

**Note:** Pin Header Assemblies Must Be Seated One At a Time

| SEATING TOOL ASSEMBLY | PIN HEADER ASSEMBLY SIZE |
|-----------------------|--------------------------|
| 1901530-1             | 6 × 6                    |
| 1901540-1             | 4 × 4                    |

Figure 1

## 1. INTRODUCTION

The seating tool assemblies listed in Figure 1 are used to seat a Z-PACK TINMAN Orthogonal pin header assemblies (reference part number 1469786-1) for double-sided application. These pin header assemblies have compliant pin press-fit contacts to allow solderless pc board installation.

One application requires two seating tool assemblies.

### NOTE



*Dimensions in this instruction sheet are in metric units [with U.S. customary units in brackets]. Figures are not drawn to scale.*

## 2. DESCRIPTION

Each seating tool assembly consists of a holder, 4 or 8 insert plates, and two roll pins. The roll pins hold the insert plates in place. See Figure 1.

The holder provides a surface to accept the force applied by the application tool to seat the pin header assembly onto the pc board. During seating, one seating tool assembly sits inside the pin header assembly and the insert plates prevent the contacts from pushing out of the pin header assembly. Another seating tool assembly is used as a support for the pc board and to protect the pc board and pin header assembly from damage.

Reasons for reissue of this instruction sheet are provided in Section 8, REVISION SUMMARY.

### 3. REQUIREMENTS

Power for the seating tool assembly must be provided by an application tool (with a ram) capable of supplying a downward force of 44.5 N [10 lb] per contact. For available application tools, call PRODUCT INFORMATION at the number at the bottom of page 1.

#### CAUTION



Over-driving of the pin header assemblies could cause damage to the pc board.

### 4. SETUP

When setting up equipment to seat the pin header assemblies, pay particular attention to the following:

- each seating tool assembly must be matched to the pin header assemblies

#### CAUTION



If the seating tool assemblies and pin header assemblies are mismatched or are improperly aligned, damage could occur to the tooling, pin header assemblies, or both.

- the seating tool assembly, pin header assembly, and application tool ram must be properly aligned before cycling the application tool

Set the seating height to the dimension shown in Figure 2. For the first pin header assembly, the application tool *shut height* will equal the seating height PLUS the combined thicknesses of the pc board and seating tool assembly. For the remaining pin header assembly, the application tool *shut height*

will equal the seating height PLUS the combined thicknesses of the pc board and the seated pin header assembly and seating tool assembly. After seating, a gap of no more than 0.10 mm [.004 in.] between the pin header assembly standoffs and the pc board is allowed.

#### NOTE



Use the seating height as a reference starting point. This height may need to be adjusted to obtain the amount allowed (maximum of 0.10 mm [.004 in.]) between the standoffs of the pin header assembly and the pc board.

### 5. SEATING (See Figure 2)

1. Place the pc board on one of the seating tool assemblies (with ends of insert plates facing up). Make sure to center the pc board layout over the insert plates.

2. Place the pin header assembly on the pc board so that the contacts are aligned and started into the matching holes in the pc board.

#### CAUTION

Damage to the pc board, seating tool assembly, or pin header assembly may occur if the seating tool assembly is not properly inserted into the pin header assembly before cycling the application tool.

3. Orient the other seating tool assembly over the pin header assembly so that the insert plates face the alignment slots of the pin header assembly. Then lower the seating tool assembly into the pin header assembly until the seating tool assembly bottoms on the floor of the pin header assembly.

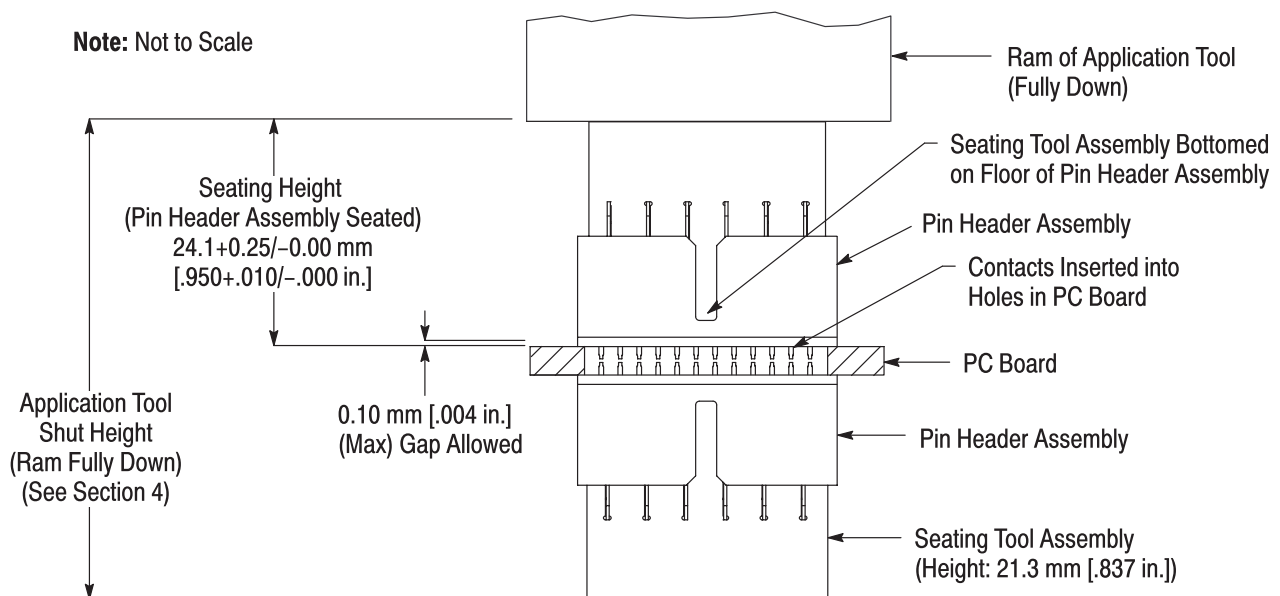


Figure 2

**CAUTION**

*To avoid damage to the pin header assembly, the seating tool assembly must bottom on the floor, NOT ON THE CONTACTS, of the pin header assembly before cycling the application tool. If the seating tool assembly bottoms on the contacts, the seating tool assembly and pin header assembly are mismatched.*

