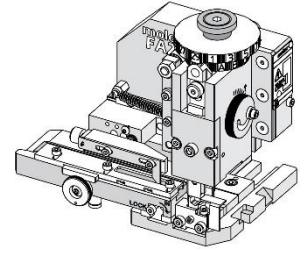**Order Number
213069-1700**

# molex

Application Tooling Specification

FEATURES

- Applicator designed to industry-standard mounting and 135.80mm (5.346") shut height
- Quick setup 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 0.015mm (.0006") for conductor crimp height and 0.025mm (.001") for insulation height
- Independent adjustment rings allow users to quickly adjust the conductor or insulation crimp height without affecting each other
- Directly adapts to most automatic wire processing machines

SCOPE

Products: Milli-Grid Crimp Terminals, 24 AWG UL1061 Wire and 26-30 AWG UL1007 Wire.

Terminal Series No.	Terminal Order No.	Wire		Insulation Diameter		Strip Length	
		Wire Type	Wire Size	mm	In.	mm	In.
151087	151087-8101	UL1007	30 AWG	0.80-1.40	.031-.055	1.30-1.80	.051-.071
	151087-8201	UL1007	28 AWG	0.80-1.40	.031-.055	1.30-1.80	.051-.071
	151087-8301	UL1007	26 AWG	0.80-1.40	.031-.055	1.30-1.80	.051-.071
	151087-8401	UL1061	24 AWG	0.80-1.40	.031-.055	1.30-1.80	.051-.071

DEFINITION OF TERMS

SECTION K-K

SECTION L-L
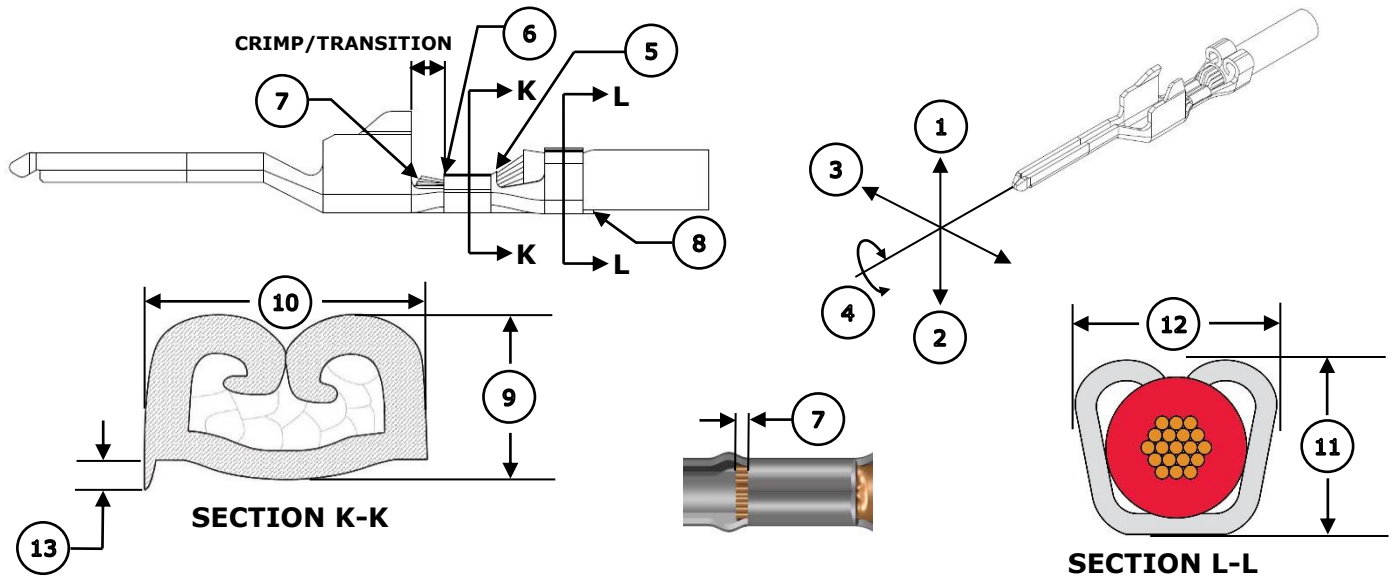
CRIMP SPECIFICATIONS

The following crimp specifications are based on document CS-151087-0001 Rev. A:

