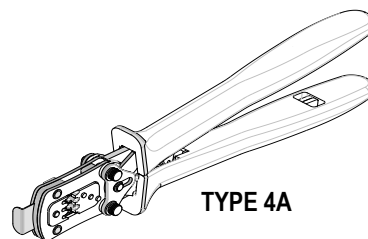


**Modular Crimp Head**  
**Order No. 63819-3870**

**molex**

## Application Tooling Specification Sheet



**Hand Crimp Tool**  
**Order No. 63819-3800**

### FEATURES

- % A full cycle ratcheting hand tool ensures complete crimps
- % Ergonomically designed soft handles
- % Precisely designed crimping profiles with simple contact positioning
- % Easy handling due to outstanding force ratio
- % Modular Crimp Head is removable and can be use in the Air Powered Tool Order No.63816-0100, accompanied by Air Powered Crimp Adapter (Order No. 63816-0700).
- % Can also be used in the Battery Powered Tool Order No.63816-0200 (110 V) or 63816-0250 (220 V), accompanied by Battery Powered Crimp Adapter (Order No. 63816-0600).

### SCOPE

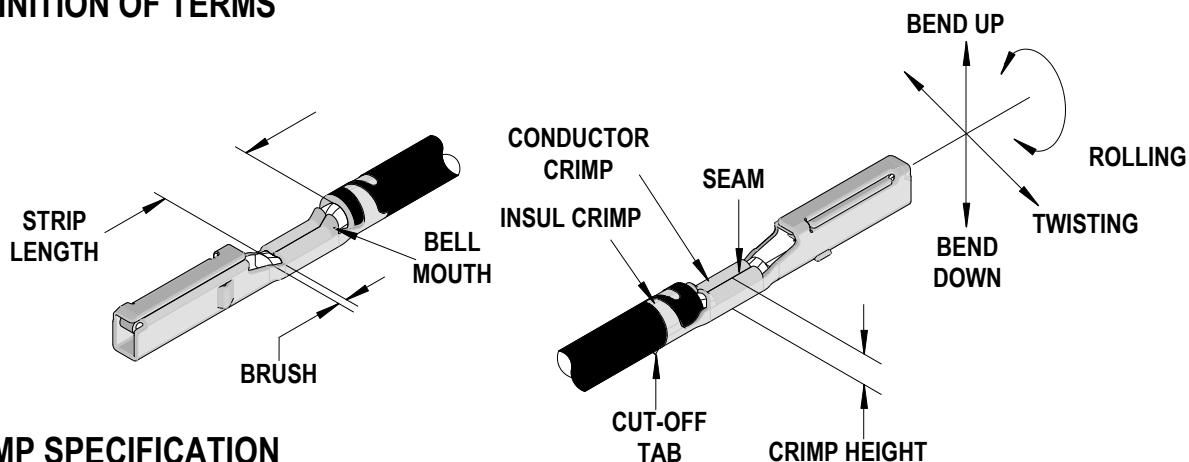
Products: CTX64 Receptacle Terminals for 0.50, 0.75, 0.85mm<sup>2</sup> and 20 AWG.

Terminal Series No.	Terminal Order No.			Wire Size		Insulation Diameter		Strip Length	
	* Reel Form only			AWG	mm²	mm	In.	mm	In.
502306	502306-0112	502306-0412	502306-2309	-	0.50mm2-0.85mm2	1.40-1.90	.055-.075	4.00-4.50	.158-.177
	502306-0114	502306-0414	502306-2310						
	502306-0122	502306-1112	502306-3112						
	502306-0124	502306-1114	502306-3114						
	502306-0212	502306-1122	502306-3212						
	502306-0214	502306-1124	502306-3214						
	502306-0222	502306-2112	502306-3405	20 AWG	-	1.40-1.90	.055-.075	4.00-4.50	.158-.177
	502306-0224	502306-2114	502306-3409						
	502306-0405	502306-2122	502306-3412						
	502306-0406	502306-2124	502306-3414						
	502306-0409	502306-2305	502306-5305						
	502306-0410	502306-2306	502306-5309						
34803	34803-0112	34803-0412	34803-2309	-	0.50mm2-0.85mm2	1.40-1.90	.055-.075	4.00-4.50	.158-.177
	34803-0114	34803-0414	34803-2310						
	34803-0122	34803-1112	34803-3112						
	34803-0124	34803-1114	34803-3114						
	34803-0212	34803-1122	34803-3212						
	34803-0214	34803-1124	34803-3214						
	34803-0222	34803-2112	34803-3405	20 AWG	-	1.40-1.90	.055-.075	4.00-4.50	.158-.177
	34803-0224	34803-2114	34803-3409						
	34803-0405	34803-2122	34803-3412						
	34803-0406	34803-2124	34803-3414						
	34803-0409	34803-2305	34803-5305						
	34803-0410	34803-2306	34803-5309						
34863	34863-0212	34863-0412	34863-3405	-	0.50mm2-0.85mm2	1.40-1.90	.055-.075	4.00-4.50	.158-.177
	34863-0214	34863-0414	34863-3409	-	-				
	34863-0405	34863-3212	34863-3412	20 AWG	-				
	34863-0409	34863-3214	34863-3414						

