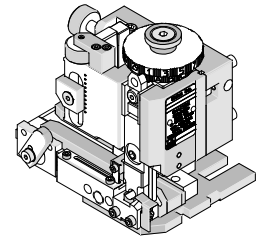


**Mini-Mac  
Applicator**



**Application Tooling  
Specification Sheet**



**Order No. 63891-4100**

**FEATURES**

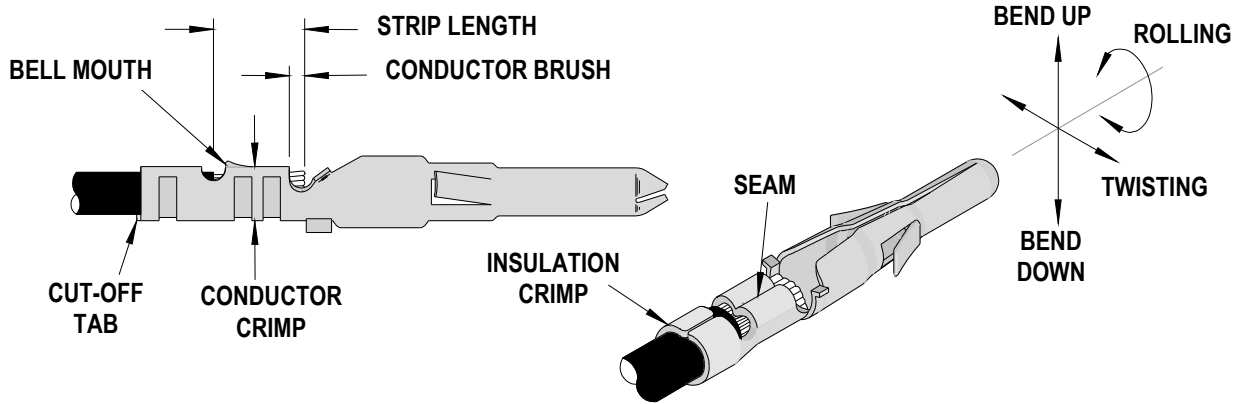
- Directly adapts to most automatic wire processing machines
- Applicator designed to industry standard mounting and shut height 135.80mm (5.346")
- Quick set-up time; plus the crimp height, track and feed adjustments can be set without removing the applicator from the press
- Fine adjustment allows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

**SCOPE**

Products: 1.57mm (.062") Diameter, Standard .062" Pin and Socket Crimp Terminal 24-30 AWG.

| Terminal Series No. | Terminal Order No. |            |            | Wire Size |                 | Insulation Diameter |           | Strip Length |           |
|---------------------|--------------------|------------|------------|-----------|-----------------|---------------------|-----------|--------------|-----------|
|                     |                    |            |            | AWG       | mm <sup>2</sup> | mm                  | In.       | mm           | In.       |
| 1854                | 02-06-2131         | 02-06-2134 | 02-06-6130 | 24-30     | 0.20-0.05       | 1.78 Max.           | .070 Max. | 3.18-3.96    | .125-.156 |
|                     | 02-06-6137         | 02-06-6138 | 02-06-6143 |           |                 |                     |           |              |           |
|                     | 02-06-6145         | 04-01-0809 |            |           |                 |                     |           |              |           |
|                     | 39-00-0280         | 39-00-0336 |            | 22-28     | 0.33-0.08       | 1.50 Max.           | .059 Max. | 3.18-3.96    | .125-.156 |
| 1855                | 02-06-1131         | 02-06-1141 | 02-06-1143 | 24-30     | 0.20-0.05       | 1.78 Max.           | .070 Max. | 3.18-3.96    | .125-.156 |
|                     | 02-06-5130         | 02-06-5137 | 02-06-5138 |           |                 |                     |           |              |           |
|                     | 02-06-5147         | 04-01-0810 |            |           |                 |                     |           |              |           |
|                     | 39-00-0338         | 39-00-0340 |            | 22-28     | 0.33-0.08       | 1.50 Max.           | .059 Max. | 3.18-3.96    | .125-.156 |
| 2189                | 02-06-1231         | 02-06-3202 | 02-06-5203 | 24-30     | 0.20-0.05       | 1.78 Max.           | .070 Max. | 3.18-3.96    | .125-.156 |
|                     | 02-06-5212         |            |            |           |                 |                     |           |              |           |
| 2190                | 02-06-2231         | 02-06-4202 | 02-06-6207 | 24-30     | 0.20-0.05       | 1.78 Max.           | .070 Max. | 3.18-3.96    | .125-.156 |
| 4559                | 02-06-1109         | 02-06-5211 |            | 24-30     | 0.20-0.05       | 1.78 Max.           | .070 Max. | 3.18-3.96    | .125-.156 |

