

Charles Breaker/Relay Installation Kit

97-MP1310INSTKT

General Description and Installation

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1. GENERAL INTRODUCTION

1.1. Document Purpose

This document provides general information for the 97-MP1310INSTKT Breaker/Relay Installation Kit. Figure 1 shows the kit components. Hardware is not shown.

-NOTE-
Hereafter, the 97-MP1310INSTKT Breaker/Relay Installation Kit will be referred to as the "kit."

1.2. Product Purpose

The kit includes two 20A breakers and two SPDT relays, as well as mounting provisions to mount the kit on a backplane in a cabinet.

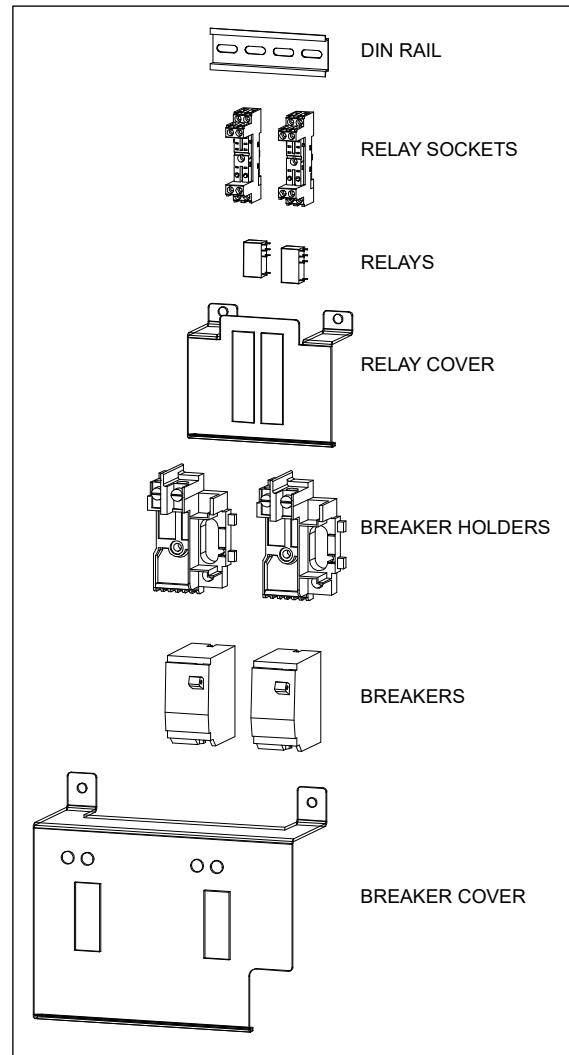


Figure 1 Kit Components

2. INSTALLATION

2.1. Inspecting the Product

The kit is shipped in a carton. Unpack the unit, and dispose of the packaging material.

-INSPECTION NOTE-

Visually inspect the unit for damages prior to installation. If the equipment was damaged in transit, immediately report the extent of the damage to the transportation company.

2.2. Following and Using Safety Precautions

Read the following site and safety tips, cautions, and warnings, then proceed with the paragraphs that follow.

- For installation, follow all National Electrical Codes (NEC) ANSI/NFPA 70, local, environmental, workplace, and company codes, safety procedures, and practices.
- Minimum spacing between the accessories and components and the housing for ITE equipment shall be maintained for safe operation of the equipment when installed in accordance with NEC ANSI/NFPA 70.
- Read all instructions, warnings and cautions on the equipment and in the documentation shipped with the product.
- Always connect ground connections first.
- Do not place this product on weak or unstable surfaces which may allow the product to fall, resulting in potentially serious damage(s) to persons or product.
- Only authorized trained personnel shall install the kit.

2.3. Obtaining Tools and Equipment

Obtain the following recommended or needed items for installing the kit.

- Protective and/or insulated work gloves
- Safety glasses
- Tape measure
- Marking utensil
- Drill with 0.125” bit
- Phillips screwdriver
- Torque wrench
- Level

2.4. Mounting the Kit

Mount the kit on a backplane inside an enclosure suitable for electrical equipment. Prior to installing the kit, drill mounting holes in the backplane as directed. Then install the kit components using the included hardware.

2.4.1. Torque Requirements

Torque all hardware as shown below (unless otherwise noted). These values apply to SAE Grade 1 & 2 Low Carbon Steel, ASTM A307 Low Carbon Steel, and Stainless Steel Grade 18-8.

