# Installation instructions for Eaton RSPF series surge protective device (SPD)



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# **NOTICE**

PRODUCT IMPROVEMENTS AND ENHANCEMENTS ARE CONTINUOUS; THEREFORE THE SPECIFICATIONS AND INFORMATION CONTAINED IN THIS DOCUMENT MAY CHANGE WITHOUT NOTICE.

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#### 1 Introduction

#### 1.1 Manual introduction

This installation manual describes the installation and operation of the Eaton RSPF series Surge Protective Device (SPD). This technical document covers most aspects of installation and operation. This document is a guide only for licensed/qualified electricians. If you require further information regarding a particular installation, application, or maintenance activity, please contact your Eaton 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 local, state, and national regulations, as well as 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 Eaton RSPF series SPD 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 to ground through thermally protected metal oxide varistors while supporting power frequency voltage. Proper installation is critical to ensure the SPD operates as intended.

The Eaton RSPF series SPD was designed and developed to fit in the space of an Eaton FD-Frame molded case circuit breaker for retrofit into existing panelboards or switchboards with space or provisions for an additional FD-Frame molded case circuit breaker.

This device features internal protection that will disconnect the surge protective component under fault conditions but will maintain power to the load, now unprotected from surge events.

The Eaton RSPF series SPD is available in voltage ratings from 208 Vac to 600 Vac and surge current ratings of 50 kA and 100 kA. The enclosure measures 6.00" x 4.125" x 3.807" (152.40 mm x 104.775 mm x 96.6978 mm) with a maximum weight of  $\sim\!\!3$  lbs ( $\sim\!\!1.36$  kg).

The Eaton RSPF series is available in nine options, see Section 10, Ordering Guidelines for more details.

#### 1.3 Safety precautions

#### **⚠ WARNINGS**

WARNING – SHOCK HAZARD – DO NOT OPEN. AVERTISSEMENT: RISQUE DE DECHARGE. ELECTRIQUE – 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 ELECTRIC 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 FRONT OF THE SPD TO VERIFY THAT THE ELECTRICAL SYSTEM'S VOLTAGE ARE THE SAME AS THE SPD.

CONDUCTING DIELECTRIC, MEGGAR, OR HIPOTENTIAL 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 INSTRUCTION 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.

ALWAYS VERIFY THAT NO VOLTAGE IS PRESENT BEFORE PROCEEDING WITH THE TASK AND ALWAYS FOLLOW ALL SAFETY PROCEDURES.

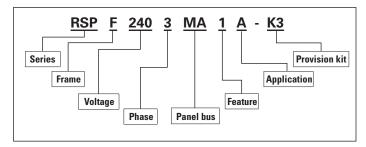
UL 1449

4th Edition

# 2 RSPF series catalog number

Each Eaton RSPF series SPD is identified by a catalog number, see example in Table 1. The catalog number identifies the parameters that make up the unit.

Table 1. Catalog numbering system.



For example, an RSPF series SPD with a catalog number of RSPF2403MA1A-K3, where:

**RSP** = RSP series;

**F** = Surge frame;

240 = Voltage code;

3 = Number of phases;

MA = Type and current rating of panel;

1 = Feature package;

A = Application;

**K3** = Optional panelboard provision kit.

See Section 10 - Ordering guidelines for additional voltages, features, and service options.

# 3 RSPF series product nameplate

Each Eaton RSPF series SPD has a product nameplate affixed to the front of the unit that identifies the catalog number and operating parameters. The catalog number consists of letters and numbers which identify the RSPF series, surge frame, voltage code, number of phases, panel bus rating, feature package, and application as shown in Figure 1

Catalog#: RSPF2403MA1A Date Code: T171209

S/N: 123456

Sys. Voltage: 120/208,127/220, 240Vac SCCR: 200kA In: 20kA Sys. Freq: 50/60 Hz

MCOV Rating: 300V L-N, 300V L-L, 300V L-G

VPR: 900V L-N, 900V L-L, 900V L-G

Enclosure: Indoor Use Only Contains no serviceable parts. Suitable for use on a circuit capable of delivering not more than 200,000 RMS symmetrical amperes, 240V maximum. Convient aux circuits non susceptibles de delivrer plus de 200,000 amperes symetriques eff., maximum 240V.

