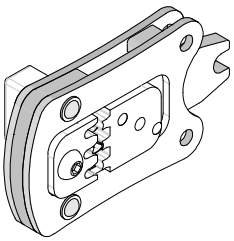
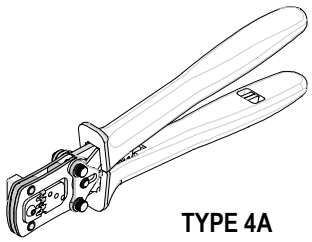


Modular Crimp Head
Order No. 63819-3970

molex

Application Tooling Specification Sheet



TYPE 4A

Hand Crimp Tool
Order No. 63819-3900

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

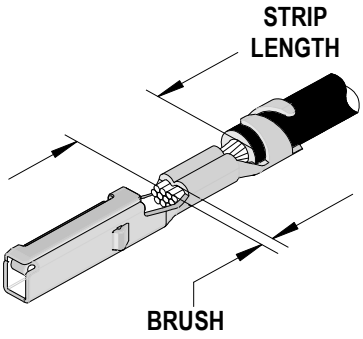
Products: CTX150 Mat Seal Receptacle Crimp Terminal for 0.30, 0.35, and 0.50mm² wires.

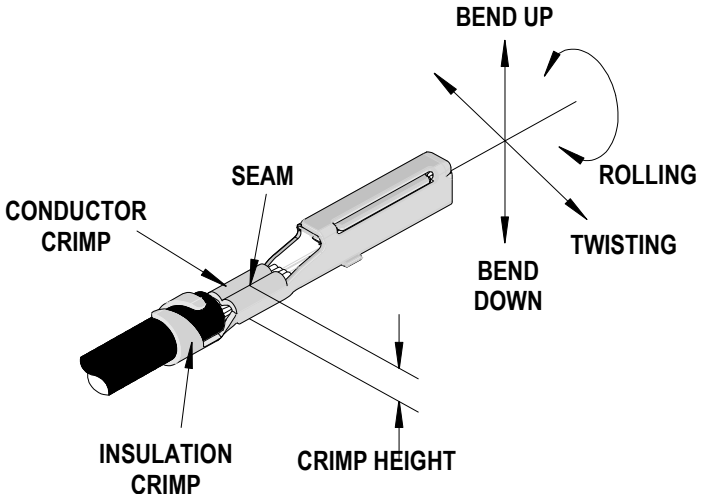
Terminal Series	Terminal Order No. ✳Reel Form only			Wire Size		Insulation Diameter		●Strip Length (Ref)	
				Wire Type	mm²	mm	In.	mm	In.
502307	502307-0111 502307-0121 502307-0211	502307-0221 502307-0411 502307-0421	502307-0511 502307-0521	AVSS	0.30	1.25-1.70	.049-.067	4.50-5.00	.177-.197
				T3-ZHID	0.35				
				T3-ZHID	0.50				
				AVSS	0.50				
34805	34805-0111 34805-0211	34805-0411	34805-0511	AVSS	0.30	1.25-1.70	.049-.067	4.50-5.00	.177-.197
				T3-ZHID	0.35				
				T3-ZHID	0.50				
				AVSS	0.50				
34864	34864-0111 34864-0211	34864-0411	34864-0511	AVSS	0.30	1.25-1.70	.049-.067	4.50-5.00	.177-.197
				T3-ZHID	0.35				
				T3-ZHID	0.50				
				AVSS	0.50				

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

● Note: This tool has a new insulation stop plate, to control the brush within specs, The wire insulation strip length needs to be stripped at 4.60 mm Ref.

DEFINITION OF TERMS





CRIMP SPECIFICATION

Terminal Series	Bell mouth		Conductor Brush		Bend up Bend Down		Twist Roll	
	mm	In.	mm	In.	Degree (Max)		Degree (Max)	
502307 34805 34864	0.20-0.55	.008-.022	0.20-1.20	.008-.047	1.5	1.5	4	6

After crimping, the crimp profiles should measure the following.

