



**ADB**  
Airfield Solutions

Service Bulletin

# ADB Constant Current Regulator Circuit Breaker Replacement Kit

ALN174, Rev. A, 6/24/16

DISCLAIMER / WARRANTY

## A.0 Disclaimer / Standard Warranty

### A.1 CE certification

The equipment listed as CE certified means that the product complies with the essential requirements concerning safety and hygiene. The directives that have been taken into consideration in the design are available on written request to ADB.

### A.2 ETL certification

The equipment listed as ETL certified means that the product complies with the essential requirements concerning safety and FAA Airfield regulations. The directives that have been taken into consideration in the design are available on written request to ADB.

### A.3 LED Product Guarantee

Where applicable, per FAA EB67 (applicable edition), ADB L858(L) Airfield Guidance Signs are warranted against electrical defects in design or manufacture of the LED or LED specific circuitry for a period of 4 years. ADB LED light fixtures (with the exception of obstruction lighting) are warranted against mechanical and physical defects in design or manufacture for a period of 12 months from date of installation; and are warranted against electrical defects in design or manufacture of the LED or LED specific circuitry for a period of 4 years per FAA EB67 (applicable edition).

**NOTE:** See your sales order contract for a complete warranty description. In some specific cases, deviations are (to be) accepted in the contract, which will supersede the standard warranty.

### A.4 Standard Product Guarantee

Products of ADB manufacture are guaranteed against mechanical, electrical, and physical defects (excluding lamps) which may occur during proper and normal use for a period of one year from the date of installation or 2 years from date of shipment and are guaranteed to be merchantable and fit for the ordinary purposes for which such products are made. ADB L858 Airfield Guidance Signs are warranted against mechanical and physical defects in design or manufacture for a period of 2 years from date of installation per FAA AC 150/5345-44 (applicable edition).

**NOTE:** See your sales order contract for a complete warranty description.

### A.5 All Products

LED Products of ADB, manufactured and sold by ADB or its licensed representatives, meets the corresponding requirements of FAA, ICAO and IEC.

ADB will correct by repair or replacement per the applicable guarantee above, at its option, equipment or parts which fail because of mechanical, electrical or physical defects, provided that the goods have been properly handled and stored prior to installation, properly installed and properly operated after installation, and provided further that Buyer gives ADB Airfield Solutions written notice of such defects after delivery of the goods to Buyer. Refer to the Safety section for more information on Material Handling Precautions and Storage precautions that must be followed.

ADB reserves the right to examine goods upon which a claim is made. Said goods must be presented in the same condition as when the defect therein was discovered. ADB Airfield Solutions further reserves the right to require the return of such goods to establish any claim.

ADB's obligation under this guarantee is limited to making repair or replacement within a reasonable time after receipt of such written notice and does not include any other costs such as the cost of removal of defective part, installation of repaired product, labor or consequential damages of any kind, the exclusive remedy being to require such new parts to be furnished.

ADB's liability under no circumstances will exceed the contract price of goods claimed to be defective. Any returns under this guarantee are to be on a transportation charges prepaid basis. For products not manufactured by, but sold by ADB Airfield Solutions, warranty is limited to that extended by the original manufacturer.

This is ADB's sole guarantee and warranty with respect to the goods; there are no express warranties or warranties of fitness for any particular purpose or any implied warranties of fitness for any particular purpose or any implied warranties other than those made expressly herein. All such warranties being expressly disclaimed.

## A.6 Liability



### WARNING

Use of the equipment in ways other than described in the catalogue leaflet and the manual may result in personal injury, death, or property and equipment damage. Use this equipment only as described in the manual.

ADB cannot be held responsible for injuries or damages resulting from non-standard, unintended uses of its equipment. The equipment is designed and intended only for the purpose described in the manual. Uses not described in the manual are considered unintended uses and may result in serious personal injury, death or property damage.

Unintended uses includes the following actions:

- Making changes to equipment that have not been recommended or described in this manual or using parts that are not genuine ADB replacement parts or accessories.
- Failing to make sure that auxiliary equipment complies with approval agency requirements, local codes, and all applicable safety standards if not in contradiction with the general rules.
- Using materials or auxiliary equipment that are inappropriate or incompatible with your ADB equipment.
- Allowing unskilled personnel to perform any task on or with the equipment.