Figure 1. RSPF series product nameplate.

#### 4 Installation

# **⚠ WARNING**

A LICENSED/QUALIFIED ELECTRICIAN MUST COMPLETE ALL INSTRUCTIONS IN THIS MANUAL IN ACCORDANCE WITH THE NATIONAL ELECTRIC 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 FRONT OF THE SPD TO VERIFY THAT THE ELECTRICAL SYSTEM'S VOLTAGE AND WIRING CONFIGURATION ARE THE SAME AS THE SPD.

FOR USE ON CIRCUITS DELIVERING UP TO 200,000 RMS AMPS.

CONVIENT Á DES CIRCUITS PRODUCISANT AU PLUS 200,000 A EFF.

BEFORE MOUNTING THE SPD IN AN ELECTRICAL SYSTEM MAKE SURE THERE IS NO VOLTAGE PRESENT WHERE WORK IS TO BE PERFORMED. VOLTAGES IN ENERGIZED EQUIPMENT CAN CAUSE INJURY OR DEATH.

#### 4.1 Pre-installation checklist

- Does the panelboard have a 3-pole FD frame breaker space available?
- Does the panelboard have a panel with an opening that will allow the front of a RSPF series SPD to protrude through after installation?
- Does the panelboard have 3-pole FD frame phase connectors?
- If the answer is 'Yes' to all three previously listed statements, then the RSPF catalog number will **NOT** require an optional provision kit. If the answer is 'No' to any of the three previous statements, then an optional provision kit '- K3' or '- K4' will need to be included in the RSPF catalog number.
- Select a space to the mount the SPD as close to the incoming power terminations as possible for optimum performance.
- Confirm that the system voltage is the same as the RSPF sSeries SPD that you are installing.
- Check the facility grounding system. All grounding, bonding, and earthing must meet the NEC, CEC, and any other national, state and local electrical codes.
- The installation consists of mounting and verifying the SPD's connections and torque settings on the line side provision bus and the surge ground terminal.
- Check to ensure the area is clear of dirt, debris, or clutter that may hamper the installation.

#### 4.2 Warning

#### ⚠ WARNING

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

DO NOT EXCEED CONNECTOR/BUS CAPACITY IN EATON PRL3A AND PRL4 PANELS.

IMPROPER INSTALLATION 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.

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

# 4.3 Mounting

- Locate the electrical system's applicable block diagram in Section
   Wiring diagrams.
- Turn OFF power to the electrical panel that the SPD is being connected to in accordance with NEC, CEC, state, county, and local codes for all safety ratings.
- 3. Confirm no voltage is present before continuing.
- 4. Remove the panelboard's trim/door to assist with installation.
- 5. Remove the four panel mounting screws where the SPD will be mounted. Then remove the black plastic fillers where the SPD will be located. If the existing panel has no openings and is being replaced with a new panel from a connector kit then discard/recycle the old panel (see Figure 2).



Figure 2. Remove panel.

- Remove any accessories that could impede the removable of the rails and panels such as breaker padlockable handles and/or interlocks
- 7. Remove the four silver rail mounting screws located in the four corners shown below to remove the remaining panels and rails as one complete assembly. Caution: Support the assembly while removing it from the panelboard. Save the hardware to re-install the assembly after installation of the SPD (see Figure 3).

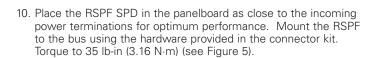




Figure 5. SPD installed - terminal side.

- 11. The RSPF series SPD's surge ground terminal can be wired to either the ground bar or the neutral bar whichever bar is closest to the SPD.
  - A When wiring to the ground bar, preferred method, use a green or green with yellow stripe #10 AWG insulated conductor. Keep the wire length as short as possible. Torque the surge ground terminal screw to 35 lb-in (3.16 N·m) (see Figure 6).
  - B When wiring to the neutral bar use a white #10 AWG insulated conductor. Keep the wire length as short as possible. Torque the surge ground terminal screw to 35 lb-in (3.16 N·m).



Figure 6. SPD installed - surge ground terminal.