34970	34970-3112	34970-3405	34970-3414	-	0.50mm <sup>2</sup> -0.85mm <sup>2</sup>	1.40-1.90	.055-.075	4.00-4.50	.158-.177
	34970-3114	34970-3409	34970-5305						
	34970-3212	34970-3412	34970-5309	20 AWG	-				
	34970-3214								

\* Customer to cut off terminal from reel: 0.30mm (.012") maximum Cut-off Tab.

## DEFINITION OF TERMS



## CRIMP SPECIFICATION

Terminal Series No.	Bell mouth		* Conductor Brush		Bend up	Bend Down	Twist	Roll
	mm	In.	mm	In.	Degree (Max)		Degree (Max)	
502306 34803 34863 34970	0.20-0.55	.008-.022	0.20-1.00	.008-.039	1	2	4	6

\* Wire brush must be flush or below top of Conductor Crimp.

After crimping, the crimp profiles should measure the following (See notes on page 4).

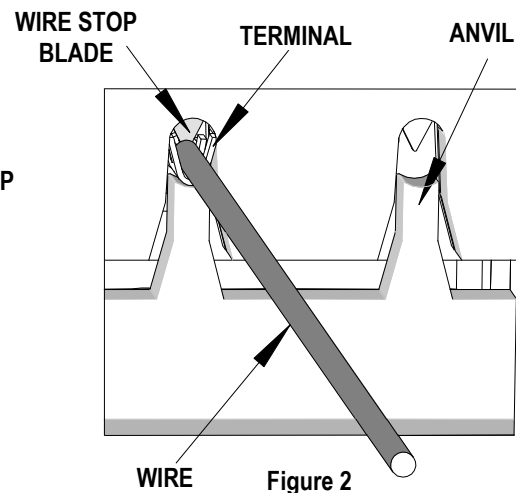
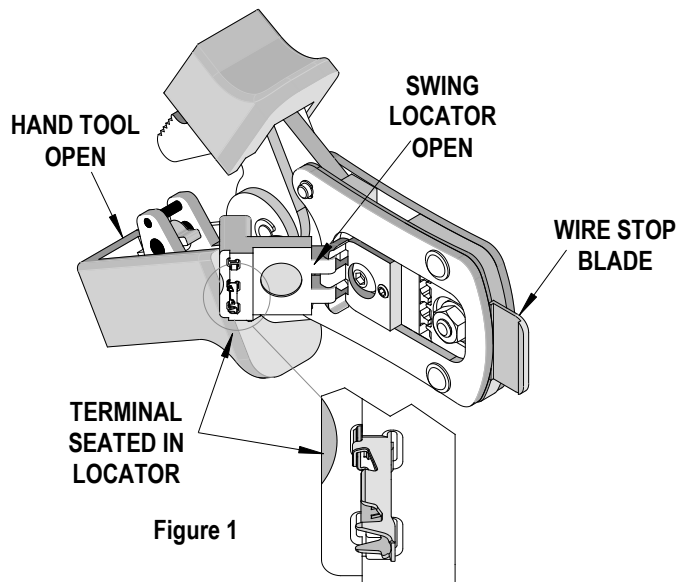
Terminal Series No.	Wire Size		Conductor				Insulation				Pull Force Minimum	
			Crimp Height		Crimp Width (Ref)		Crimp Height Maximum		Crimp Width Maximum			
	Wire Type	mm² / AWG	mm	In.	mm	In.	mm	In.	mm	In.	N	Lb.
502306 34803 34863 34970	T3ZHID	0.50	0.90-1.00	.035-.039	1.40	.055	2.00	.079	1.90	.075	70	15.8
	AVSS	0.50	0.90-1.00	.035-.039	1.40	.055	2.00	.079	1.90	.075	90	20.3
	T3ZHID	0.75	1.00-1.10	.039-.043	1.40	.055	2.00	.079	1.90	.075	90	20.3
	AVSS	0.85	1.05-1.15	.041-.045	1.40	.055	2.00	.079	1.90	.075	130	29.3
	TXL	20 AWG	0.90-1.00	.035-.039	1.40	.055	2.00	.079	1.90	.075	90	20.3