DISCLAIMER / WARRANTY

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# 1.0 Circuit Breaker Kit 94A0712

Description: Provides users with the steps necessary to replace the CCR fuses holders with a circuit breaker on the effected regulators or step necessary to replace the power pack circuit breaker.

## 1.1 Record of changes

Page	Rev	Description	Date
All	A	Released service bulletin	6/21/16

## 1.2 Kit Introduction

### 1.2.1 Parts Supplied

One of the following Circuit Breakers and lugs: Table 1 is for the stand alone CCR models and table 2 is for the power pack SGRS models.

**Table 1: Constant Current Regulators**

Regulator Size (kW)	Input Volts	Kit Number 94A0713/XXX	Circuit Breaker	Lug for input	Qty
25 - 30	480	94A0713/110	57A0103/110	72A0396	2
25 - 30	347	94A0713/125	57A0103/125		
30	240	94A0568/210	57A0095/210		
30	220	94A0568/225	57A0095/225		
30	208	94A0568/250	57A0095/250		
20	480	94A0713/70	57A0103/070		
20	347	94A0713/100	57A0103/100		
20	240	94A0713/125	57A0103/125		
20	220	94A0713/125	57A0103/125		
20	208	94A0568/175	57A0095/175		
15	480	94A0713/60	57A0103/060		
15	347	94A0713/80	57A0103/080		
15	240	94A0713/110	57A0103/110		
15	220	94A0713/125	57A0103/125		
15	208	94A0713/125	57A0103/125		
10	480	94A0713/40	57A0103/040		
10	347	94A0713/50	57A0103/050		
10	240	94A0713/80	57A0103/080		
10	220	94A0713/80	57A0103/080		
10	208	94A0713/90	57A0103/090		
7.5	480	94A0713/30	57A0103/030		
7.5	347	94A0713/40	57A0103/040		
7.5	240	94A0713/60	57A0103/060		
7.5	220	94A0713/60	57A0103/060		
7.5	208	94A0713/70	57A0103/070		
2.5 - 4	480	94A0713/15	57A0103/015		
2.5 - 4	347	94A0713/20	57A0103/020		
2.5 - 4	240	94A0713/30	57A0103/030		
2.5 - 4	220	94A0713/30	57A0103/030		

Kit Introduction

**Table 2: SGRS Power Pack Regulators**


Regulator Size (kW)	Input Volts	Kit Number 94A0713/XXX	Circuit Breaker	Lug for input	Qty
30	600	94A0712/080	57A0103/080	72A0396	2
30	480	94A0712/100	57A0103/100		
30	380	94A0712/125	57A0103/030		
25	600	94A0712/070	57A0103/070		
25	480	94A0712/080	57A0103/080		
25	380	94A0712/100	57A0103/100		
20	600	94A0712/060	57A0103/060		
20	480	94A0712/070	57A0103/070		
20	380	94A0712/080	57A0103/080		
15	600	94A0712/040	57A0103/040		
15	480	94A0712/060	57A0103/060		
15	380	94A0712/060	57A0103/060		
10	600	94A0712/030	57A0103/030		
10	480	94A0712/040	57A0103/040		
10	380	94A0712/040	57A0103/040		
7.5	600	94A0712/020	57A0103/020		
7.5	480	94A0712/030	57A0103/030		
7.5	380	94A0712/030	57A0103/030		
2.5 - 5	600	94A0712/020	57A0103/020		
2.5 - 5	480	94A0712/020	57A0103/020		
2.5 - 5	380	94A0712/020	57A0103/020		

**1.2.2 Tools Required**

- #2 flat head screw driver
- 1/2" socket and socket wrench
- Marker or, pen and paper
- Drill bit #36
- Tap 6-32

**1.2.3 CCR 2.5 - 30 kW**

The purpose of the following is to provide instructions to replace the existing fuses with a circuit breaker.



