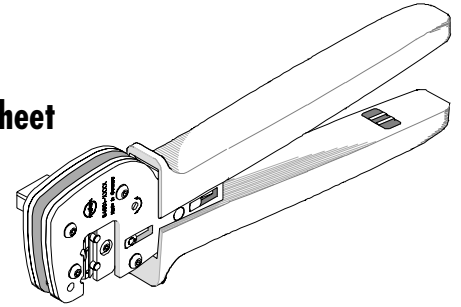




Hand Crimp Tool
Operating Instruction and Specifications Sheet
Order No. 64001-7400
(Replaces 64001-3200)



FEATURES

- A full cycle ratcheting hand tool ensures complete crimps
- Long handles for comfortable crimping with reduced crimping force
- 3-nested tool eliminates the need for additional tools
- A precision user-friendly terminal locator holds terminals in the proper crimping position for each of the three nests

SCOPE

Products: Perma-Seal™ Ring Tongue, Spade Tongue, Hook Tongue, 3 and 4-Way Terminals. Butt Splices and Step Down Butt Splices
 10–22 AWG.

Testing

Mechanical

The tensile test, or pull test, is a means of evaluating the mechanical properties of the crimped connections. The following charts show the specifications for various wire sizes. The tensile strength is shown in pounds and indicates the minimum acceptable force to break or separate terminal from the conductor.

Wire Size (AWG)	UL – 486 A	UL – 486 C
22	8	8
20	13	10
18	20	10
16	30	15
14	50	25
12	70	35
10	80	40

*UL - 486 A - Terminals (copper conductors only)

*UL - 486 C - Butt Splices, Parallel Splices

The following is a partial list of the product part numbers and their specifications that this tool is designed to run. We will be adding to this list and an up to date copy is available on www.molex.com

Wire Size: 18 – 22 AWG 0.80 – 0.35 mm ²						
Terminal No.	Terminal Eng No. (REF)	Terminal No. Mylar Tape	Wire Strip Length		Insulation Diameter Maximum	
			In	mm	In	mm
19164-0003	SA-221-10	19164-0306	.281	7.14	.235	5.97
19164-0004	SA-222-14	19164-0844	.281	7.14	.235	5.97
19164-0005	SA-226-38	19164-0845	.281	7.14	.235	5.97
19164-0006	SA-235-06		.281	7.14	.235	5.97
19164-0007	SA-235-08		.281	7.14	.235	5.97
19164-0008	SA-235-10		.281	7.14	.235	5.97
19164-0011	SA-2YCX	N/A	.281	7.14	.215	5.46
19164-0013	SAA-22-18	19164-0014	.281	7.14	.210	5.33

Wire Size: 18 – 22 AWG 0.80 – 0.35 mm ²						
Terminal No.	Terminal Eng No. (REF)	Terminal No. Mylar Tape	Wire Strip Length		Insulation Diameter Maximum	
			In	mm	In	mm
19164-0085	SA-221-06		.281	7.14	.235	5.97
19164-0086	SA-221-08	19164-0419	.281	7.14	.235	5.97
19164-0210	SA-210-06		.281	7.14	.235	5.97
19164-0211	SA-210-08		.281	7.14	.235	5.97
19164-0212	SA-210-10		.281	7.14	.235	5.97
19164-0283	SA-232-04		.281	7.14	.235	5.97
19164-0284	SA-2XCX	N/A	.281	7.14	.235	5.97
19164-0435	SA-222-56		.281	7.14	.235	5.97
19164-0443	SA-215-08	19164-0850	.281	7.14	.235	5.97
19164-0445	SA-215-04		.281	7.14	.235	5.97
19164-0446	SA-215-06		.281	7.14	.235	5.97
19164-0625	SA-222-10		.281	7.14	.235	5.97

