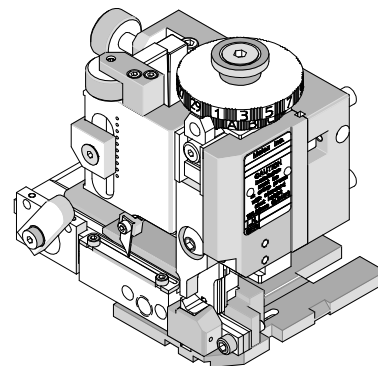




## Mini-Mac Applicator Specification Sheet Order No. 63893-4100



### FEATURES

- Directly adapts to most automatic wire processing machines
- Applicator designed to industry standard mounting and shut height 135.80mm (5.346")
- Quick set-up time; plus the crimp height, track and feed adjustments can be set without removing the applicator from the press
- Fine adjustment allows users to achieve target with little effort by adjusting in increments of .015mm (.0006") for barrel crimp height and .063mm (.0025") for insulation height. See notes on Page 2.
- Independent adjustment rings allow users to quickly adjust the barrel or insulation crimp height without affecting each other.

### SCOPE

Products: Board-In Crimp Terminal Male, 18-24 AWG.

| Terminal Series No. | Terminal Order No. |            | Wire Size |                 | Insulation Diameter Maximum |      | Strip Length |           |
|---------------------|--------------------|------------|-----------|-----------------|-----------------------------|------|--------------|-----------|
|                     |                    |            | AWG       | mm <sup>2</sup> | mm                          | In.  | mm           | In.       |
| 4706                | 02-07-2101         | 50-29-1688 | 18-24     | 0.80-0.20       | 3.05                        | .120 | 5.97-6.35    | .235-.250 |

### DEFINITION OF TERMS

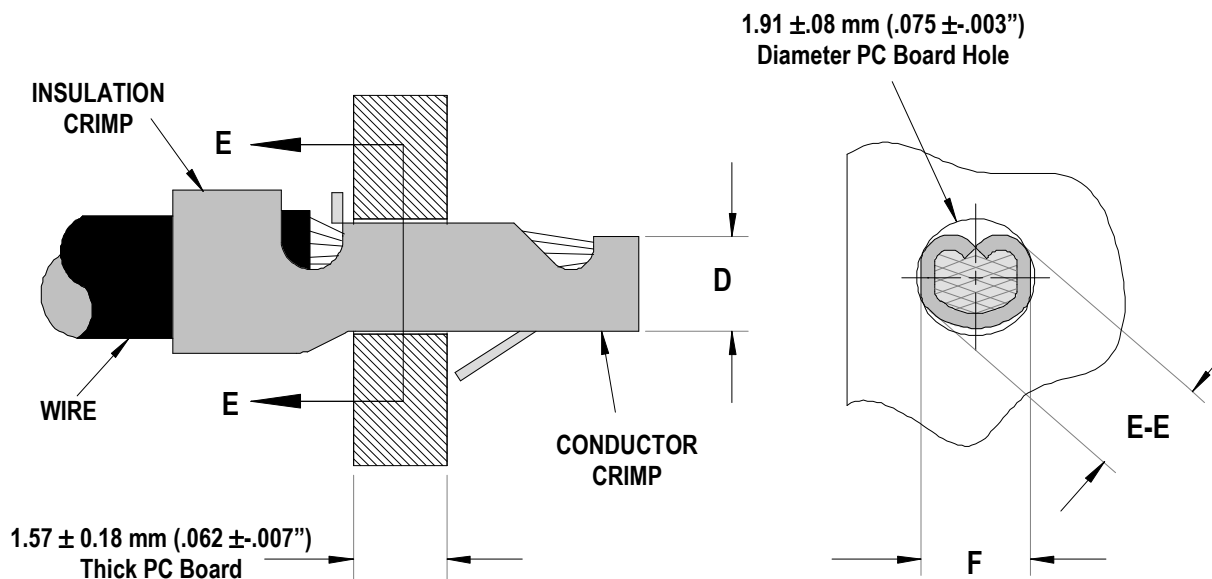


Figure 1

Section E-E

## CRIMP SPECIFICATIONS

After crimping, the conductor profiles should measure the following (See Figure 1).