4. Center the seating tool assembly (with the pin header assembly) under the ram of the application tool. Slowly lower the ram until it just meets the seating tool assembly. Verify alignment of the seating tool assembly (used as a support), pc board, pin header assembly, and seating tool assembly.

**CAUTION**

*Damage to the pc board, seating tool assembly, or pin header assembly may occur if the seating tool assembly is not properly inserted into the pin header assembly before cycling the application tool.*

5. Cycle the application tool to seat the pin header assembly on the pc board. Then retract the ram.

6. Re-position the pc board under the ram, and seat the remainder pin header assembly according to Steps 2, 3, 4, and 5.

7. Carefully remove each seating tool assembly by pulling it straight from the pin header assembly.

8. Check each pin header assembly for proper seating according to the following:

- a. the widest section of each compliant pin is inside its intended pc board hole
- b. the pin header assembly is seated on the pc board with the seating height—measured from the top of the pin header assembly to the top of the pc board—given in Figure 2
- c. if present, the gap between the standoffs and the pc board is no more than 0.10 mm [.004 in.]

**CAUTION**

*DO NOT use damaged product. If damage is evident, the product should be removed from the pc board and replaced.*

## 6. MAINTENANCE AND INSPECTION

The seating tool assembly is assembled and inspected before shipment. It is recommended that the seating tool assembly be inspected immediately

upon arrival at your facility to ensure that it has not been damaged during shipment and that it conforms to the dimensions provided in Figure 3.

### 6.1. Daily Maintenance

It is recommended that each operator be made aware of, and responsible for, the following steps of daily maintenance:

1. Remove dust, moisture, and contaminants with a clean, soft brush or a lint-free cloth. DO NOT use objects that could damage the seating tool assembly components.
2. When the seating tool assembly is not in use, store it in a clean, dry area.

### 6.2. Periodic Inspection

Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the seating tool assembly or be supplied to personnel responsible for the seating tool assembly.

Inspection frequency should be based on amount of use, working conditions, operator training and skill, and established standards.

## 7. REPLACEMENT AND REPAIR

Customer-replaceable parts are listed in Figure 3. A complete inventory should be stocked and controlled to prevent lost time when replacement of parts is necessary. Parts other than those listed should be replaced by Tyco Electronics Corporation to ensure quality and reliability. Order replacement parts through your representative, or call 1-800-526-5142, or send a facsimile of your purchase order to 717-986-7605, or write to:

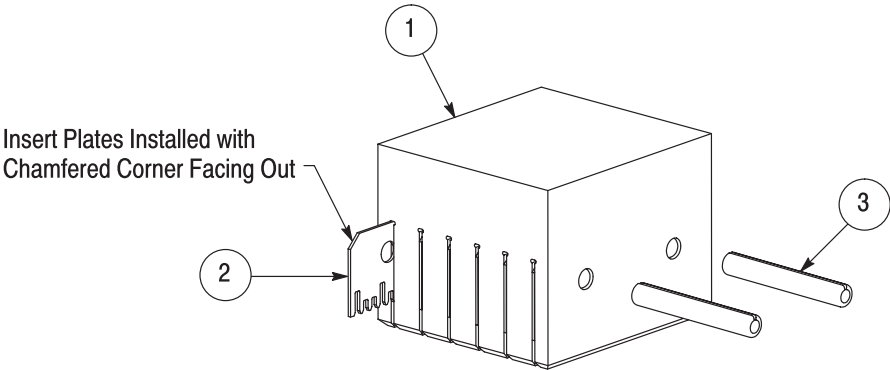
CUSTOMER SERVICE (038-035)  
TYCO ELECTRONICS CORPORATION  
PO BOX 3608  
HARRISBURG PA 17105-3608

For customer repair service, contact a representative at 1-800-526-5136.

## 8. REVISION SUMMARY

Revisions to this instruction sheet include:

- Updated document to corporate requirements



REPLACEMENT PARTS

| ITEM | PART NUMBER FOR TOOL |           | DESCRIPTION                          | QTY PER TOOL |           |
|------|----------------------|-----------|--------------------------------------|--------------|-----------|
|      | 1901530-1            | 1901540-1 |                                      | 1901530-1    | 1901540-1 |
| 1    | 1901531-1            | 1901539-1 | HOLDER, Insert Plate                 | 1            | 1         |
| 2    | 1901532-1            | 1901541-1 | INSERT PLATE                         | 6            | 4         |
| 3    | 4-21028-4            | —         | PIN, Slotted Spring, .094 × 1.00 in. | 2            | 2         |
|      | —                    | 3-21028-8 | PIN, Slotted Spring, .094 × .625 in. |              |           |

Figure 3

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[1901540-1](#)