Feature	Requirement					
1. Bend Up	4° Max					
2. Bend Down	3° Max					
3. Twist	3° Max					
4. Roll	4° Max					
5. Bell Mouth Rear	0.05-0.35mm (.002-.014")					
6. Bell Mouth Front	Not Applicable					
7. Conductor Brush	0.00-0.50mm (.000-.020")					
8. Cut-Off Tab	0.15mm (.006") Max					
Conductor Crimp	**Wire Type**	**Wire Size**	**9. Crimp Height**		**10. Crimp Width**	
	UL1007	30 AWG	0.53-0.58mm	.021-.023 in.	1.00-1.10mm	.039-.043 in.
	UL1007	28 AWG	0.56-0.61mm	.022-.024 in.	1.00-1.10mm	.039-.043 in.
	UL1007	26 AWG	0.59-0.64mm	.023-.025 in.	1.00-1.10mm	.039-.043 in.
	UL1061	24 AWG	0.60-0.65mm	.024-.026 in.	1.00-1.10mm	.039-.043 in.
Insulation Crimp	**Wire Type**	**Wire Size**	**11. Crimp Height**		**12. Crimp Width**	
	UL1007	30 AWG	1.20-1.40mm	.047-.055 in.	1.35-1.51mm	.053-.059 in.
	UL1007	28 AWG	1.20-1.40mm	.047-.055 in.	1.38-1.54mm	.054-.061 in.
	UL1007	26 AWG	1.25-1.45mm	.049-.057 in.	1.39-1.55mm	.055-.061 in.
	UL1061	24 AWG	1.25-1.45mm	.049-.057 in.	1.39-1.55mm	.055-.061 in.
Pull Force	**Wire Type**	**Wire Size**	**Minimum Force**			
	UL1007	30 AWG	4.9 N	1.1 lb.		
	UL1007	28 AWG	9.8 N	2.2 lb.		
	UL1007	26 AWG	19.6 N	4.4 lb.		
	UL1061	24 AWG	29.4 N	6.6 lb.		
13. Conductor Anvil Flash	0.10mm (.004") Max					

NOTES

General Notes

1. Molex recommends that an extra perishable tooling kit be maintained at your facility.
2. Verify tooling alignment by hand 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 the work area.
4. Wear safety glasses at all times.
5. For recommended maintenance, refer to the FA2 manual (TM-638080200).
6. Molex recommends crimping stranded copper wire only.

WARNINGS

CAUTION: This applicator must be installed in a press with a standard shut height of 135.80mm (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 tooling crimp specifications are valid only when used with Molex terminals and tooling manufactured by Molex and sold by Molex or authorized distributors ("Molex Tooling"). When using tooling other than Molex Tooling with Molex-specific connector systems listed in our ATS documents, the Molex Tooling qualification does not apply, and the responsibility for full qualification of the connector system is that of the customer. Molex accepts no liability for connector performance or tooling support where tooling other than Molex Tooling is used or where Molex Tooling is modified.