Terminal Series No.	Wire Size		Profile		
			20 AWG 0.50mm <sup>2</sup>	0.75mm <sup>2</sup>	0.85mm <sup>2</sup>
	Wire Type	mm <sup>2</sup> / AWG	A	B	C
502306 34803 34863 34970	T3ZHID	0.50	X		
	AVSS	0.50	X		
	T3ZHID	0.75		X	
	AVSS	0.85			X
	TXL	20 AWG	X		

**CAUTION:** Install only Molex terminals listed above with this tool. Do not crimp hardened objects - damage can occur to the tool or die.

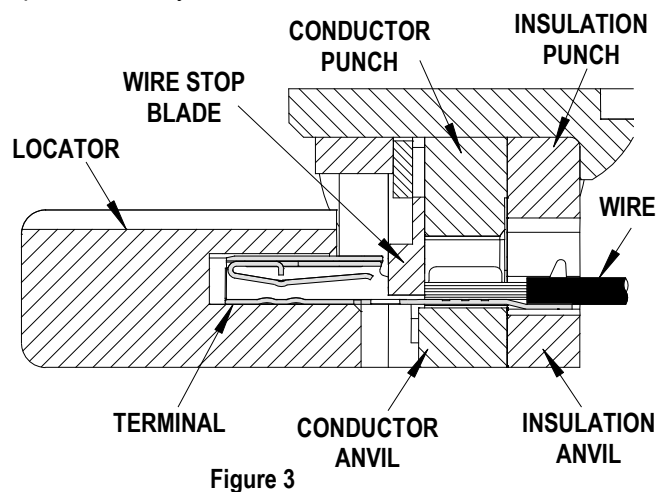
## OPERATION

Open the tool by squeezing the handles together, at the end of the closing stroke, the ratchet mechanism will release the handles, and the hand tool will spring open.



## Crimping Terminals

1. With the hand tool in the open position, pivot the terminal locator open by pulling up on the locator knob and lift the wire stop blade up. See Figure 1.
2. Insert the terminal into the correct profile until the terminal is fully seated and stops.
3. Gently pivot the locator closed.
4. Bring down the wire stop blade; make sure the wire stop blade is fully seated on the terminal behind the conductor grip section.
5. Slide the pre-stripped wire into the terminal; make sure to aim the wire brush towards the tip point on the wire stop blade. See Figure 2. Align the wire so that it is parallel and sitting into the terminal. Maintain a light and constant pressure on the wire that is seated in the terminal at all times. (Do not let go of the wire.) Be sure to hold the wire and terminal in place until the terminal is fully crimped. See Figure 3.
6. Close the tool until the ratchet releases.
7. Lift the wire stop blade up.
8. Carefully remove the crimped terminal.



**Note:** To maintain a good brush control and a consistent bell mouth, the crimping instructions must be followed.

## Maintenance

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

1. Remove dust, moisture, and other contaminants with a clean brush, or soft, lint free cloth.
2. Do not use any abrasive materials that could damage the tool.
3. Make certain all pins; pivot points and bearing surfaces are protected with a thin coat of high quality machine oil. Do not oil excessively. The tool was engineered for durability but like any other equipment it needs cleaning and lubrication for a maximum service life of trouble free crimping. Light oil (such as 30 weight automotive oil) used at the oil points, every 5,000 crimps or 3 months, will significantly enhance the tool life.
4. Wipe excess oil from hand tool, particularly from crimping area. Oil transferred from the crimping area onto certain terminations may affect the electrical characteristics of an application.
5. When tool is not in use, keep the handles closed to prevent objects from becoming lodged in the crimping dies, and store the tool in a clean, dry area.

## Miscrimps or Jams

Should this tool ever become stuck or jammed in a partially closed position, **Do Not force the handles open or closed**. The tool will open easily by lifting the ratchet release lever. See Figure 7.

## Warranty

This tool is for electrical terminal crimping purposes only. This tool is made of the best quality materials. All vital components are long life tested. All tools are warranted to be free of manufacturing defects for a period of 30 days. Should such a defect occur, we will repair or exchange the tool free of charge. This repair or exchange will not be applicable to altered, misused, or damaged tools. This tool is designed for hand use only. Any clamping, fixturing, or use of handle extensions voids this warranty.