- 12. After the SPD has been installed, check all mounting hardware, line terminal hardware, and the surge ground terminal for correct torque loading.
- 13. Re-install the rails and panel assembly using the four silver rail screws. Torque the hardware according to the manufacturer's specifications.
- 14. Re-install any breaker interlocks or accessories.
- 15. Mount the panel over the SPD.
- 16. Apply the "Protected by Eaton Surge Protective Device (SPD) Catalog No. RSPFxxxxxxxxx" label to the left or right of the SPD (see Figure 7).



Figure 3. Remove panel and rails.

- 8. If installing a new PRL3 or PRL4 provision kit, do so now following the instructions provided (see Appendix A).
- 9. View of a panelboard PRL3a with panels and rails removed showing the phase connectors installed just above the FD frame breaker (see Figure 4).



Figure 4. PRL3a with connector kit installed.



Figure 7. Apply label provided with SPD.

17. Replace the panelboard's trim/door.

# 4.4 Wiring diagrams

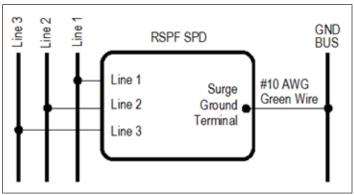


Figure 8. Surge ground terminal connected to the ground bus.

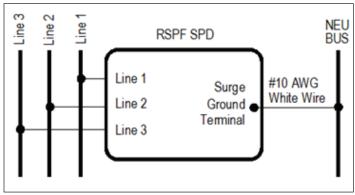


Figure 9. Surge ground terminal connected to the neutral bus.

# 5 Operation

### 5.1 Power up and system checkout

Switch main panel power to ON. The green LED should light to indicate the phase voltage is being monitored.

If the red LED lights, remove power and contact the EatonCare Technical Resource Center at: 1-800-809-2772, Option 4, sub-option 2, as the SPD may be damaged.

If neither LED lights, remove power, check connections, and test again. Verify that the proper voltage is present. If the panel is energized properly and the LEDs still do not light, contact EatonCare Technical Resource Center at: 1-800-809-2772, Option 4, sub-option 2, as the SPD may be damaged.

### 5.2 Alarm silence pushbutton

The RSPF SPD has an alarm silence pushbutton located below the red LED on the front to the SPD. The alarm will sound when the red LED indicates that the SPD has lost one or more phases of protection. To silence the alarm after loss of protection press and hold the alarm silence pushbutton for at least 1 second. If the alarm silence pushbutton does not silence the alarm, contact EatonCare Technical Resource Center at: 1-800-809-2772, Option 4, sub-option 2, as the SPD may be damaged.