PARTS LIST

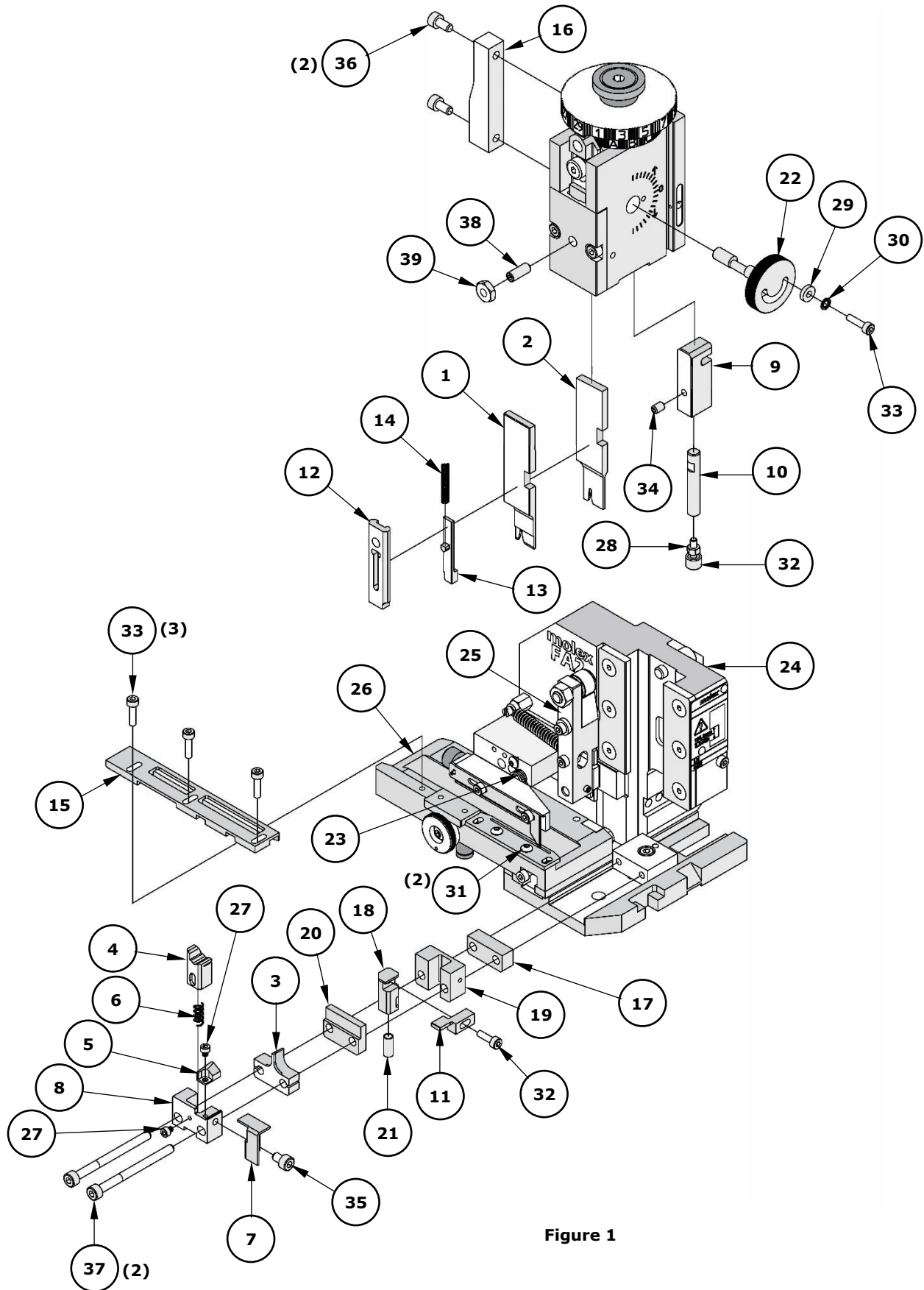| FA2 Applicator 213069-1700				
Item	**Order No.**	**Engineering No.**	**Description**	**Quantity**
Perishable Tooling				
	213069-1770	213069-1770	Tool Kit (All "Y" Items)	Ref
1	200220-1403	200220-1403	Insulation Punch	1 Y
2	200216-1003	200216-1003	Conductor Punch	1 Y
3	200217-1204	200217-1204	Combination Anvil	1 Y
4	63443-0136	63443-0136	Cut-Off Plunger	1 Y
5	63443-0119	63443-0119	Cutting Insert	1 Y
Non-Perishable Components				
6	11-24-1067	4996-4	Cut-Off Plunger Spring	1
7	63443-0117	63443-0117	Front Scrap Chute	1
8	63443-0118	63443-0118	Front Plunger Retainer	1
9	63808-0220	63808-0220	Nose Hold Down Block	1
10	63600-5775	63600-5775	Nose Hold Down Shank	1
11	63443-7750	63443-7750	Nose Hold Down	1
12	63443-2806	63443-2806	Front Plunger Striker	1
13	63443-2905	63443-2905	Wire Hold Down Plunger	1
14	63600-0021	63600-0021	Wire Hold Down Spring	1
15	63443-4720	63443-4720	Terminal Guide	1
16	63443-4405	63443-4405	Feed Cam	1
17	200213-7516	200213-7516	Anvil Mount	1
18	63443-7315	63443-7315	Terminal Hold Down Plunger	1
19	63443-7323	63443-7323	Terminal Hold Down Retainer	1
20	63443-7702	63443-7702	Terminal Hold Down Retainer Plate	1
21	63700-0992	63700-0992	Terminal Hold Down Plunger Spring	1
22	63808-0229	63808-0229	Bend Adjust Dial	1
23	203045-0030	203045-0030	Torsion Spring	1
Frame				
24	63808-0200	63808-0200	Applicator Core	1
25	63808-0197	63808-0197	Mechanical Feed Assembly	1
26	63808-0191	63808-0191	Track Assembly	1
Hardware				
27	—	—	M2.5 x 3 SHCS	2*
28	—	—	M3 Hex Nut	1*
29	—	—	M3 Flat Washer Hard	1*
30	—	—	M3 Inner Tooth Lock Washer	1*
31	—	—	M3 x 6 BHCS	2*
32	—	—	M3 x 10 SHCS	2*
33	—	—	M3 x 12 SHCS	4*
34	—	—	M4 x 6 SSS	1*
35	—	—	M4 x 6 SHCS	1*
36	—	—	M4 x 8 SHCS	2*
37	—	—	M4 x 50 SHCS	2*
38	—	—	#10-32 UNF x .25" SSS	1*
39	—	—	#10-32 Hex Jam Nut	1*
*Fastener parts can be purchased through most industrial suppliers by using the description in the table above.				