**CAUTION: Repetitive use of this tool should be avoided.**

## CAUTIONS:

1. Manually powered hand tools are intended for low volume or field repair. This tool is **NOT** intended for production use. Repetitive use of this tool should be avoided.
2. Insulated rubber handles are not protection against electrical shock.
3. Wear eye protection at all times.
4. Use only the Molex terminals specified for crimping with this tool.

## Notes:

1. This tool should only be used for the terminals and wire gauges specified on this sheet.
2. This tool is not adjustable for crimp height; however crimp force is adjustable (See instructions above). Variations in tools, terminals, wire stranding, and insulation types may affect crimp height.
3. This tool is intended for standard conductor sizes. It may not give a good insulation crimp support for all insulation sizes.
4. Molex does not repair hand tools (see warranty above). The replacement parts listed are the only parts available for repair. If the handles or crimp tooling is damaged or worn, a new tool must be purchased.
5. Pull force should be used as the final criteria for an acceptable crimp. Pull force is measured with no influence from the insulation crimp. The insulation should be stripped long (1/2 in.) so the insulation grips on the terminal do not grip the wire insulation or the conductor. Refer to Molex Quality Crimping Handbook 63800-0029 for additional information on crimping and crimp testing.

Molex does not certify crimp hand tools.

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

## Applications for the Modular Crimp Head

**WARNING:** NEVER operate, service, install, or adjust this Modular Crimp Head without proper instruction and without first reading and understanding the instructions in the proper Manual or Specification Sheet. See Chart below for the correct Manual or Specification Sheet.

**WARNING:** NEVER install tooling or service this tool while it is into any power source. Disconnect the power by unplugging or turn off the Actuator from its power source.

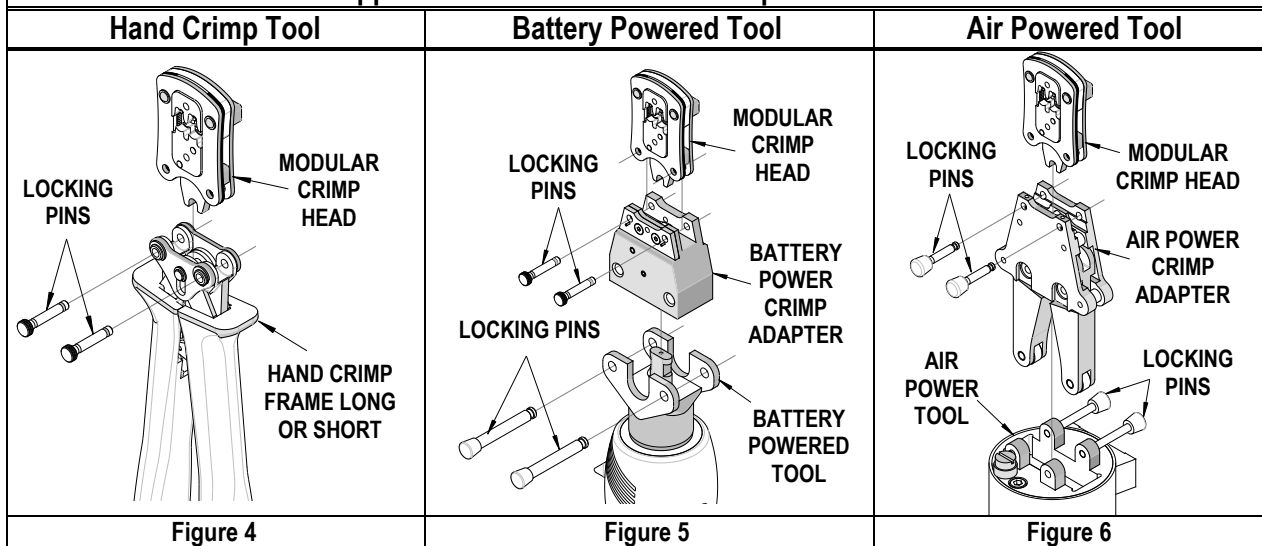
**CAUTION:** Keep fingers away from the crimping area when operating this tool. It may cause severe injury.

**CAUTION:** Wear safety glasses when operating or serving this tool.

The chart below shows all applications for this Modular Crimp Head.