Thread Size	In-lbs	Ft-lbs
4-40	4±10%	
6-32	8±10%	
8-32	16±10%	
10-32	26±10%	
12-24	50±10%	
1/4-20/M6	60±5%	5±5%
5/16-18	125±5%	10.4±5%
3/8-16	180±5%	15.0±5%
1/2-13	500±2%	41.7±2%
5/8-11	1000±1%	83.3±1%

2.4.2. Prepare the Backplane

Drill pilot mounting holes in the backplane as shown in Figure 2. Use a 0.125" bit.

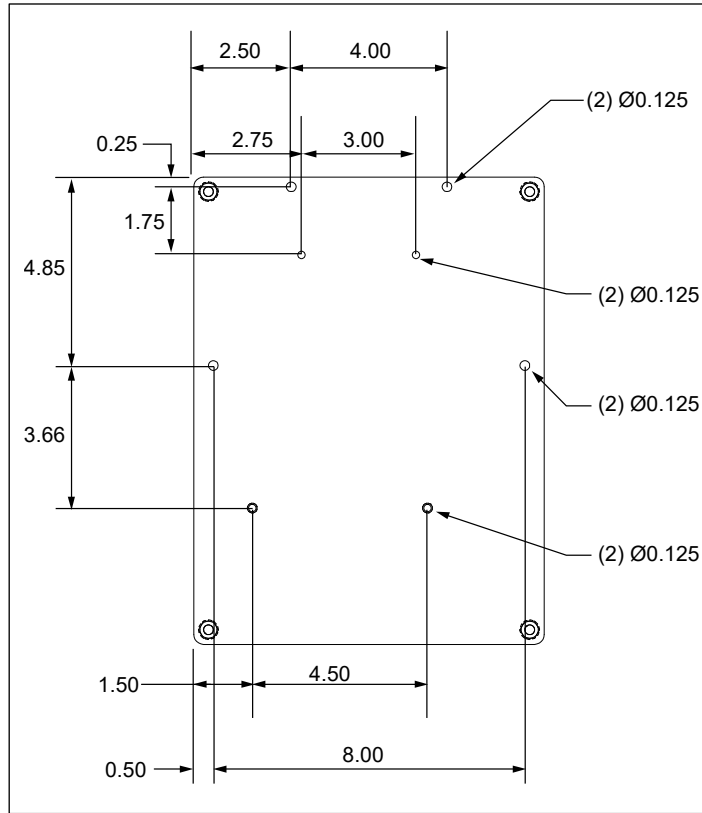


Figure 2 Mounting Hole Dimensions (in inches)

2.4.3. Install Kit Components

1. Install the breaker holders using the two 10-12 (3/4" long) Philips screws (one per breaker cover, Figure 3).
2. Push the breakers into the breaker holders until they snap into place (Figure 4).

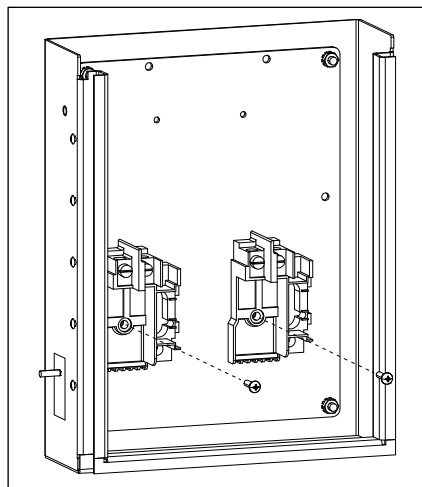


Figure 3 Breaker Holders

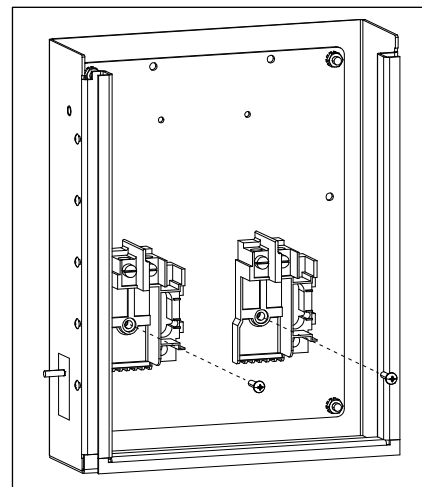


Figure 4 Breakers

3. Install the DIN rail using two 10-12 (1/2" long) Philips screws with washers (Figure 5).
4. Install the relays into the relay sockets, then snap the relay sockets onto the DIN rail (Figure 5).
5. Install the covers over the breakers and relays using 10-12 (1/2" long) Philips screws with washers (two per cover, Figure 6).