ASSEMBLY DRAWING

Figure 1

FACTORY SETTINGS

Feed Pawl Assembly

The FA2 applicator number 213069-1700 ships with the following factory settings. See Figure 2:

- The feed pawl shaft and M3 screw that holds the feed pawl spring are in position 2.
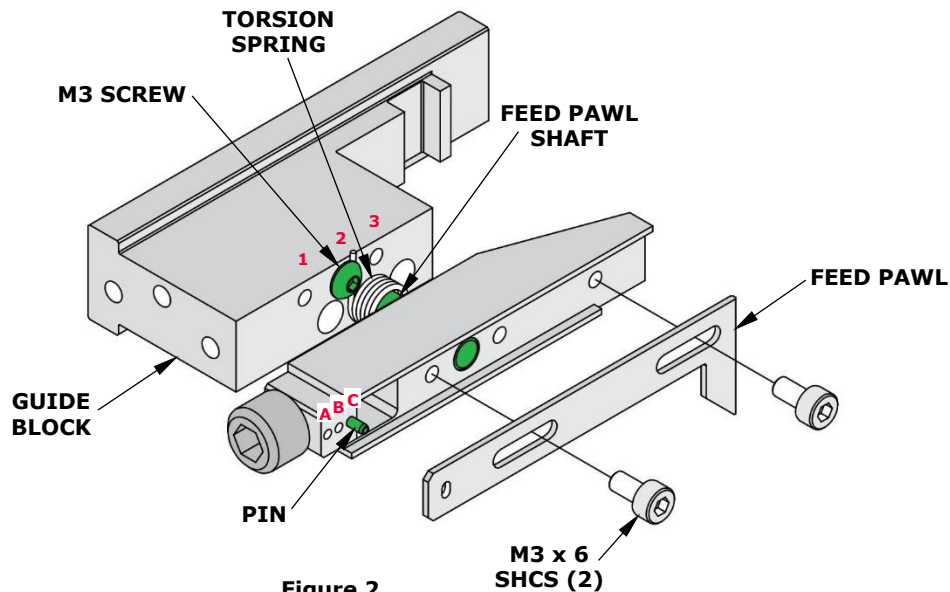- The pin is in position C.

Figure 2

Note: Each applicator is configured and tested by Molex prior to shipping, and the above settings were used to produce the included sample crimps.