# 6 Specifications

Nominal discharge current (In)   20 kA	kA per phase	50 (on units with filtering), 100
A80 = 220/380Y, 230/400Y, 240/415Y, 277/480Y, 480D	Nominal discharge current (In)	20 kA
277/480Y, 480D	System voltages	240 = 120/208Y, 127/220Y, 240D
SCCR         200 kA           Input power frequency         50/60 Hz           Protection modes         Wye L-N, L-L           Delta L-G, L-L         Delta L-G, L-L           Operating temperature         -40°F to +140°F (-40°C to +60°C)           Relative humidity         5% - 95%, non condensing           Max. altitude         6561 ft (2000 m)           Weight         -3 lbs (~1.36 kg)           Certification/listing         UL 1449 4th edition, CSA 269.1-17, 269.2-17, C22.2 No. 8-13 EMI Filter, Tested to UL1283 6th edition           SPD type         UL1449 4th edition & CSA type 1 and type 2 SPD           RoHS compliant         Yes           Enclosure         Indoor use only           Designed and tested in accordance with the most recent version of these standards:         IEEE C62.41.1           IEEE C62.41.2         IEEE C62.45           IEEE C62.48         IEEE C62.48		
Input power frequency		600 = 347/600Y, 600D
Protection modes  Wye L-N, L-L  Delta L-G, L-L  Operating temperature  -40°F to +140°F (-40°C to +60°C)  Relative humidity  5% - 95%, non condensing  Max. altitude  6561 ft (2000 m)  Weight  -3 lbs (~1.36 kg)  Certification/listing  UL 1449 4th edition, CSA 269.1-17,  269.2-17, C22.2 No. 8-13 EMI Filter,  Tested to UL1283 6th edition  SPD type  UL1449 4th edition & CSA type 1 and type 2 SPD  RoHS compliant  Yes  Enclosure  Designed and tested in accordance with the most recent version of these standards:  IEEE C62.41.1  IEEE C62.41.2  IEEE C62.48	SCCR	200 kA
Delta L-G, L-L	Input power frequency	50/60 Hz
Operating temperature         -40°F to +140°F (-40°C to +60°C)           Relative humidity         5% - 95%, non condensing           Max. altitude         6561 ft (2000 m)           Weight         -3 lbs (~1.36 kg)           Certification/listing         UL 1449 4th edition, CSA 269.1-17,           269.2-17, C22.2 No. 8-13 EMI Filter,         Tested to UL1283 6th edition           SPD type         UL1449 4th edition & CSA type 1 and type 2 SPD           RoHS compliant         Yes           Enclosure         Indoor use only           Designed and tested in accordance with the most recent version of these standards:         IEEE C62.41.1           IEEE C62.43         IEEE C62.45           IEEE C62.48         IEEE C62.48	Protection modes	Wye L-N, L-L
Relative humidity 5% - 95%, non condensing  Max. altitude 6561 ft (2000 m)  Weight -3 lbs (~1.36 kg)  Certification/listing UL 1449 4th edition, CSA 269.1-17,  269.2-17, C22.2 No. 8-13 EMI Filter,  Tested to UL1283 6th edition  SPD type UL1449 4th edition & CSA type 1 and type 2 SPD  RoHS compliant Yes  Enclosure Indoor use only  Designed and tested in accordance with the most recent version of these standards:  IEEE C62.41.1  IEEE C62.41.2  IEEE C62.45  IEEE C62.48		Delta L-G, L-L
Max. altitude         6561 ft (2000 m)           Weight         ~3 lbs (~1.36 kg)           Certification/listing         UL 1449 4th edition, CSA 269.1-17, 269.2-17, C22.2 No. 8-13 EMI Filter, Tested to UL1283 6th edition           SPD type         UL1449 4th edition & CSA type 1 and type 2 SPD           RoHS compliant         Yes           Enclosure         Indoor use only           Designed and tested in accordance with the most recent version of these standards:         IEEE C62.41.1           IEEE C62.43         IEEE C62.45           IEEE C62.48         IEEE C62.48	Operating temperature	-40°F to +140°F (-40°C to +60°C)
Weight -3 lbs (-1.36 kg)  Certification/listing UL 1449 4th edition, CSA 269.1-17, 269.2-17, C22.2 No. 8-13 EMI Filter, Tested to UL1283 6th edition  SPD type UL1449 4th edition & CSA type 1 and type 2 SPD  RoHS compliant Yes  Enclosure Indoor use only  Designed and tested in accordance with the most recent version of these standards:  IEEE C62.41.1  IEEE C62.43  IEEE C62.45  IEEE C62.48	Relative humidity	5% - 95%, non condensing
Certification/listing  UL 1449 4th edition, CSA 269.1-17, 269.2-17, C22.2 No. 8-13 EMI Filter, Tested to UL1283 6th edition  SPD type  UL1449 4th edition & CSA type 1 and type 2 SPD  RoHS compliant  Yes  Enclosure  Indoor use only  Designed and tested in accordance with the most recent version of these standards:  IEEE C62.41.1  IEEE C62.43  IEEE C62.45  IEEE C62.48	Max. altitude	6561 ft (2000 m)
269.2-17, C22.2 No. 8-13 EMI Filter, Tested to UL1283 6th edition  SPD type  UL1449 4th edition & CSA type 1 and type 2 SPD  RoHS compliant  Finclosure  Indoor use only  Designed and tested in accordance with the most recent version of these standards:  IEEE C62.41.1  IEEE C62.43  IEEE C62.45  IEEE C62.48	Weight	~3 lbs (~1.36 kg)
Tested to UL1283 6th edition  SPD type  UL1449 4th edition & CSA type 1 and type 2 SPD  RoHS compliant  Yes  Enclosure  Indoor use only  Designed and tested in accordance with the most recent version of these standards:  IEEE C62.41.1  IEEE C62.43  IEEE C62.45  IEEE C62.48	Certification/listing	UL 1449 4th edition, CSA 269.1-17,
SPD type  UL1449 4th edition & CSA type 1 and type 2 SPD  RoHS compliant  Yes  Enclosure  Indoor use only  Designed and tested in accordance with the most recent version of these standards:  IEEE C62.41.1  IEEE C62.43  IEEE C62.45  IEEE C62.48		269.2-17, C22.2 No. 8-13 EMI Filter,
RoHS compliant  Enclosure  Designed and tested in accordance with the most recent version of these standards:    EEE C62.41.1     EEE C62.41.2     EEE C62.43     EEE C62.45     EEE C62.48		Tested to UL1283 6th edition
Enclosure Indoor use only  Designed and tested in accordance with the most recent version of these standards:    IEEE C62.41.1     IEEE C62.41.2     IEEE C62.43     IEEE C62.45     IEEE C62.48	SPD type	
Designed and tested in accordance with the most recent version of these standards:    IEEE C62.41.1     IEEE C62.41.2     IEEE C62.43     IEEE C62.45     IEEE C62.48	RoHS compliant	Yes
with the most recent version of these standards:    IEEE C62.41.2     IEEE C62.43     IEEE C62.45     IEEE C62.48	Enclosure	Indoor use only
EEE C62.41.2   IEEE C62.43   IEEE C62.45   IEEE C62.48		IEEE C62.41.1
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IEEE C62.48		IEEE C62.43
<u></u>		IEEE C62.45
IEEE C62.62		IEEE C62.48
		IEEE C62.62