## WARNING

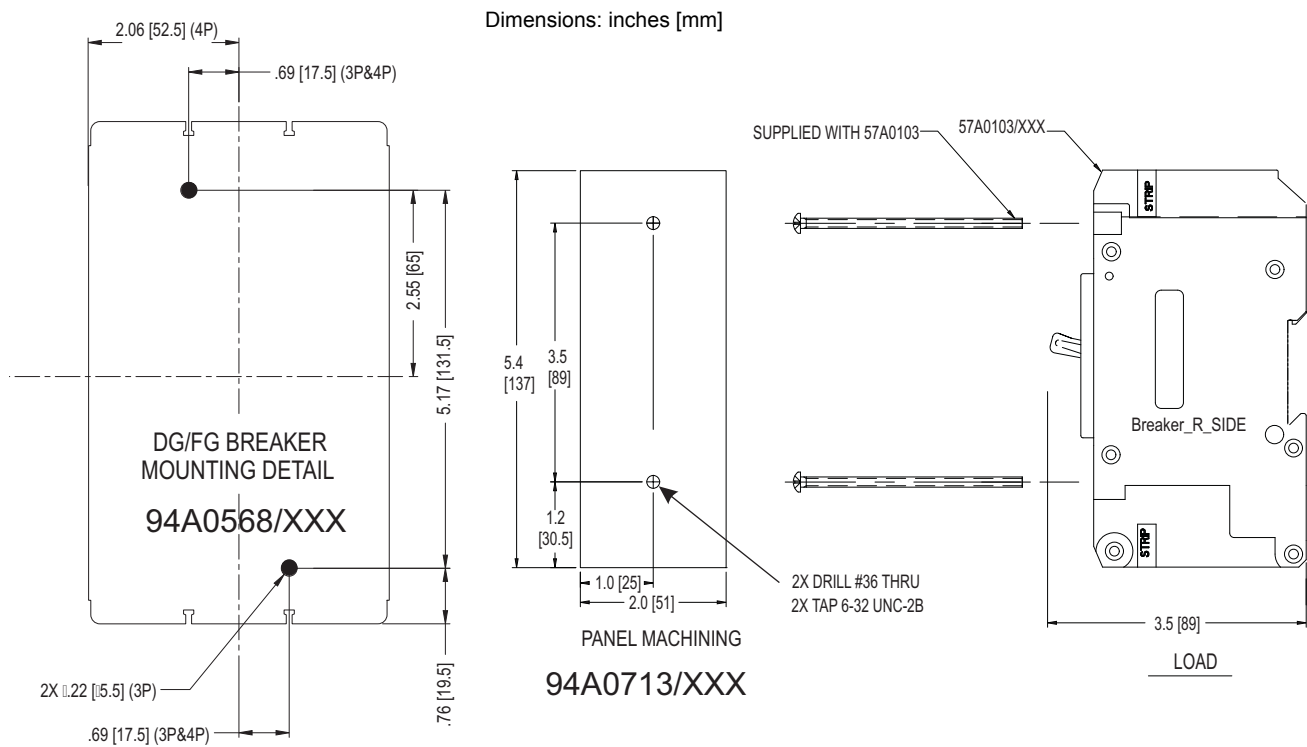
Read installation instructions in their entirety before starting installation.

- Become familiar with the general safety instructions in this section of the manual before installing, operating, maintaining or repairing this equipment.
- Read and carefully follow the instructions throughout this manual for performing specific tasks and working with specific equipment.
- Follow all applicable safety procedures required by your company, industry standards and government or other regulatory agencies.
- Protect components from damage, wear, and harsh environment conditions.
- Protect equipment with safety devices as specified by applicable safety regulations.
- If safety devices must be removed for installation, install them immediately after the work is completed and check them for proper functioning prior to returning power to the circuit.

**Failure to follow these warnings may result in serious injury or equipment damage.**

1. Follow all local lock out and tag out precautions prior to attempting the installation of the retro fit power pack circuit breaker.
2. Turn off power to the regulator and follow lock-out tag-out procedures.