Wire Size: 14 – 16 AWG 2.00 – 1.30 mm ²						
Terminal No.	Terminal Eng No. (REF)	Terminal No. Mylar Tape	Wire Strip Length		Insulation Diameter Maximum	
			In	mm	In	mm
19164-0020	SB-218-38	19164-0307	.281	7.14	.235	5.97
19164-0021	SB-219-10		.281	7.14	.235	5.97
19164-0022	SB-223-06		.281	7.14	.235	5.97
19164-0023	SB-224-06		.281	7.14	.235	5.97
19164-0024	SB-224-08		.281	7.14	.235	5.97
19164-0025	SB-225-10	19164-0940	.281	7.14	.235	5.97
19164-0026	SB-225-14	19164-0308	.281	7.14	.235	5.97
19164-0027	SB-225-56	19164-0309	.281	7.14	.235	5.97
19164-0028	SB-227-06	19164-0948	.281	7.14	.235	5.97
19164-0029	SB-227-08	19164-0949	.281	7.14	.235	5.97
19164-0030	SB-227-10	19164-0950	.281	7.14	.235	5.97
19164-0031	SB-237-04	19164-0941	.281	7.14	.235	5.97
19164-0032	SB-237-06	19164-0310	.281	7.14	.235	5.97
19164-0033	SB-237-08	19164-0311	.281	7.14	.235	5.97
19164-0034	SB-237-10	19164-0312	.281	7.14	.235	5.97
19164-0035	SB-239-04		.281	7.14	.235	5.97
19164-0036	SB-239-06		.281	7.14	.235	5.97
19164-0037	SB-239-08		.281	7.14	.235	5.97
19164-0038	SB-239-10	19164-0313	.281	7.14	.235	5.97
19164-0041	SB-2XCX	N/A	.281	7.14	.235	5.97
19164-0042	SB-2YCX	N/A	.281	7.14	.235	5.97
19164-0044	SBB-16-14	19164-0045	.375	9.53	.200	5.08
19164-0139	SB-218-56		.281	7.14	.235	5.97
19164-0141	SB-219-06		.281	7.14	.235	5.97
19164-0142	SB-219-08		.281	7.14	.235	5.97
19164-0146	SB-618-38		.281	7.14	.235	5.97
19164-0150	SB-319-10		.281	7.14	.235	5.97
19164-0152	SB-625-14		.281	7.14	.235	5.97
19164-0153	SB-625-56		.281	7.14	.235	5.97
19164-0154	SB-327-06		.281	7.14	.235	5.97
19164-0155	SB-327-08		.281	7.14	.235	5.97
19164-0156	SB-327-10		.281	7.14	.235	5.97
19164-0159	SB-637-06		.281	7.14	.235	5.97

Wire Size: 14 – 16 AWG 2.00 – 1.30 mm ²						
Terminal No.	Terminal Eng No. (REF)	Terminal No. Mylar Tape	Wire Strip Length		Insulation Diameter Maximum	
			In	mm	In	mm
19164-0160	SB-637-08		.281	7.14	.235	5.97
19164-0161	SB-637-10		.281	7.14	.235	5.97
19164-0532	SB-216-08		.281	7.14	.235	5.97
19164-0849	SB-216-10		.281	7.14	.235	5.97

Terminal No.	Terminal Eng No. (REF)	Terminal No. Mylar Tape	Wire Strip Length		Insulation Diameter Maximum	
			In	mm	In	mm
19164-0056	SC-12-10	19164-0057	.375	9.53	.280	7.11
19164-0058	SC-201-12		.438	11.12	.310	7.87
19164-0060	SC-228-04	19164-0936	.438	11.12	.310	7.87
19164-0061	SC-228-06	19164-0937	.438	11.12	.310	7.87
19164-0062	SC-228-08	19164-0938	.438	11.12	.310	7.87
19164-0063	SC-228-10	19164-0939	.438	11.12	.310	7.87
19164-0065	SC-230-10	19164-0316	.438	11.12	.310	7.87
19164-0066	SC-230-14	19164-0317	.438	11.12	.310	7.87
19164-0067	SC-230-56	19164-0318	.438	11.12	.310	7.87
19164-0068	SC-240-38	19164-0857	.438	11.12	.310	7.87
19164-0069	SC-241-06		.438	11.12	.310	7.87
19164-0070	SC-241-08		.438	11.12	.310	7.87
19164-0071	SC-241-10		.438	11.12	.310	7.87
19164-0072	SC-268-10		.438	11.12	.310	7.87
19164-0073	SC-268-14		.438	11.12	.310	7.87
19164-0074	SC-2YCX	N/A	.438	11.12	.310	7.87
19164-0200	SC-301-12		.438	11.12	.310	7.87
19164-0201	SC-328-06		.438	11.12	.310	7.87
19164-0202	SC-328-08		.438	11.12	.310	7.87
19164-0203	SC-328-10		.438	11.12	.310	7.87
19164-0204	SC-330-14		.438	11.12	.310	7.87
19164-0205	SC-330-56		.438	11.12	.310	7.87
19164-0206	SC-340-38		.438	11.12	.310	7.87
19164-0207	SC-341-06		.438	11.12	.310	7.87
19164-0208	SC-341-08		.438	11.12	.310	7.87
19164-0209	SC-341-10		.438	11.12	.310	7.87
19164-0213	SC-211-06		.438	11.12	.310	7.87
19164-0214	SC-211-08		.438	11.12	.310	7.87
19164-0215	SC-211-10		.438	11.12	.310	7.87
19164-0285	SC-2XCX	N/A	.438	11.12	.310	7.87
19164-0533	SC-217-08		.438	11.12	.310	7.87
19164-0534	SC-217-10		.438	11.12	.310	7.87
19164-0624	SC-236-08		.438	11.12	.310	7.87
19164-0846	SC-201-38		.438	11.12	.310	7.87