#### 7 Maintenance

The RSPF series SPD is a self-contained device that requires no maintenance and contains no serviceable parts. If the red LED is illuminated the unit has lost one or more modes of surge protection and must be replaced. Please contact your local authorized distributor or EatonCare Technical Resource Center at: 1-800-809-2772, Option 4, sub-option 2 for additional information and technical assistance, as the SPD may be under warranty.

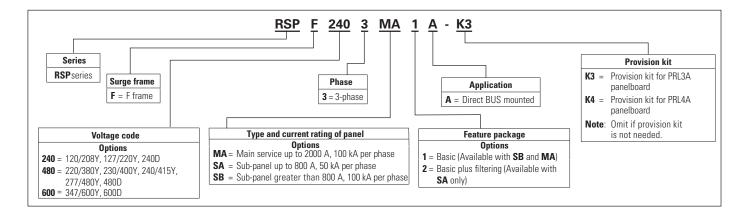
## 8 Liability

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# 9 Ordering guidelines



#### 10 Reference

Provision kits contain phase connectors, deadfront cover, filler covers, hardware, and instruction sheet. Contact the EatonCare Technical Resource Center at: 1-800-809-2772, Option 4, suboption 2, to order the appropriate connector kit listed below for the intended installation.

The following references are available at www.eaton.com

- Current Eaton panelboards Renewal parts RP01400001E
- Eaton renewal parts data Panelboard renewal rarts supplement RP01414001E
- Vintage Cutler-Hammer panelboards and switchboards Renewal parts RP01400003E
- Vintage Westinghouse panelboards Renewal parts RP01400002E

# 11 Warranty

Eaton warrants the RSPF series SPD to be free from defects in both workmanship and materials for a period of 2 years from shipment. To register the product, go to www.eaton.com/RSP and click on the warranty registration icon.

Eaton 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 Eaton to repair, or at Eaton's sole discretion, replace, free of charge, F.O.B. factory, any defective items received at said factory within said term determined by Eaton to be defective. The giving of or failure to give any advice or recommendations by Eaton shall not constitute any warranty by or impose any liability upon Eaton 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 Eaton 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 Eaton shall be under no further warranty obligation expressed or implied.

The Eaton RSPF series SPD 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 or contact CORE (Center of Returns Excellence) at 1-800-410-2910 for help with 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 Eaton will replace the defective product at Eaton's expense (including shipping charge.