| Terminal Series No.             | Wire Size |                 | Dimensions (Figure 1) |      |              |           |          |      | Pull Force Min. |     |
|---------------------------------|-----------|-----------------|-----------------------|------|--------------|-----------|----------|------|-----------------|-----|
|                                 |           |                 | D (Ref.)(Conductor)   |      | E-E (Barrel) |           | F (Ref.) |      |                 |     |
|                                 | AWG       | mm <sup>2</sup> | mm                    | In.  | mm           | In.       | mm       | In.  | N               | Lb. |
| 4706                            | 18        | 0.80            | 1.12                  | .044 | 1.72-1.78    | .068-.070 | .055     | 1.40 | 13.34           | 3.0 |
|                                 | 20        | 0.50            | 1.12                  | .044 | 1.72-1.78    | .068-.070 | .055     | 1.40 | 13.34           | 3.0 |
|                                 | T 22      | 0.35            | 0.97                  | .038 | 1.72-1.78    | .068-.070 | .055     | 1.40 | 13.34           | 3.0 |
|                                 | T 24      | 0.20            | 0.97                  | .038 | 1.72-1.78    | .068-.070 | .055     | 1.40 | 13.34           | 3.0 |
| T For 22 and 24 AWG See Note 2. |           |                 |                       |      |              |           |          |      |                 |     |

The crimp on this terminal is not an electrical crimp; the final soldering operation is the electrical connection. This minimum force is what should be expected when pulling the terminal with both insulation and conductor crimped.

### Notes:

- 1 The Conductor crimp (D dimension in Figure 1) should be set at the maximum height to contain all wire strands, meet minimum pull, and fit into the PCB Hole. The insulation and barrel crimps are adjustable, by the cams (rings) on top of the Mini-Mac ram. The conductor crimp height is not adjustable. Shimming may be required of the conductor punch to optimize this for different wire types.
- 2 To achieve the reference "D" dimension listed in the chart above, a (.38mm) .015" thick shim is required. These shims are not supplied with the applicator. The shim should be located between the ram and the conductor punch. See Figure 2.

