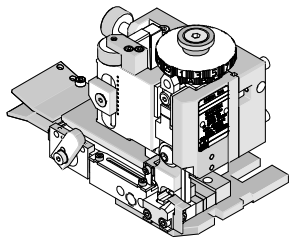
Mini-Mac Applicator

molex

Application Tooling Specification Sheet



Order No. 63891-1100

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.
- Optimum terminal feed/indexing can be obtained with the optional terminal guide assembly, Order No. 63830-0120. See page 5.

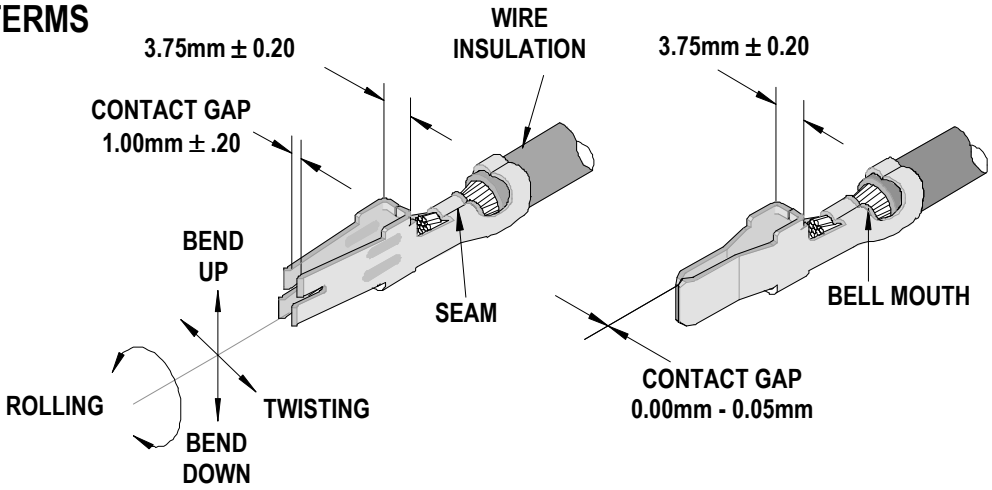
SCOPE

Products: Mini-Fit Sr. ™ Male and Female Crimp Terminals, 10 to 12 AWG.

Terminal Series No.	Terminal Order No.		Wire Size		Insulation Diameter				Strip Length	
					IPC/WHMA-A620 (1)		Terminal (2)			
			AWG	mm²	mm	In.	mm	In.	mm	In.
42815	42815-0010	42815-0011	10-12	3.30 - 5.00	4.40-5.30	.173-.209	3.50-5.30	.138-.209	7.50-8.50.	295-.335
	42815-0012	42815-0019								
42817	42817-0010	42817-0011	10-12	3.30 - 5.00	4.40-5.30	.173-.209	3.50-5.30	.138-.209	7.50-8.50.	295-.335
	42817-0012	42817-0019								
	42817-0110	42817-0111								
	42817-0112									

(1) To achieve optimum IPC-A620 insulation crimps, use this insulation OD range
(2) Overall insulation OD specification for terminal.
Applicator 63891-1200 should be used for insulation OD range 3.50-4.40mm

DEFINITION OF TERMS



CRIMP SPECIFICATIONS

Terminal Series No.	Bell mouth		Cut-off Tab Maximum		Conductor Brush	
	mm	In.	mm	In.	mm	In.
42815	.20-.50	.008-.020	.30-.50	.012-.020	3.50-4.50	.138-.177
42817	.20-.50	.008-.020	.30-.50	.012-.020	3.50-4.50	.138-.177

Terminal Series No.	Bend up	Bend down	Twist	Roll	Punch Width			
					Conductor		Insulation	
	Degree		Degree		mm	In	mm	In
42815	3	3	4	8	3.60	.142	5.00	.197
42817	3	3	4	8	3.60	.142	5.00	.197
Seam Seam shall not be open and no wire allowed out of the crimping area.								

After crimping, the conductor profile should measure the following.

Terminal Series No.	Wire Size		Conductor				Pull Force Minimum	
			Crimp Height		Crimp Width (Ref)			
	AWG	mm²	mm	In.	mm	In.	N	Lb.
42815	10	5.00	2.69-2.79	.106-.110	3.95	.156	355.0	80.0
	12	3.30	2.39-2.49	.094-.098	3.85	.152	311.0	70.0
42817	10	5.00	2.69-2.79	.106-.110	3.95	.156	355.0	80.0
	12	3.30	2.39-2.49	.094-.098	3.85	.152	311.0	70.0

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

Special Note:

Cut-off Tab length below 0.30mm may cause the box dimension to be under recommendation. See Figure 1