# **Appendix A**

#### PRL3 provision kit

# INSTALLATION INSTRUCTIONS F-FRAME BREAKERS, 3 POLE, INTO A PRL3a PANELBOARD

DANGER: HAZARDOUS VOLTAGES WILL CAUSE SEVERE INJURY OR DEATH. TURN OFF ALL POWER SUPPLYING THE PANELBOARD BEFORE INSTALLING OR REMOVING THE SWITCH OR CONNECTORS.

WARNING: THESE INSTRUCTIONS ONLY FOR USE WITH A THREE PHASE PANELBOARD AND THE FOLLOWING TYPE BREAKERS: EHD, FD, HFD, FDB,

AND FDC.

PARTS INCLUDED			
ITEM #	DESCRIPTION	QTY	
1	A & C Phase Connector	2	
2	B Phase Connector	1	
3	B Phase Isolator	2	
4	8-32 X 1-3/4" Hex Square Recessed Head Screw	4	
5	1/4-20 X 7/8" Hex Square Recessed Head Screw	3	
6	10-32 X 9/16" Hex Square Recessed Head Screw	6	
7	Deadfront Cover	1	
8	Filler Cover	3	
12	Instruction Sheet	1	
13	10-32 X 1/2" Hex Square Recessed Head Screw	4	

Note: Torque all hardware. (See Fig. 4)

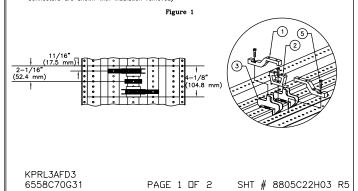
1. Use a tester to be sure that no voltage is present on the panelboard.

2. Remove trim. Using the overall height of the breaker assy as 4-1/8" (104.8 mm), determine where the breaker assembly will be mounted on the panel. Remove deadfront assembly.

3. If two breakers are being mounted at this time, remove all insulation from ends of A & C Phase

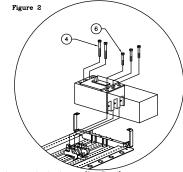
<u>WARNING:</u> IF ONLY ONE BREAKER WILL BE MOUNTED AT THIS TIME, REMOVE <u>ONLY</u> THAT PART OF THE INSULATION NECESSARY TO MOUNT THE ONE BREAKER. <u>DO NOT</u> REMOVE THE INSULATION FROM THE SIDE OF THE CONNECTORS WHERE NO BREAKER IS MOUNTED. THIS INSULATION IS REQUIRED FOR CLEARANCE IF NO BREAKER IS PRESENT.

4. Place one B Phase Isolator on B phase of chassis bus; tabs of the isolators fit into holes in bus. Using 1/4-20 X 7/8" Hex Square Recessed Head Screw, secure one A & C Phase Connector to A phase of chassis bus. Connector will hold isolator in place. Repeat for C phase. Secure B Phase Connector to bus using one 1/4-20 X 7/8" Hex Square Recessed Head Screw. (See Fig. 1.— Connectors are shown with insulation removed)



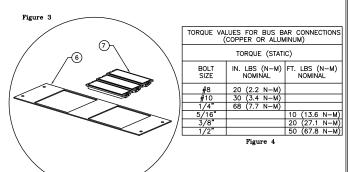
5. Torque all connectors. (See Fig. 4)

6. Using the 8-32 X 1-3/4" Hex Recessed Head Screws, mount breaker(s) to rail(s). (See Fig. 2) Using the 10-32 X 9/16" Hex Recessed Head Screws, secure breaker(s) to Phase Connectors.