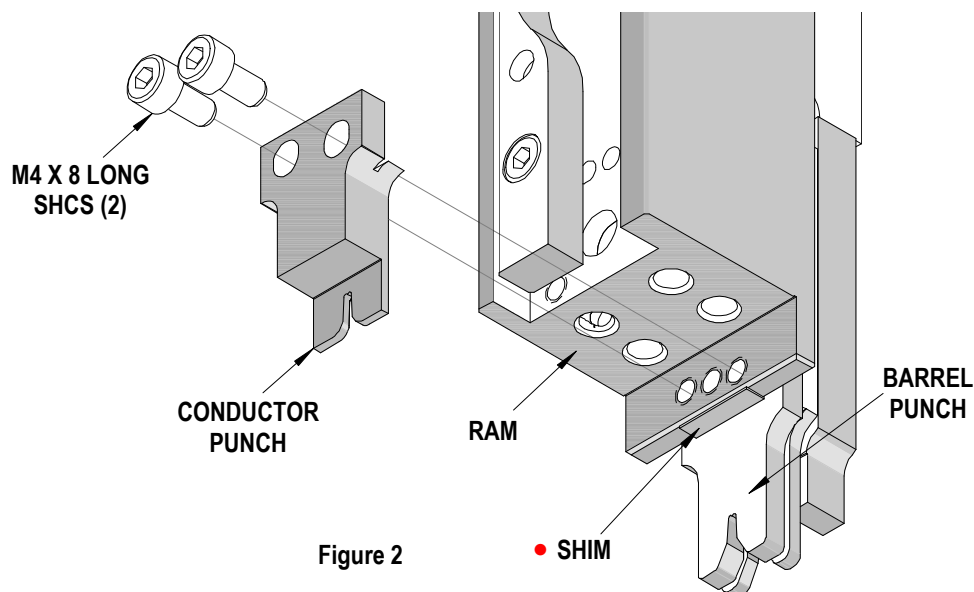


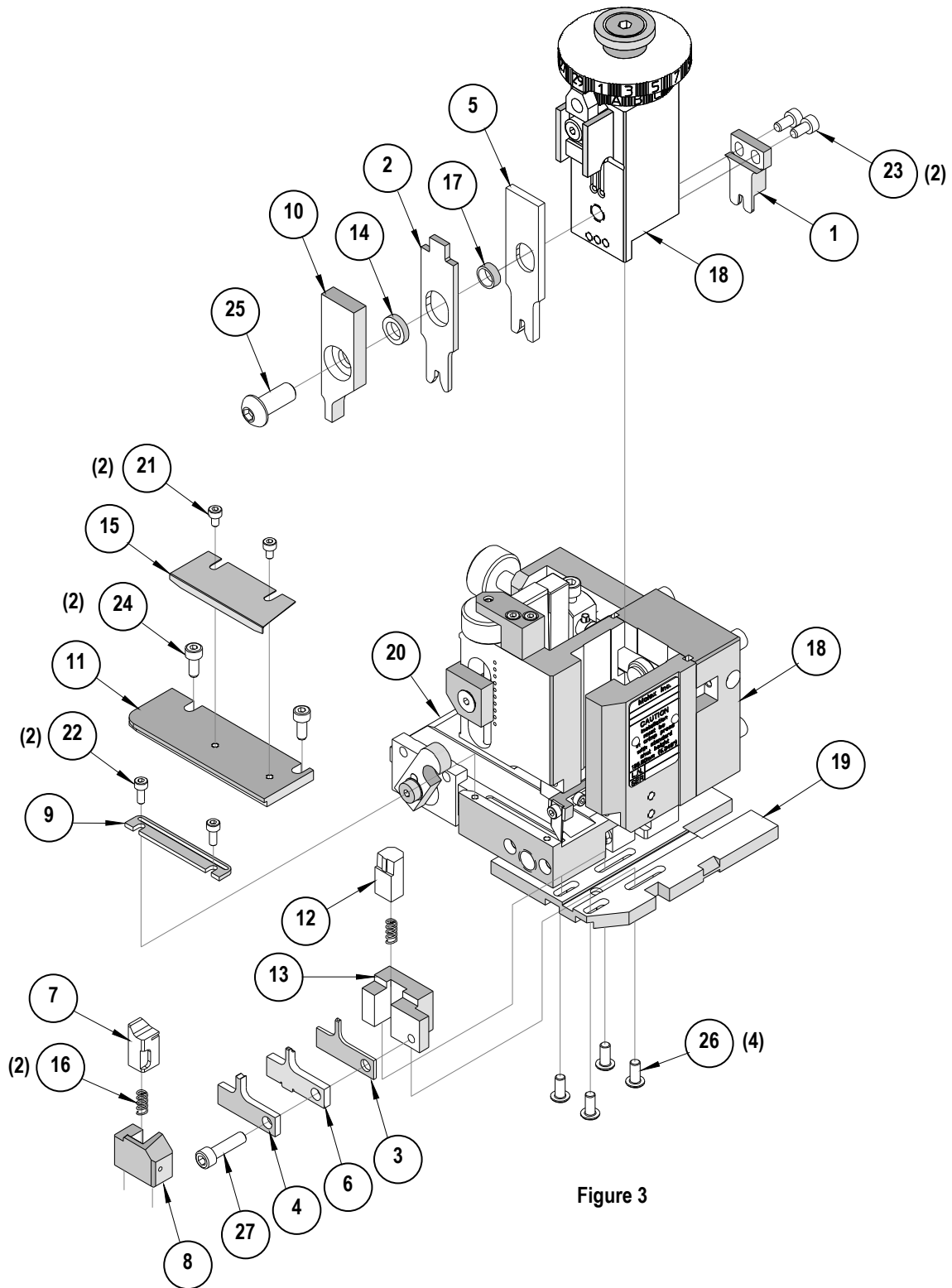
Figure 2

- Shim location for Conductor Punch. Shim size should be .38 by 3.2 by 12.7mm (.015 by 1/8 by 1/2").