**Figure 1: Circuit Breaker Mounting for Kits 94A0713/XXX and 94A0568/XXX**



3. Remove the two input fuses marked F1 and F2.
4. Take note of the wiring connections for F1 and F2. Disconnect the wires from the input fuse holders. Remove the fuse holders.
5. Mark the panel for drilling the two holes as shown in Figure 1.  
**NOTE:** Make certain there is nothing behind the area to be drilled.
6. Drill the two circuit breaker holes in the panel. Tap for 6-32.
7. Attach the circuit breaker. Connect the LINE and LOAD side wires.
8. Clean the work area and panel of debris.
9. At this point the regulator is ready to be returned to service.

Kit Introduction

### 1.2.4 SGRS Power Pack Field Installation

The purpose of the following is to provide instructions to replace the existing circuit breaker with a new circuit breaker and lugs.



## WARNING

Read installation instructions in their entirety before starting installation.

- Become familiar with the general safety instructions in this section of the manual before installing, operating, maintaining or repairing this equipment.
- Read and carefully follow the instructions throughout this manual for performing specific tasks and working with specific equipment.
- Follow all applicable safety procedures required by your company, industry standards and government or other regulatory agencies.
- Protect equipment with safety devices as specified by applicable safety regulations.
- If safety devices must be removed for installation, install them immediately after the work is completed and check them for proper functioning prior to returning power to the circuit.

**Failure to follow these warnings may result in serious injury or equipment damage.**

#### Step 1

1. Follow all local lock out and tag out precautions prior to attempting the installation of the retro fit power pack circuit breaker.
2. Pull the power pack regulator into the “maintenance” position. Pull the side rail locking pin, pull the power pack out a short distance to the maintenance position, then reinstall the locking pin. Refer to the manual 96A0303 for further details.
3. Before removing the old circuit breaker, measure and record DIMENSION 1 as shown in Figure 2 or mark the bolt locations on the circuit breaker mounting angles.
4. The new breaker enclosure will need to be set to this position.

#### Step 2

5. Measure and record the offset of the front of the interlock bracket to the front of the circuit breaker housing angle. Record DIMENSION 2 as shown in Figure 2.

**NOTE:** Mark the placement of the interlock bracket at the same location on the new circuit breaker enclosure. Failure to do this will require adjustments to get the interlock to work properly.

6. Remove the interlock bracket. Leave the switch attached to the bracket along with the wires attached to the switch.

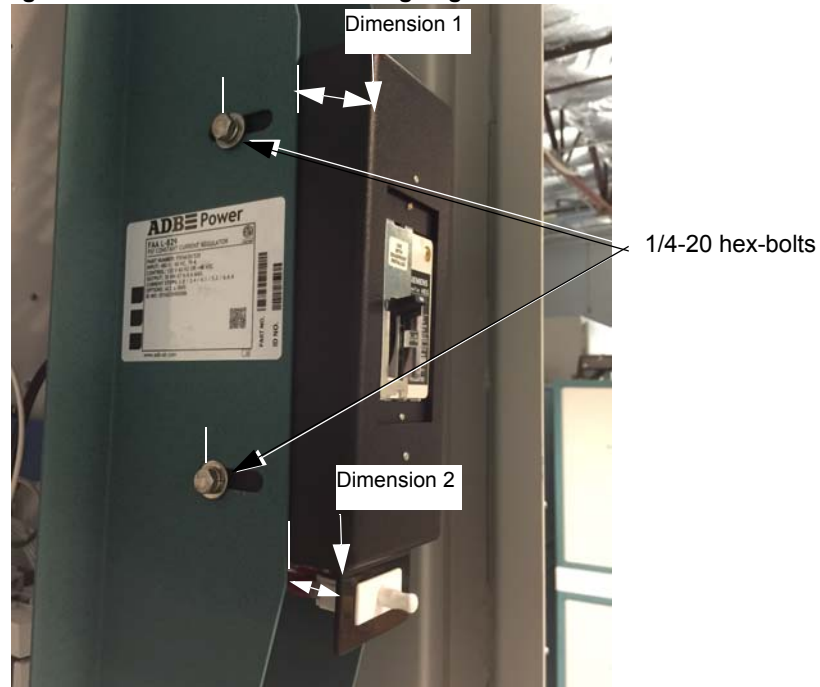
**NOTE:** Retain the 8-32 hardware to install the interlock switch and bracket onto the new circuit breaker enclosure.