STEP DOWN BUTT SPLICE						
Wire Size: 14 – 16 AWG 2.00 – 1.30mm ² to 18 - 22 AWG .080-0.35 mm ²						
Terminal No.	Terminal Eng No. (REF)	Terminal No. Mylar Tape	Wire Strip Length		Insulation Diameter Maximum	
			In	mm	In	mm
19164-0043	SBA-631		.281	7.14	.230	5.84

STEP DOWN BUTT SPLICE						
Wire Size: 10 – 12 AWG 5.00 – 3.30mm ² to 14 - 16 AWG 2.00-1.30 mm ²						
Terminal No.	Terminal Eng No. (REF)	Terminal No. Mylar Tape	Wire Strip Length		Insulation Diameter Maximum	
			In	mm	In	mm
19164-0077	SCB-646	19164-0582	.281	7.14	.300	7.62

OPERATION

Open the tool by first closing the jaws sufficiently for the ratchet mechanism to release.

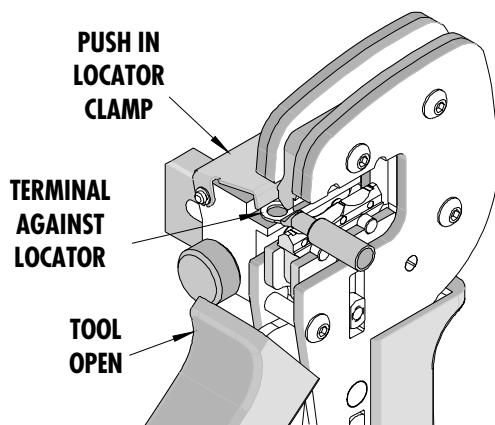


Figure 1

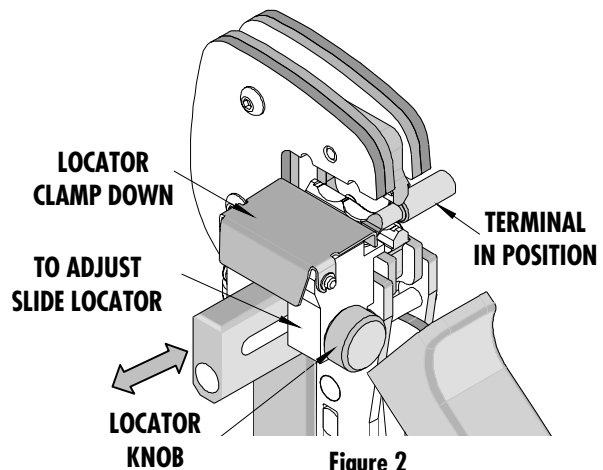


Figure 2

Crimping Terminals

1. Push in on the locator clamp to lift and position the nose of terminal under the clamp and push against the shoulder with the barrel facing up into the color-coded nest. Release the locator clamp to hold the terminal. See Figure 1.
2. Loosen the locator knob and slide as required until the conductor barrel is centered over the crimp pocket in the lower jaw as shown in Figure 2. Tighten the locator knob to lock the locator assembly in position.
3. Partially close the hand tool jaws until the terminal is held snug in place.