7. Torque breaker to connector hardware.

8. If only one breaker is being installed, install Filler Covers to Deadfront Cover. (See Fig. 3)



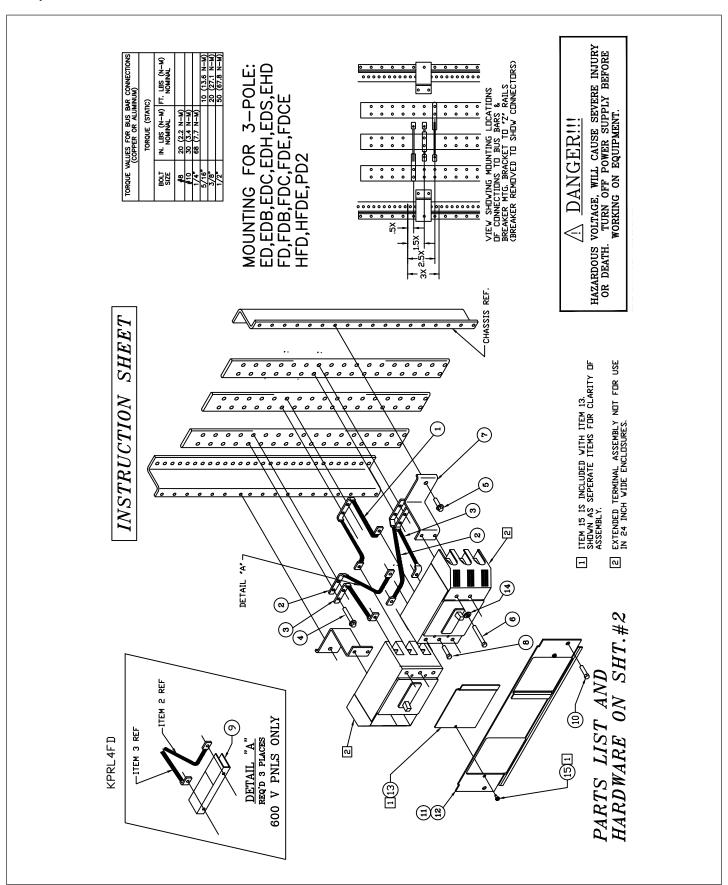
9. Install load cables to newly installed breakers.

9. Replace deadfront assembly. Install new deadfront cover using the four 10-32 X 1/2" Hex Square Recessed Head Screws.

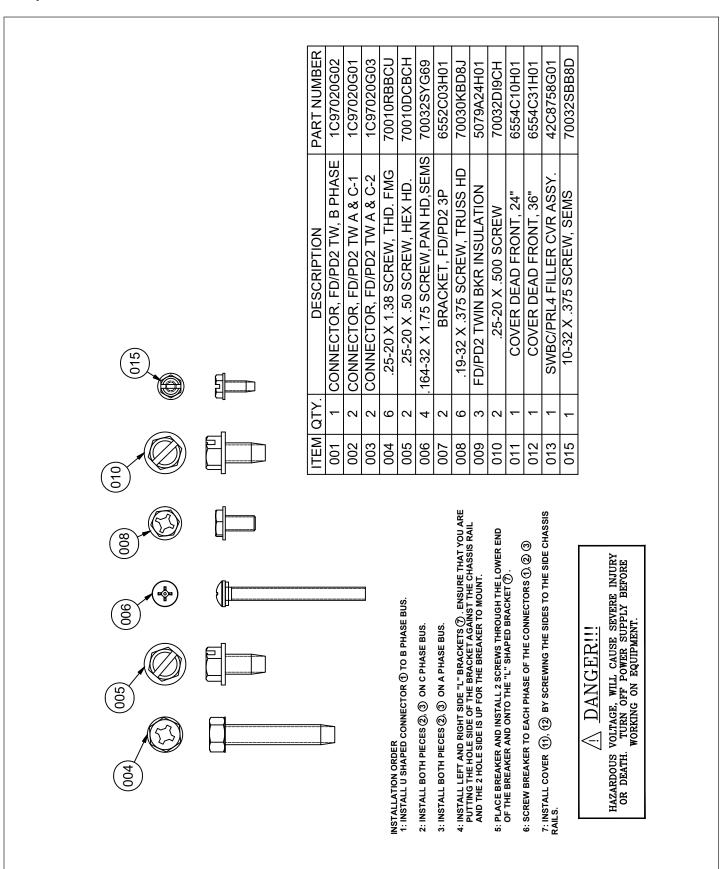
10. BE SURE THAT ALL TOOLS AND ANY OTHER LOOSE ITEMS ARE REMOVED FROM THE PANELBOARD BEFORE REPLACING THE TRIM AND TURNING ON THE POWER.

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# PRL4 provision kit 1 of 2



#### PRL4 provision kit 2 of 2



For additional information please call: Eaton's Power Quality Technical Support 1-800-809-2772 Option 4, sub-option 2.

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