### DEFINITION OF TERMS



The above terminal drawing is a generic terminal representation. It is not an image of a terminal listed in the scope.

### CRIMP SPECIFICATIONS

| Terminal Series No. | Wire Size                        |                 | Bell mouth |           | Cut-off Tab Maximum |      | Conductor Brush |                       |
|---------------------|----------------------------------|-----------------|------------|-----------|---------------------|------|-----------------|-----------------------|
|                     | AWG                              | mm <sup>2</sup> | mm         | In.       | mm                  | In.  | mm              | In.                   |
| 1854                | 24-30                            | 0.20-0.05       | 0.10-0.60  | .004-.024 | 0.13                | .005 | .25-1.00        | .010-.039             |
| 1854                | 39-00-0280<br>39-00-0336<br>Only | 22-28           | 0.33-0.08  | 0.10-0.60 | .004-.024           | 0.50 | .019            | .25-1.00<br>.010-.039 |
| 1855                | 24-30                            | 0.20-0.05       | 0.10-0.60  | .004-.024 | 0.13                | .005 | .25-1.00        | .010-.039             |
| 1855                | 39-00-0338<br>39-00-0340<br>Only | 22-28           | 0.33-0.08  | 0.10-0.60 | .004-.024           | 0.50 | .019            | .25-1.00<br>.010-.039 |
| 2189                | 24-30                            | 0.20-0.05       | 0.10-0.60  | .004-.024 | 0.13                | .005 | .25-1.00        | .010-.039             |
| 2190                | 24-30                            | 0.20-0.05       | 0.10-0.60  | .004-.024 | 0.13                | .005 | .25-1.00        | .010-.039             |
| 4559                | 24-30                            | 0.20-0.05       | 0.10-0.60  | .004-.024 | 0.13                | .005 | .25-1.00        | .010-.039             |

| Terminal Series No. | Wire Size |                 | Punch Width mm (Ref) |      |            |      | Seam   |
|---------------------|-----------|-----------------|----------------------|------|------------|------|--|
|                     | AWG       | mm <sup>2</sup> | Conductor            |      | Insulation |      |  |
|                     |           |                 | mm                   | In   | mm         | In   |  |
| 1854                | 22-30     | 0.33-0.05       | 1.65                 | .065 | 1.65       | .065 | Seam shall not be open and no wire allowed out of the crimping area. |
| 1855                | 22-30     | 0.33-0.05       | 1.65                 | .065 | 1.65       | .065 |  |
| 2189                | 24-30     | 0.20-0.05       | 1.65                 | .065 | 1.65       | .065 |  |
| 2190                | 24-30     | 0.20-0.05       | 1.65                 | .065 | 1.65       | .065 |  |
| 4559                | 24-30     | 0.20-0.05       | 1.65                 | .065 | 1.65       | .065 |  |

After crimping, the conductor profile should measure the following.