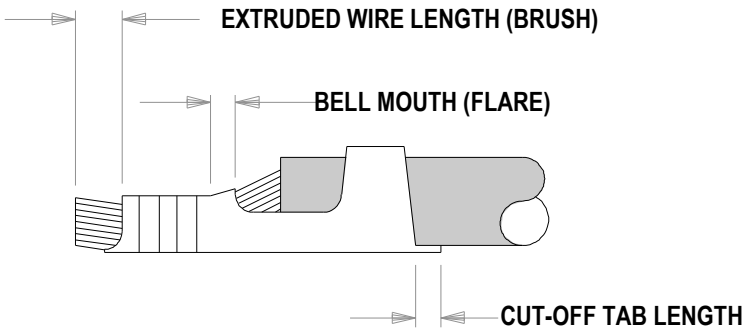


Figure 1

PARTS LIST

Mini-Mac Applicator 63891-1100				
Item	**Order No**	**Engineering No.**	**Description**	**Quantity**
Perishable Tooling				
	63891-1170	63891-1170	Tool Kit (All “Y” Items)	REF
1	11-18-5244	60827A106	Conductor Punch	1 Y
2	63821-0002	63821-0002	Conductor Anvil	1 Y
3	11-18-5246	60827A108	Insulation Punch	1 Y
4	63821-0004	63821-0004	Insulation Anvil	1 Y
5	63443-0045	63443-0045	Front Cut-off Plunger	1 Y
6	63443-0046	63443-0046	Front Cut-off Plunger Retainer	1 Y
Other Components				
7	11-18-5248	60827A115	Tooling Washer	1
8	63443-0009	63443-0009	Scrap Chute Front	1
9	63443-0024	63443-0024	Lower Tooling Key	1
10	63443-1715	63443-1715	Height Spacer	1
11	63443-2209	63443-2209	Course Spacer (9.00mm)	1
12	63443-2306	63443-2306	Fine Spacer (3.30mm)	1
13	63700-0539	63700-0539	Cut-Off Plunger Spring	1
14	63803-5105	63803-5105	Conductor Bushing	1
15	63821-0012	63821-0012	Front Cover	1
16	63821-0015	63821-0015	Wire Stop	1
17	63830-0008	63830-0008	Front Plunger Striker	1
18	63830-0117	63830-0117	Terminal Lead In	2
19	63830-0118	63830-0118	Rear Cover	1
Frame				
20	63801-3201	63801-3201	Top	1
21	63801-3281	63801-3281	Base	1
22	63801-4650	63801-4650	Track	1
Hardware				
23	N/A	N/A	M3 by 6 Long FHCS	1**
24	N/A	N/A	M3 by 6 Long SHCS	2**
25	N/A	N/A	M4 by 6 Long SHCS	5**
26	N/A	N/A	M4 by 12 Long BHCS	2**
27	N/A	N/A	M4 by 50 Long SHCS	2**
28	N/A	N/A	M5 by 12 Long SHCS	1**
29	N/A	N/A	M8 by 20 Long BHCS	1**
30	N/A	N/A	2mm by 8 Long Roll Pin	1**
** Available from an industrial supply company such as MSC (1-800-645-7270).				