The complete assembly is shown in Figure 7.

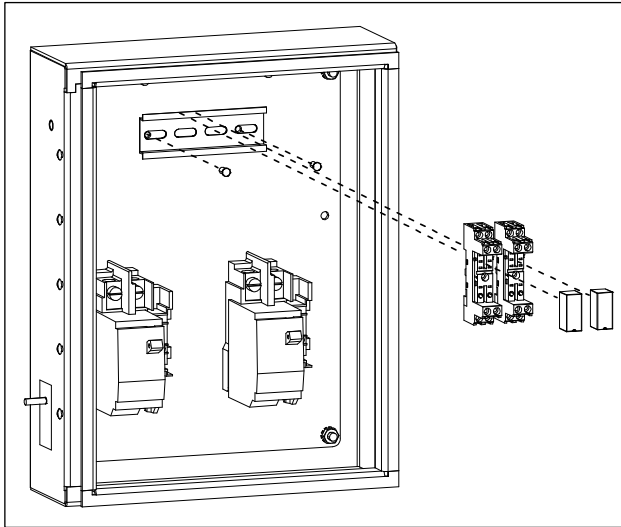


Figure 5 Relays

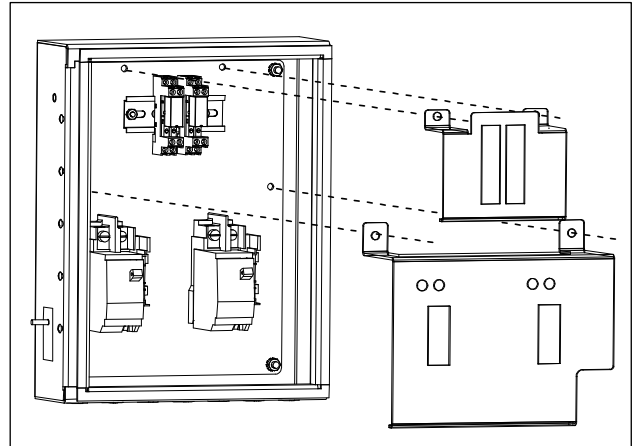


Figure 6 Covers

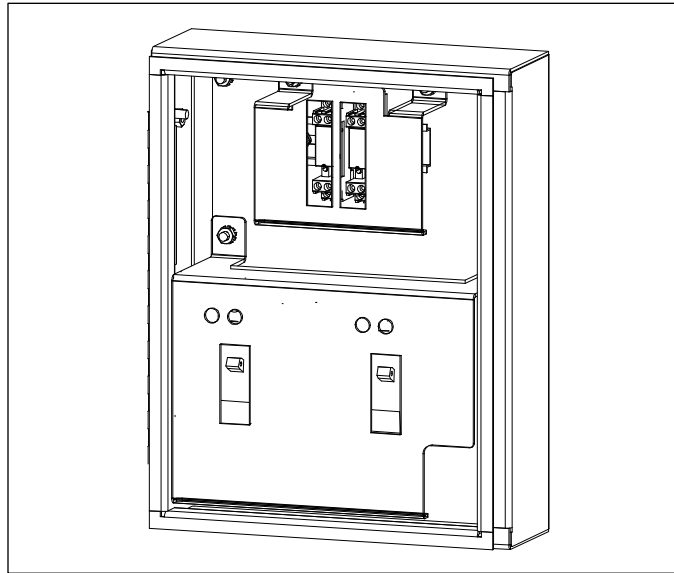


Figure 7 Complete Assembly

3. TECHNICAL ASSISTANCE AND REPAIR SERVICE

For questions on product repair or if technical assistance is required, contact Charles Technical Support.

847-806-8500

techserv@charlesindustries.com (email)

<http://www.charlesindustries.com/techserv.htm>

4. WARRANTY & CUSTOMER SERVICE

Charles Industries LLC offers a one-year warranty on the kit product. The Charles warranty is limited to the operation of the kit hardware as described in this documentation and does not cover equipment that may be integrated by a third party. The terms and conditions applicable to any specific sale of product shall be defined in the resulting sales contract. For questions on warranty or other customer service assistance, contact your Charles Customer Service Representative.

847-806-6300

mktserv@charlesindustries.com (email)

http://www.charlesindustries.com/main/telecom_sales_support.htm

5. SPECIFICATIONS

Electrical	
Relays	230VAC, SPDT, ABB 1SVR405600R3000
Relay Sockets	ABB 1SVR40560R1000
Breakers	20A, Square D QO220C

Table 1 Kit Specifications