present)
- 3-phase Delta – BSPA needs at least 2 phases to energize the relay and to keep the alarm from sounding (if installed)
- Single-, split- and 3-phase devices - If one or more LEDs turn red, the alarm will sound and the relay will de-energize. To silence the alarm, disconnect power to the BSPA and contact your authorized Bussmann series product distributor or Bussmann series product representative, as the SPD may be damaged.

Note: Form C relay contacts are "fail safe" and only change state when power is applied to the BSPA and the electrical system is operating normally or when loss of protection is detected and yellow or red LEDs are illuminated.

9. Specifications

kA per phase	50, 100, 150, 200	
Nominal discharge current	20 kA	
Single-phase voltages	120, 240	
Split-phase voltages	120/240	
Wye system voltages	120/208, 240/415, 277/480, 347/600	
Delta system voltages	240, 480, 600	
Input power frequency	50/60 Hz	
Protection modes	Single-phase	L-N, N-G, L-G
	Split-phase	L-N, N-G, L-G, L-L
	Wye	L-N, N-G, L-G, L-L
	Delta	L-G, L-L
Mounting feet torque rating	20.3 lb-in (2.3 N•m)	
Conduit locknut torque rating	Not to exceed 200 lb-in (22.5 N•m)	
Operating temperature	-40°F to +140°F (-40°C to +60°C)	
Relative humidity	5% - 95%, non condensing	
Max. altitude	2000 m	
Weight, vary per configuration	P1 enclosure ~2.5 lbs P2 enclosure ~4.0 lbs	
Agency information	UL 1449 4th Edition, UL1283 6th Edition, CSA 269.1-14, 269.2-15, C22.2 No. 8-13 EMI filter	
SPD type	UL 1449 4th Edition and CSA Type 1 and Type 2 SPD	
RoHS compliant	Yes	
Enclosure rating	NEMA 4X, IP65 with mounting feet	

10. Maintenance

The BSPA is a self-contained device that requires no maintenance and contains no serviceable parts. If any LED turns red or yellow, the unit has lost surge protection and must be replaced. Please contact your local authorized Bussmann series product distributor or Bussmann series product representative, as the BSPA may be under warranty.

11. Liability

This instruction manual is published solely for information purposes and should not be considered all-inclusive. If further information is required, you should consult Application Engineering 7:00 a.m. — 5:00 p.m. Central time, Monday-Friday or email FuseTech@eaton.com. Sale of the product shown in this manual is subject to terms and conditions outlined in appropriate Bussmann Division selling policies or other contractual agreements between the parties. This manual is not intended to and does not enlarge or add to any such contract. The sole source governing the rights and remedies of any purchaser of this equipment is the contract between the purchaser and the Bussmann Division.

NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, OR WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE, ARE MADE REGARDING THE INFORMATION, RECOMMENDATIONS AND DESCRIPTIONS CONTAINED HEREIN.

In no event will the Bussmann Division be responsible to the purchaser or user in contract, in tort (including negligence), strict liability or otherwise for any special, indirect, incidental or consequential damage or loss whatsoever, including but not limited to damage or loss of equipment use, plant or power system, cost of capital, loss of power, additional expenses in the use of existing power facilities or claims against the purchaser or user by its customers resulting from the use of the information, recommendations and description contained herein.

12. Catalog number system

The catalog numbering system permits specifying any combination to meet requirements.

BSPA 200 208Y 8 P

BSPA = Product family

Surge rating per phase

- 050 = 50 kA per phase
- 100 = 100 kA per phase
- 150 = 150 kA per phase
- 200 = 200 kA per phase

Voltage/system code

- 120N = 120 V single-phase (2W +G)
- 240N = 240 V single-phase (2W +G)
- 240S = 120/240 V split-phase (3W +G)
- 240D = 240 V Delta (3W + G)
- 480D = 480 V Delta (3W + G)
- 600D = 600 V Delta (3W + G)
- 208Y = 120/208 V Wye (4W + G)
- 415Y = 240/415 V Wye (4W + G)
- 480Y = 277/480 V Wye (4W + G)
- 600Y = 347/600 V Wye (4W + G)

Options

- 1 = No options (standard configuration), Type 1
- 4 = Form C relay, Type 1
- 5 = Audible alarm and Form C relay, Type 1
- 7 = EMI filtering and Form C relay, Type 2
- 8 = EMI filtering, audible alarm and Form C relay, Type 2

NEMA enclosure

- P = NEMA 4X

13. Voltage configurations per enclosure size

P1 enclosure		P2 enclosure	
120N/240N	50 – 200 kA	600D	50 – 200 kA
240S	50 – 100 kA	240S	120 – 200 kA
208Y/415Y/ 480Y/600Y		208Y/415Y/ 480Y/600Y	
240D/480D		240D/480D	

14. Warranty

The BSPA is warranted to be free from defects in both workmanship and materials for a period of ten years from the date of delivery to the purchaser.

The Bussmann Division assumes no risk or liability for results of the use of the product purchased, including but not limiting the generality of the foregoing:

(1) The use in combination with any electrical or electronic components, circuits, systems, assemblies or any other materials or substances.

(2) Unsuitability of any product for use in any circuit or assembly.

Purchaser's rights under the warranty shall consist solely of requiring the Bussmann Division to repair, or at the Bussmann Division's sole discretion, replace, free of charge, F.O.B. factory, any defective items received at said factory within said term determined by the Bussmann Division to be defective. The giving of or failure to give any advice or recommendations by the Bussmann Division shall not constitute any warranty by or impose any liability upon the Bussmann Division AND IS IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED, IMPLIED OR STATUTORY AS TO THE MERCHANTABILITY, FITNESS FOR PURPOSE SOLD, PRODUCTIVENESS OR ANY OTHER MATTER. In no event shall the Bussmann Division be liable for special or consequential damages or for delay in performance of the warranty.

This warranty does not apply if the unit has been misused, abused, altered, tampered with, or applied in excess of the specifications other than those written on the nameplate. At the end of the warranty period the Bussmann Division shall be under no further warranty obligation expressed or implied.

The Bussmann series BSPA covered by this warranty certificate can only be repaired or replaced by the factory. A RETURN MATERIAL AUTHORIZATION (RMA) number must be obtained. Please enter a Vista warranty claim by contacting your local authorized Bussmann series product distributor or sales representative for help entering a claim or to obtain an update on your claim status. Repair or replacement will be returned collect. If it is determined that the returned product contains manufacturer's defects then the Bussmann Division will replace the defective product at the Bussmann Division's expense (including shipping charge).

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
Eaton.com

Bussmann Division
114 Old State Road
Ellisville, MO 63021
United States
Eaton.com/bussmannseries

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