| Terminal Series No. | Wire Size                        |                 | Conductor    |           |             |           | Pull Force Min. |      |      |
|---------------------|----------------------------------|-----------------|--------------|-----------|-------------|-----------|-----------------|------|------|
|                     |                                  |                 | Crimp Height |           | Crimp Width |           |                 |      |      |
|                     | AWG                              | mm <sup>2</sup> | mm           | In.       | mm          | In.       | N               | Lb.  |      |
| 1854                | 24                               | 0.20            | 0.79-0.84    | .031-.033 | 1.65-1.73   | .065-.068 | 22.3            | 5.00 |      |
|                     | 26                               | 0.12            | 0.74-0.79    | .029-.031 | 1.65-1.73   | .065-.068 | 13.4            | 3.00 |      |
|                     | 28                               | 0.08            | 0.68-0.76    | .027-.030 | 1.65-1.73   | .065-.068 | 8.9             | 2.00 |      |
|                     | 30                               | 0.05            | 0.63-0.68    | .025-.027 | 1.65-1.73   | .065-.068 | 6.7             | 1.50 |      |
| 1854                | 39-00-0280<br>39-00-0336<br>Only | 22              | 0.33         | 0.78-0.83 | .031-.033   | 1.65-1.73 | .065-.068       | 39.2 | 8.8  |
|                     |                                  | 24              | 0.20         | 0.73-0.78 | .029-.031   | 1.65-1.73 | .065-.068       | 29.0 | 6.6  |
|                     |                                  | 26              | 0.12         | 0.69-0.74 | .027-.029   | 1.65-1.73 | .065-.068       | 19.6 | 4.4  |
|                     |                                  | 28              | 0.08         | 0.64-0.69 | .025-.027   | 1.65-1.73 | .065-.068       | 9.8  | 2.2  |
| 1855                |                                  | 24              | 0.20         | 0.79-0.84 | .031-.033   | 1.65-1.73 | .065-.068       | 22.3 | 5.00 |
|                     |                                  | 26              | 0.12         | 0.74-0.79 | .029-.031   | 1.65-1.73 | .065-.068       | 13.4 | 3.00 |
|                     |                                  | 28              | 0.08         | 0.68-0.76 | .027-.030   | 1.65-1.73 | .065-.068       | 8.9  | 2.00 |
|                     |                                  | 30              | 0.05         | 0.63-0.68 | .025-.027   | 1.65-1.73 | .065-.068       | 6.7  | 1.50 |
| 1855                | 39-00-0338<br>39-00-0340<br>Only | 22              | 0.33         | 0.78-0.83 | .031-.033   | 1.65-1.73 | .065-.068       | 39.2 | 8.8  |
|                     |                                  | 24              | 0.20         | 0.73-0.78 | .029-.031   | 1.65-1.73 | .065-.068       | 29.0 | 6.6  |
|                     |                                  | 26              | 0.12         | 0.69-0.74 | .027-.029   | 1.65-1.73 | .065-.068       | 19.6 | 4.4  |
|                     |                                  | 28              | 0.08         | 0.64-0.69 | .025-.027   | 1.65-1.73 | .065-.068       | 9.8  | 2.2  |
| 2189                |                                  | 24              | 0.20         | 0.79-0.84 | .031-.033   | 1.65-1.73 | .065-.068       | 22.3 | 5.00 |
|                     |                                  | 26              | 0.12         | 0.74-0.79 | .029-.031   | 1.65-1.73 | .065-.068       | 13.4 | 3.00 |
|                     |                                  | 28              | 0.08         | 0.68-0.76 | .027-.030   | 1.65-1.73 | .065-.068       | 8.9  | 2.00 |
|                     |                                  | 30              | 0.05         | 0.63-0.68 | .025-.027   | 1.65-1.73 | .065-.068       | 6.7  | 1.50 |
| 2190                |                                  | 24              | 0.20         | 0.79-0.84 | .031-.033   | 1.65-1.73 | .065-.068       | 22.3 | 5.00 |
|                     |                                  | 26              | 0.12         | 0.74-0.79 | .029-.031   | 1.65-1.73 | .065-.068       | 13.4 | 3.00 |
|                     |                                  | 28              | 0.08         | 0.68-0.76 | .027-.030   | 1.65-1.73 | .065-.068       | 8.9  | 2.00 |
|                     |                                  | 30              | 0.05         | 0.63-0.68 | .025-.027   | 1.65-1.73 | .065-.068       | 6.7  | 1.50 |
| 4559                |                                  | 24              | 0.20         | 0.64-0.69 | .025-.027   | 1.65-1.73 | .065-.068       | 22.3 | 5.00 |
|                     |                                  | 26              | 0.12         | 0.56-0.61 | .022-.024   | 1.65-1.73 | .065-.068       | 13.4 | 3.00 |
|                     |                                  | 28              | 0.08         | 0.53-0.58 | .021-.023   | 1.65-1.73 | .065-.068       | 8.9  | 2.00 |
|                     |                                  | 30              | 0.05         | 0.51-0.56 | .020-.022   | 1.65-1.73 | .065-.068       | 6.7  | 1.50 |