Third Dial/Ram Assembly

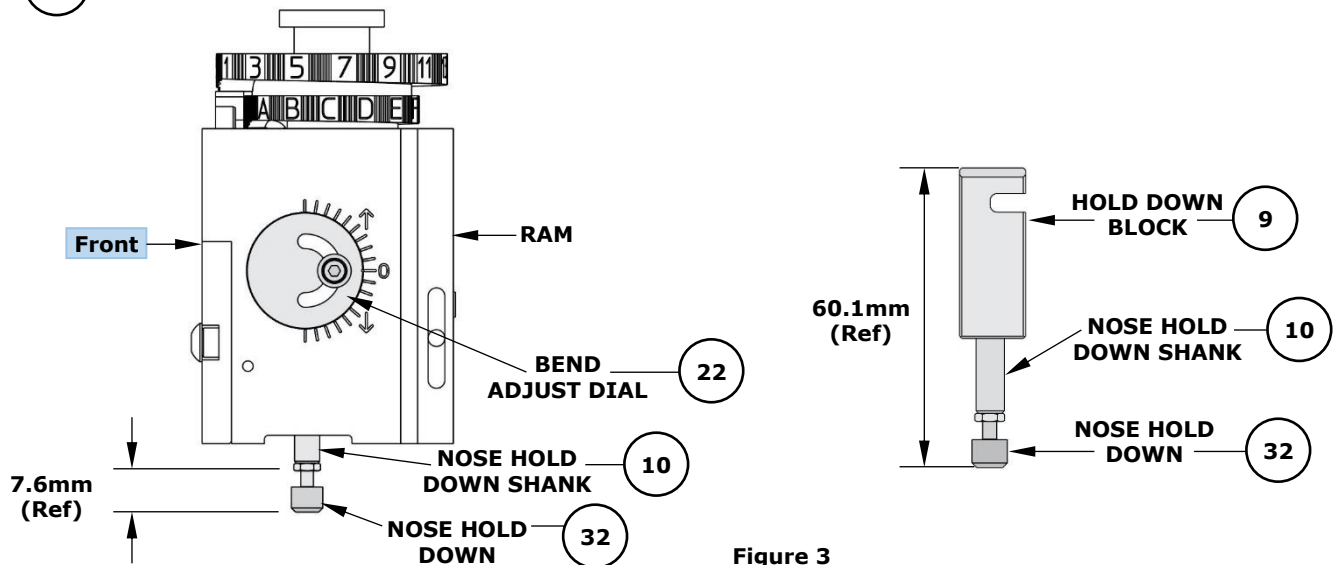◯ Indicates item number on the Parts List and Assembly Drawing

Figure 3

Note: The above dimensions were measured during setup and are included as a reference only. Additional adjustments may be required before crimping for production.

Mounting Datum Location

This applicator was assembled and tested by Molex with the mounting datum in the location shown in Figure 3. Do not remove the mounting datum.
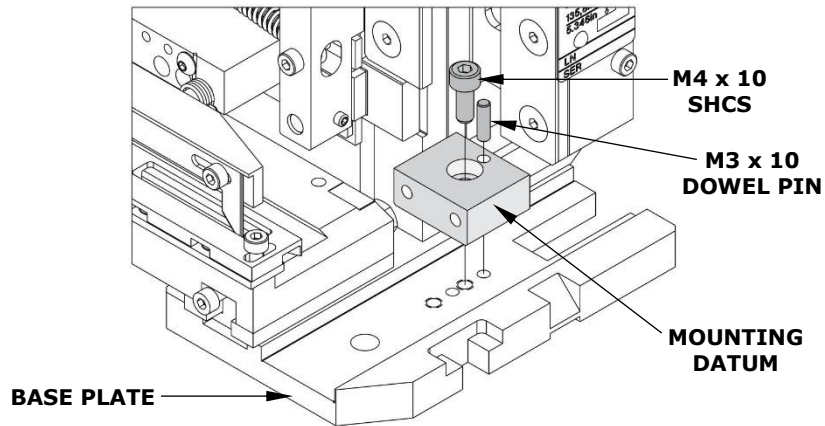
M4 x 10 SHCS

M3 x 10 DOWEL PIN

MOUNTING DATUM

BASE PLATE

Figure 3

Application Tooling Support

Phone: (402) 458-TOOL (8665)
E-Mail: applicationtooling@molex.com
Website: www.molex.com/applicationtooling