Assembly Drawing

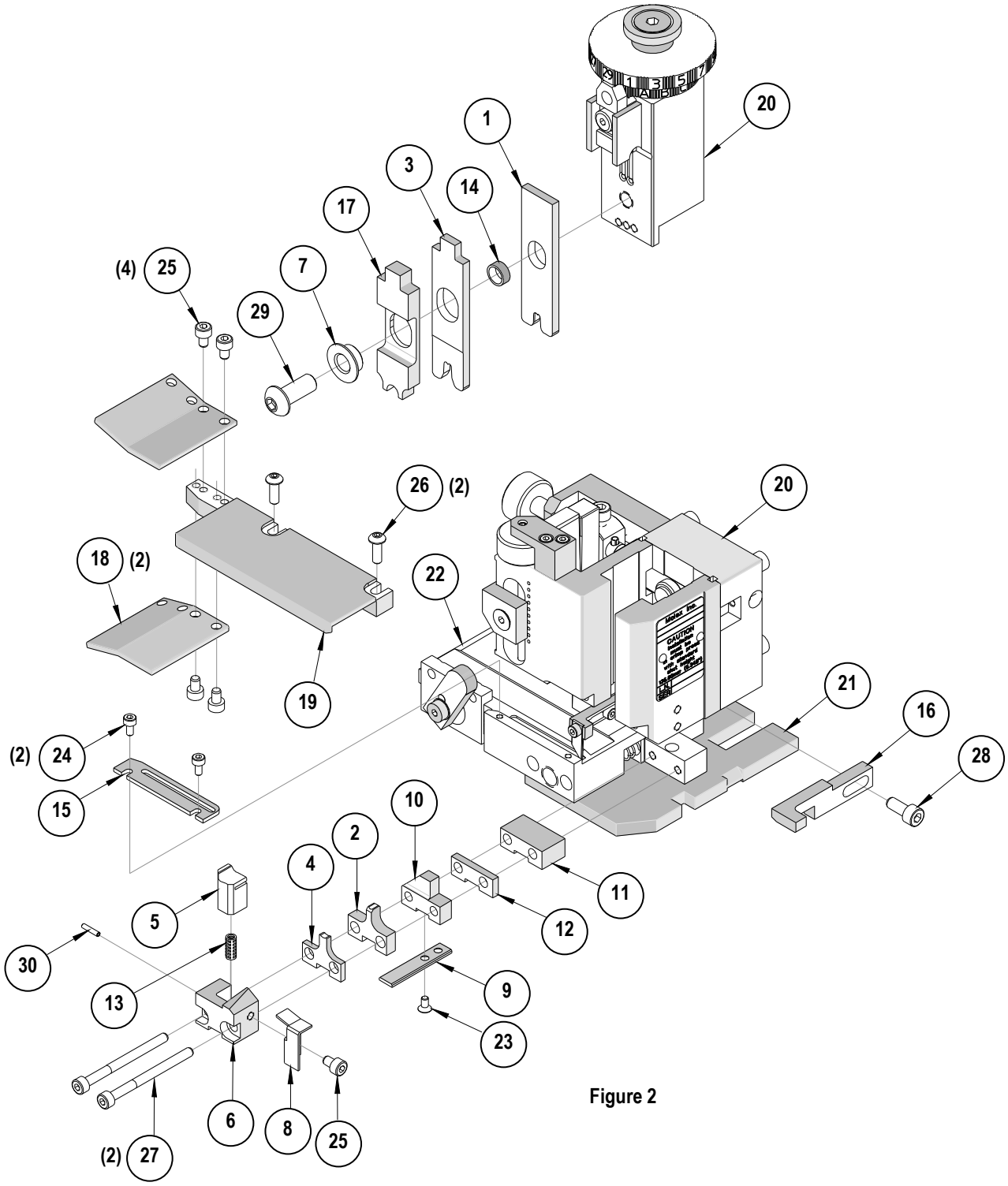


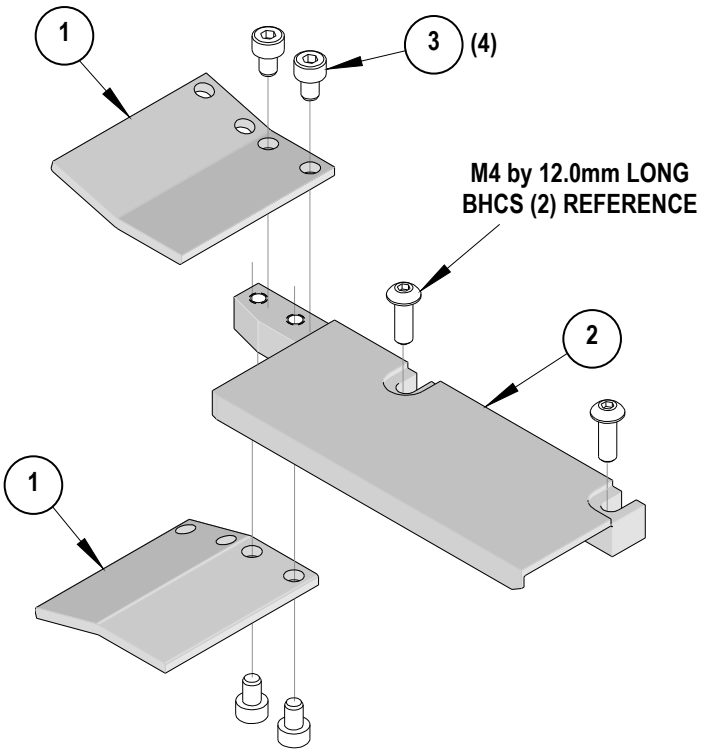
Figure 2

Older Version Applicators

Older versions of this applicator can be updated with the Terminal Guide Assembly please order the parts below.

The Terminal Guide Assembly helps to align slightly bent up or down terminals, entering the track. Recommended for use with wire processing equipment, or roughly handled terminal reels. To install the Terminal Guide assembly follow the steps below.

1. Remove the (2) M4 by 12 BHCS from the existing rear cover.
2. Remove the rear cover
3. Replace it with the 63830-0120 Terminal Guide Assembly.
4. Replace the (2) M4 by 12 BHCS.



Terminal Guide Assembly 63830-0120				
Item	**Order No**	**Engineering No.**	**Description**	**Quantity**
1	63830-0117	63830-0117	Terminal Lead-In	2
2	63830-0118	63830-0118	Rear Cover	1
Hardware				
3	N/A	N/A	M4 by 6 Long SHCS	4**
** Available from an industrial supply company such as MSC (1-800-645-7270).				

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.

Visit our Web site at http://www.molex.com

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