Tool Qualification Notes:

1. Pull Force should be measured with no influence from the insulation crimp.
2. The above specifications are guidelines to an optimum crimp.

**PARTS LIST**

| <b>Mini-Mac Applicator 63891-4100</b>  |                 |                        |                                |                 |
|--|-----------------|------------------------|--------------------------------|-----------------|
| <b>Item</b>  | <b>Order No</b> | <b>Engineering No.</b> | <b>Description</b>             | <b>Quantity</b> |
| <b>Perishable Tooling</b>  |                 |                        |                                |                 |
|  | 63891-4170      | 63891-4170             | Tool Kit (All "Y" Items)       | REF             |
| 1  | 11-18-4120      | 60707-9                | Conductor Punch                | 1 Y             |
| 2  | 11-18-4122      | 60707-11               | Combination Anvil              | 1 Y             |
| 3  | 11-18-4121      | 60707-10               | Insulation Punch               | 1 Y             |
| 4  | 11-17-3076      | 7163-30                | Front Cut-Off Plunger          | 1 Y             |
| 5  | 11-17-3079      | 7163-33                | Rear Cut-Off Plunger           | 1 Y             |
| 6  | 11-17-2136      | 7163-4                 | Rear Cut-Off Die Blade         | 1 Y             |
| 7  | 11-18-4246      | 60707-18               | Front Cut-off Plunger Retainer | 1 Y             |
| 8  | 11-18-4247      | 60707-19               | Rear Cut-off Plunger Retainer  | 1 Y             |
| <b>Other Components</b>  |                 |                        |                                |                 |
| 9  | 11-17-2140      | 7163-8                 | Insulation Punch Spacer        | 1               |
| 10   | 11-17-2152      | 7163-14                | Hold Down Pad                  | 1               |
| 11   | 11-18-4079      | 60707-4                | Cover Plate                    | 1               |
| 12   | 11-18-4081      | 60707-6                | Front Plunger Striker          | 1               |
| 13   | 11-18-4082      | 60707-7                | Rear Plunger Striker           | 1               |
| 14   | 11-18-4083      | 60707-8                | Feed Guide                     | 1               |
| 15   | 11-18-5060      | 60707-21               | Cut-off Plunger Spring         | 2               |
| 16   | 63443-0090      | 63443-0090             | Wire Stop                      | 1               |
| 17   | 63803-5127      | 63803-5127             | 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 8 Long SHCS              | 2**             |
| 22   | N/A             | N/A                    | M4 by 6 Long SHCS              | 1**             |
| 23   | N/A             | N/A                    | M4 by 12 Long BHCS             | 2**             |
| 24   | N/A             | N/A                    | M4 by 20 Long SHCS             | 2**             |
| 25   | N/A             | N/A                    | M5 by 14 Long SHCS             | 1**             |
| 26   | N/A             | N/A                    | M8 by 20 Long BHCS             | 1**             |
| 27   | N/A             | N/A                    | #6-32 by 3/8" Long BHCS        | 4**             |
| 28   | N/A             | N/A                    | #6-32 by 1/2" Long FHCS        | 1**             |
| 29   | N/A             | N/A                    | #6-32 Hex Jam Nut              | 1**             |
| 30   | N/A             | N/A                    | #8-32 by 3/8" Long SHCS        | 2**             |
| 31   | N/A             | N/A                    | #8-32 by 3/8" Long BHCS        | 1**             |
| 32   | N/A             | N/A                    | 5/64 by 3/8" Long Roll Pin     | 2**             |
| ** Available from an industrial supply company such as MSC (1-800-645-7270). |                 |                        |                                |                 |