Terminal Plating	Terminal Order No.			Wire Size		Conductor				Pull Force Minimum	
						Crimp Height		Crimp Width (Max)			
				Wire Type	mm²	mm	In.	mm	In.	N	Lb.
Standard Performance Tin	502307-0111	34805-0111	34864-0111	AVSS	0.30	0.77-0.83	.030-.033	1.65	.065	60.0	13.5
	502307-0121	34805-0211	34864-0211								
	502307-0211										
	502307-0221										
Standard Performance Tin	502307-0111	34805-0111	34864-0111	T3-ZHID	0.35	0.85-0.90	.033-.035	1.65	.065	60.0	13.5
	502307-0121	34805-0211	34864-0211								
	502307-0211										
	502307-0221										
High Performance Tin	502307-0411	34805-0411	34864-0411	T3-ZHID	0.35	0.81-0.87	.032-.034	1.65	.065	60.0	13.5
	502307-0421	34805-0511	34864-0511								
	502307-0511										
	502307-0521										
Standard Performance Tin	502307-0111	34805-0111	34864-0111	T3-ZHID	0.50	0.80-0.90	.031-.035	1.65	.065	80.0	18.0
	502307-0121	34805-0211	34864-0211								
	502307-0211										
	502307-0221										
High Performance Tin	502307-0411	34805-0411	34864-0411	T3-ZHID	0.50	0.80-0.90	.031-.035	1.65	.065	80.0	18.0
	502307-0421	34805-0511	34864-0511								
	502307-0511										
	502307-0521										
Standard Performance Tin	502307-0111	34805-0111	34864-0111	AVSS	0.50	0.85-0.95	.033-.037	1.65	.065	90.0	20.3
	502307-0121	34805-0211	34864-0211								
	502307-0211										
	502307-0221										

Terminal Series No.	Wire Size		Insulation Crimp (Ref.)				Profile		
			Height (Max)		Width (Max)		0.30mm²	0.35mm²	0.50mm²
	Wire Type	mm²	mm	In.	mm	In.	A	B	C
502307 34805 34864	AVSS	0.30	1.80	.071	1.95	.077	X		
	T3-ZHID	0.35	1.80	.071	1.95	.077		X	
	T3-ZHID	0.50	2.00	.079	1.95	.077			X
	AVSS	0.50	2.10	.083	1.95	.077			X

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.
3. This tool has a new insulation stop plate, to control the brush within specification, the wire insulation strip length needs to be stripped at 4.60 mm Ref.

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.
6. Molex does not certify crimp hand tools.

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.

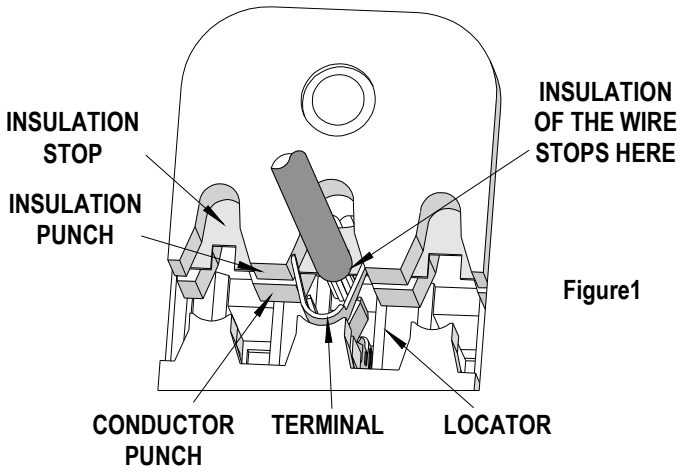


Figure1

Crimping Terminals

1. Insert the terminal fully into the correct profile until the terminal is fully seated and stops.
2. Slide the pre-stripped wire into the insulation stop. See Figure 1. The wire strands pass thru the insulation stop slot, while the end of the insulation touches the stop. Be sure to hold the wire in place until the terminal is fully crimped. See Figure 2.
3. Close the tool until the ratchet releases.
4. Carefully remove the crimped terminal.