**Step 3**

- Remove the 1/4-20 (4) hex-bolts that mount the circuit breaker enclosure to the circuit breaker housing angles. See Figure 2.

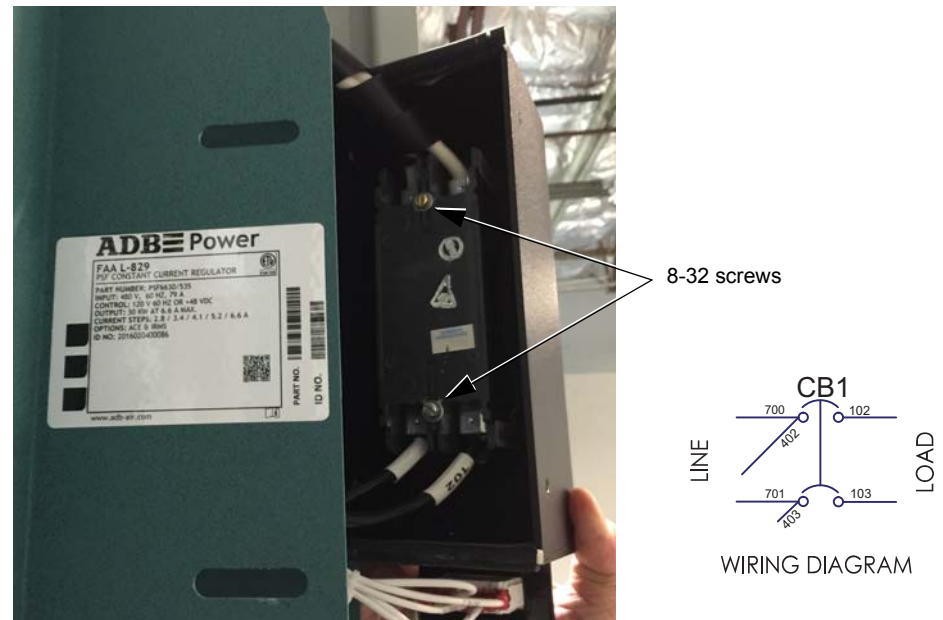
**Figure 2: Circuit breaker housing angle**



**Step 4**

- Remove the circuit breaker from the enclosure by removing the 8-32 screws shown on Figure 3.

**Figure 3: Rear of circuit breaker housing with the circuit breaker installed**



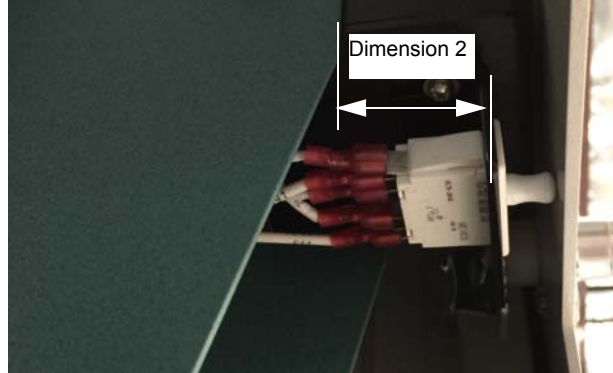
**NOTE:** This will allow the Line and Load connections and the varistor connections to be removed from the circuit breaker.

- Disconnect the Line and Load connections making note of positions for reconnection later.

**Step 5**

10. Assemble the new circuit breaker and enclosure in the reverse order.
11. Remove the new circuit breaker from the new enclosure. Retain the 6-32 screws for later.
12. Connect the wires as shown in Figure 3 as earlier noted.
13. Connect the circuit breaker to the housing angles. Adjust the position using DIMENSION 1.
14. Connect the interlock switch bracket. Adjust to position using DIMENSION 2.  
**NOTE:** Adjust the door front and interlock if necessary. See Figure 4.