### Assembly Drawing

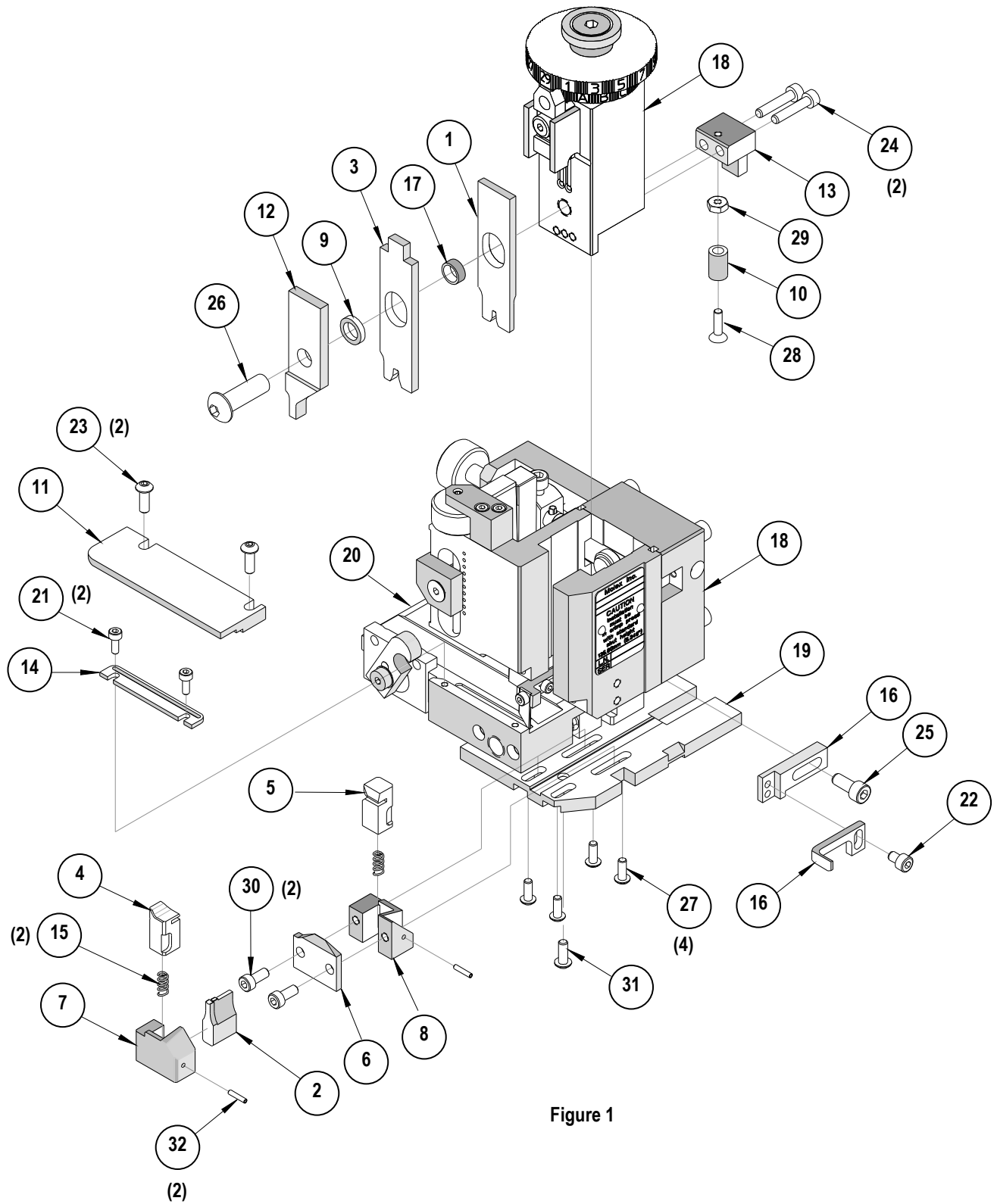


Figure 1

## 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 MiniMac Manual.

**CAUTION:** This applicator should only be used in a press with a shut height of 135.8 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.

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