**PARTS LIST**

| Mini-Mac Applicator 63893-4100                                               |            |                 |                           |          |
|------------------------------------------------------------------------------|------------|-----------------|---------------------------|----------|
| Item                                                                         | Order No   | Engineering No. | Description               | Quantity |
| <b>Perishable Tooling</b>                                                    |            |                 |                           |          |
|                                                                              | 63893-4170 | 63893-4170      | Tool Kit (All "Y" Items)  | REF      |
| 1                                                                            | 11-18-4220 | 60714-16        | Conductor Punch           | 1 Y      |
| 2                                                                            | 11-18-4213 | 60714-9         | Insulation Punch          | 1 Y      |
| 3                                                                            | 11-18-4787 | 60714B104       | Conductor Anvil           | 1 Y      |
| 4                                                                            | 11-18-4212 | 60714-8         | Insulation Anvil          | 1 Y      |
| 5                                                                            | 11-18-4219 | 60714-15        | Barrel Form Punch         | 1 Y      |
| 6                                                                            | 11-18-4788 | 60714B109       | Barrel Form Anvil         | 1 Y      |
| 7                                                                            | 63893-4105 | 63893-4105      | Front Cut-off Plunger     | 1 Y      |
| 8                                                                            | 11-18-4176 | 60718-15        | Front Plunger Guide Block | 1 Y      |
| <b>Other Components (REF 934150)</b>                                         |            |                 |                           |          |
| 9                                                                            | 11-18-4083 | 60707-8         | Feed Guide                | 1        |
| 10                                                                           | 11-18-4167 | 60718-6         | Plunger Striker           | 1        |
| 11                                                                           | 11-18-4206 | 60714-2         | Cover Plate               | 1        |
| 12                                                                           | 11-18-4207 | 60714-3         | Wire Stop                 | 1        |
| 13                                                                           | 11-18-4208 | 60714-4         | Rear Plunger Retainer     | 1        |
| 14                                                                           | 11-18-4209 | 60714-5         | Insulation Punch Spacer   | 1        |
| 15                                                                           | 11-18-4789 | 60714B113       | Terminal Guide            | 1        |
| 16                                                                           | 11-18-4944 | 60710-21        | Cut-off Plunger Spring    | 2        |
| 17                                                                           | 63803-5109 | 63803-5109      | Conductor Bushing         | 1        |
| <b>Frame</b>                                                                 |            |                 |                           |          |
| 18                                                                           | 63801-3201 | 63801-3201      | Top                       | 1        |
| 19                                                                           | 63801-3282 | 63801-3282      | Base                      | 1        |
| 20                                                                           | 63801-6550 | 63801-6550      | Track                     | 1        |
| <b>Hardware</b>                                                              |            |                 |                           |          |
| 21                                                                           | N/A        | N/A             | M3 by 5 Long SHCS         | 2**      |
| 22                                                                           | N/A        | N/A             | M3 by 8 Long SHCS         | 2**      |
| 23                                                                           | N/A        | N/A             | M4 by 8 Long SHCS         | 2**      |
| 24                                                                           | N/A        | N/A             | M4 by 10 Long SHCS        | 2**      |
| 25                                                                           | N/A        | N/A             | M8 by 20 Long BHCS        | 1**      |
| 26                                                                           | N/A        | N/A             | #8-32 by 3/8" Long BHCS   | 4**      |
| 27                                                                           | N/A        | N/A             | #10-32 by 3/4" Long SHCS  | 1**      |
| ** Available from an industrial supply company such as MSC (1-800-645-7270). |            |                 |                           |          |

# Assembly Drawing



## NOTES

1. Molex recommends an extra perishable tooling kit be maintained at your facility.
2. Verify tooling alignment by manually cycling the press and applicator before crimping under power. Check that all screws are tight.
3. Slugs, terminals, dirt, and oil should be kept clear of work area.
4. Wear safety glasses at all times.
5. For recommended maintenance refer to the Mini-Mac Manual.

**CAUTION:** This applicator should only be used in a press with a shut height of 135.80 mm (5.346"). Tooling damage could result at a lower setting

**CAUTION:** To prevent injury, never operate this applicator without the guards supplied with the press or wire-processing machine in place. Reference the press or wire processing manufacturer's instruction manual.

**CAUTION:** Molex crimp specifications are valid only when used with Molex terminals, applicators and tooling.

## Contact Information

For more information on Molex application tooling please contact Molex at 1-800-786-6539.

**Americas Headquarters**  
Lisle, Illinois 60532 U.S.A.  
1-800-78MOLEX  
amerinfo@molex.com

**Far East North Headquarters**  
Yamato, Kanagawa, Japan  
81-462-65-2324  
feninfo@molex.com

**Far East South Headquarters**  
Jurong, Singapore  
65-6-268-6868  
fesinfo@molex.com

**European Headquarters**  
Munich, Germany  
49-89-413092-0  
eurinfo@molex.com

**Corporate Headquarters**  
2222 Wellington Ct.  
Lisle, IL 60532 U.S.A.  
630-969-4550  
Fax: 630-969-1352

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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

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