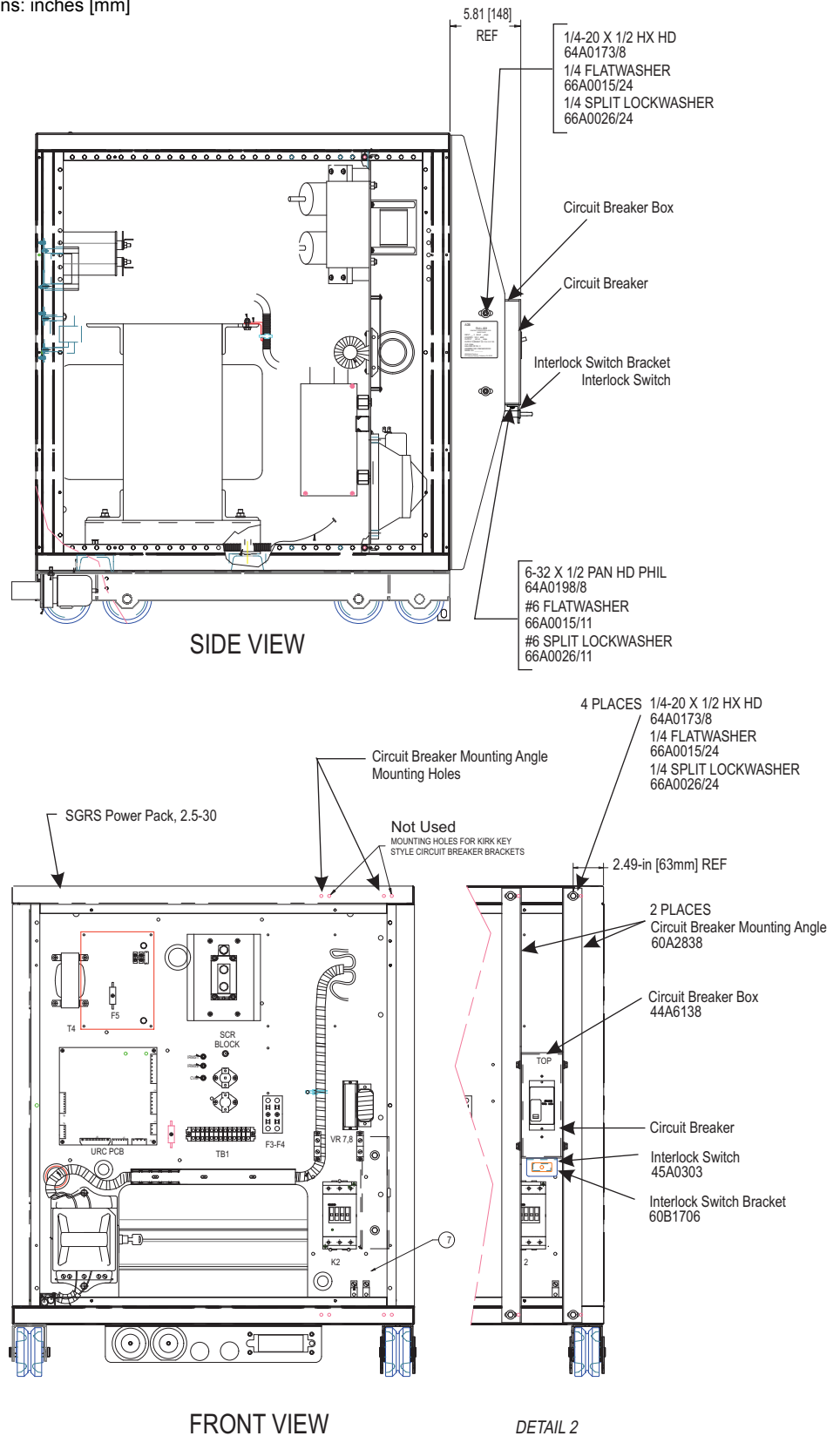
**Figure 4: Interlock Switch Assembly**



15. Pull the side rail locking pin, push the power pack in to the seated position, then reinstall the locking pin.
16. When the door is closed there should be an audible CLICK if the interlock switch is positioned correctly.
17. At this point the regulator is ready to be returned to service.

**Figure 5: 2.5 - 30 kW Power Pack Assembly**

Dimensions: inches [mm]







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