Note: To maintain 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:

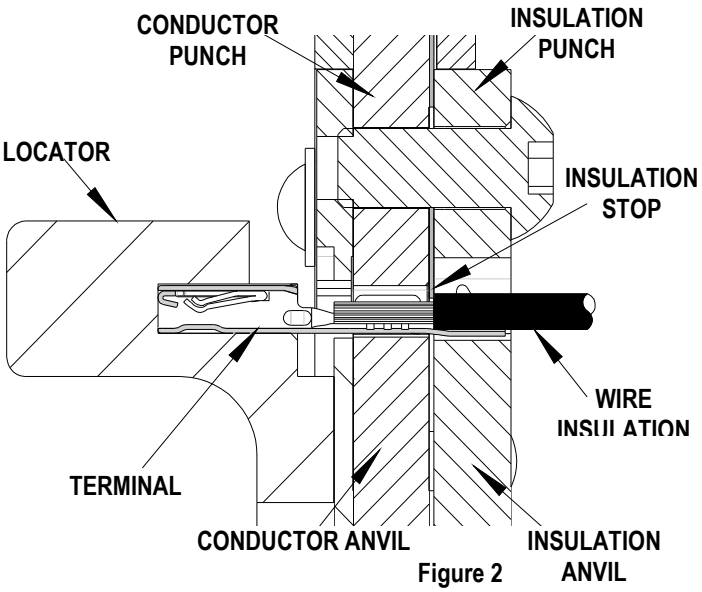


Figure 2

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 6.

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.

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.
63819-3970	63816-0000	Hand Crimp Frame (Short)	N/A	N/A	3
	63816-0050	Hand Crimp Frame (Long)	N/A	N/A	3
	63816-0200	Battery Power Tool (110 V)	63816-0600	Battery Power Crimp Adapter	4
	63816-0250	Battery Power Tool (220 V)	63816-0600	Battery Power Crimp Adapter	4
	63816-0100	Air Power Tool	63816-0700	Air Power Crimp Adapter	5

Applications for the Modular Crimp Head

Hand Crimp Tool	Battery Powered Tool	Air Powered Tool

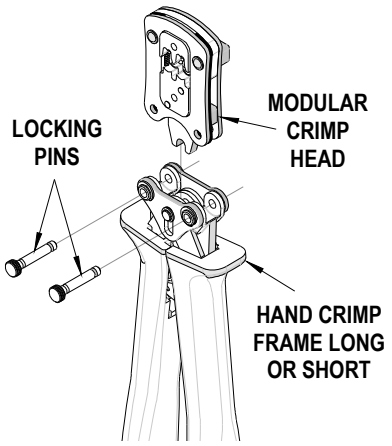
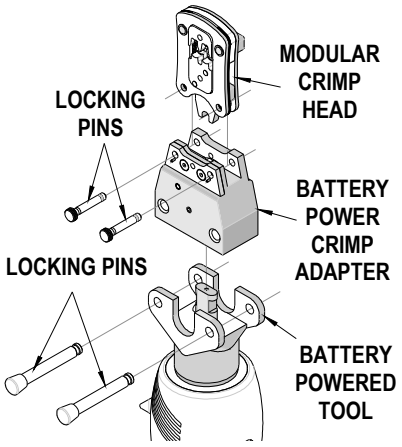
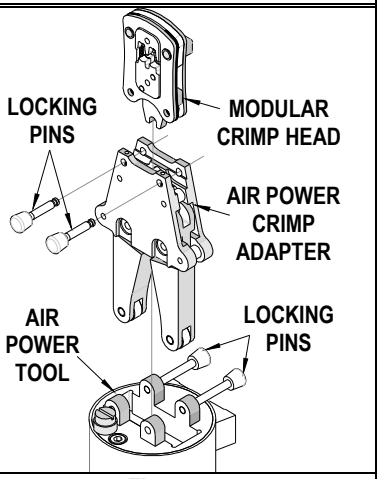

		