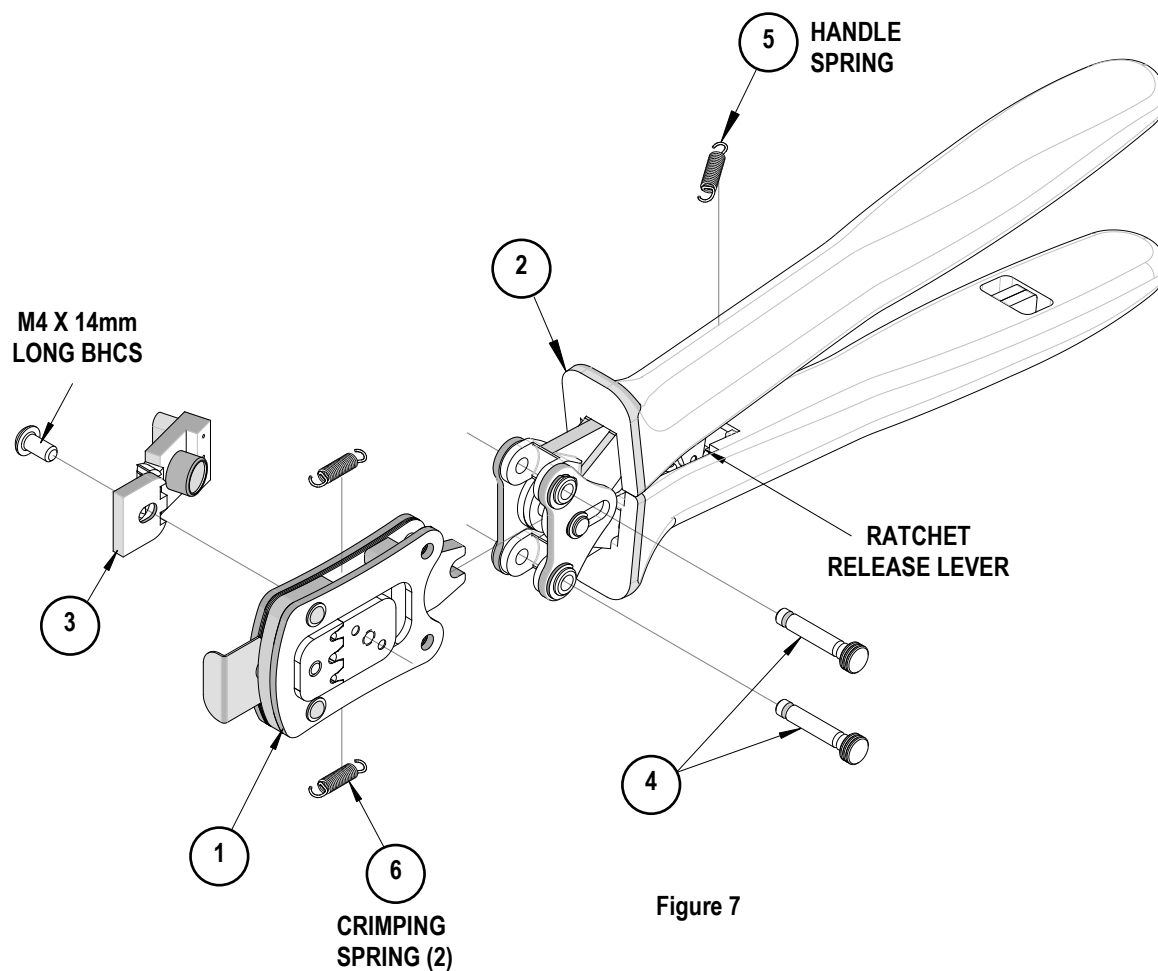
Modular Crimp Head Order No.	Tool Order no.	Tool Description	Adapter Order No.	Adapter Description	Figure No.
63819-3870	63816-0000	Hand Crimp Frame (Short)	N/A	N/A	4
	63816-0050	Hand Crimp Frame (Long)	N/A	N/A	4
	63816-0200	Battery Power Tool (110 V)	63816-0600	Battery Power Crimp Adapter	5
	63816-0250	Battery Power Tool (220 V)	63816-0600	Battery Power Crimp Adapter	5
	63816-0100	Air Power Tool	63816-0700	Air Power Crimp Adapter	6

## Applications for the Modular Crimp Head



**PARTS LIST**

Hand Crimp Tool 63819-3800			
Item	Order Number	Description	Quantity
1	63819-3870	Modular Crimp Head	1 (Ref)
2	63816-0050	Hand Crimp Frame (Long)	1 (Ref)
3	63819-3875	Locator	1
4	63816-0001	Locking Pin	2
5	63600-0525	Handle Spring	1
6	63600-0520	Crimping Spring	2

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