Figure 3	**Figure 4**	**Figure 5**

PARTS LIST

Item	Order Number	Description	Quantity
1	63819-3970	Modular Crimp Head	1
2	63816-0050	Hand Crimp Frame (Long)	1
3	63819-3975	Locator	1
4	63816-0001	Locking Pin	2
5	63600-0525	Handle Spring	1
6	63600-0520	Crimping Spring	2

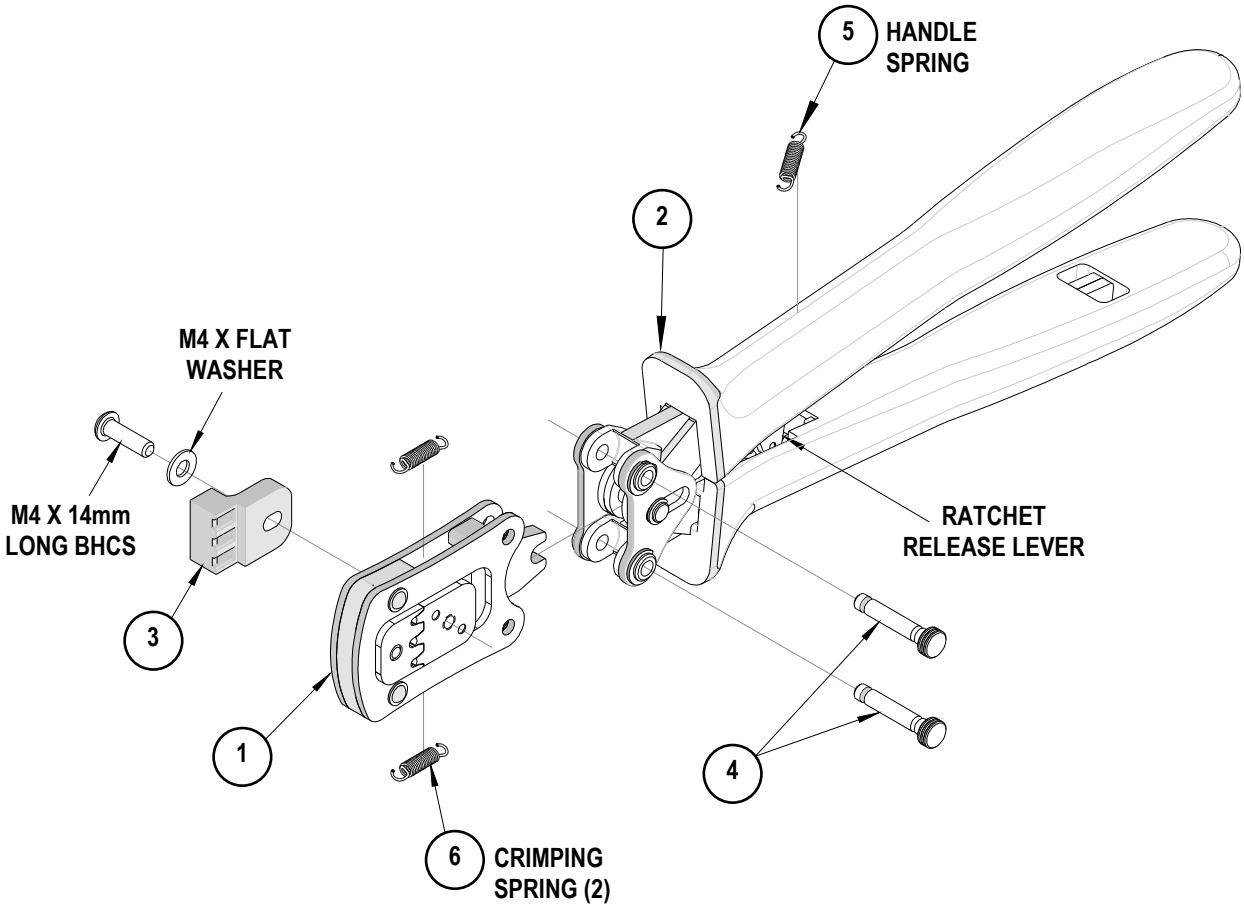


Figure 6

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