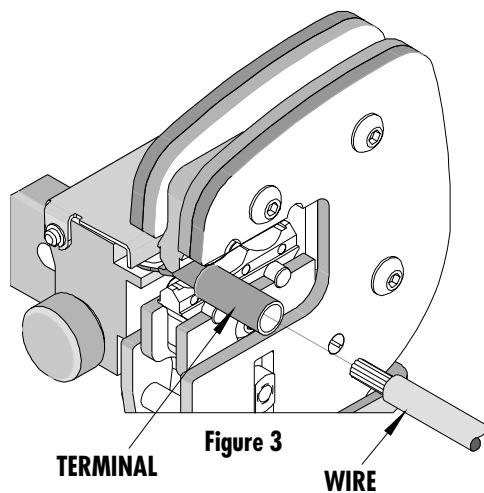


Figure 3

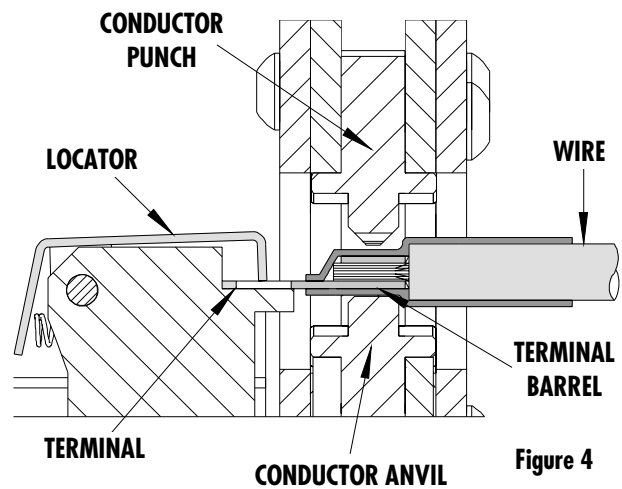


Figure 4

4. Insert the properly stripped wire into the terminal barrel. See Figure 3 and 4.
5. Complete the crimp by closing the hand tool handles until they release.
6. Remove the crimped terminal by pulling away from the locator or open to remove flanged spades. Inspect for proper crimp location. Molex offers a Crimp Inspection Handbook for closed barrel industrial product. See our website or contact your Molex sales engineer.

Note: The tamper proof ratchet action will not release the tool until it has been fully closed.

Crimping Butt Splices

When crimping one end of a butt splice, loosen the locator knob and slide locator all the way out away from crimp jaws. When crimping the second end of a butt splice the locator assembly must be removed. See Figure 5.

1. Position the butt splice centered over the appropriate crimp pocket.
2. Partially close the tool to hold the butt splice in place.
3. Insert the properly stripped wire into the butt splice. The end of the wire should butt against the wire stop in the butt splice. Cycle the tool.
4. Remove the crimped butt splice and inspect for proper crimp location.
5. To crimp the second end, remove the locator assembly and rotate the butt splice 180° so the opposite end of the butt splice is centered over the appropriate crimp pocket.
6. Repeat steps. 2 thru 4.

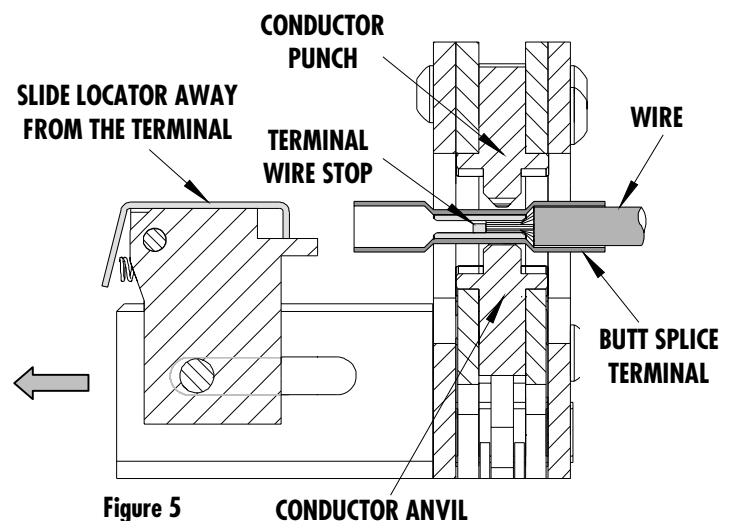


Figure 5

Note: Whenever crimping without the locator, make sure the seam of the terminal is oriented up or down in the tool if using unbrazed product, as this will provide higher pull force values.

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. This hand tool was engineered for durability but like any fine piece of equipment, it requires cleaning and lubrication for maximum service life of trouble free operation. Use light oil such as 30 weight automotive at the oil points shown in Figure 5. Lubricate every 5,000 crimps or 3 months to significantly enhance the tool life.
4. 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.

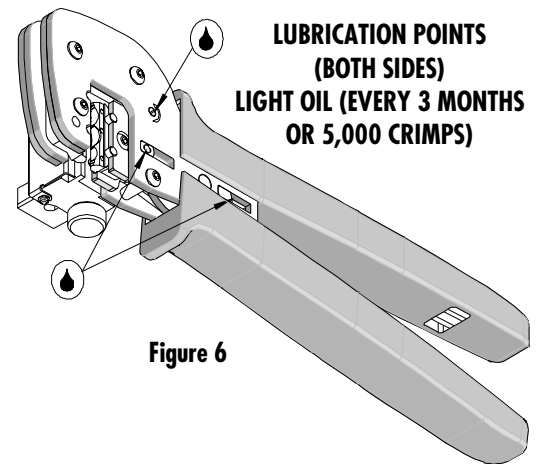


Figure 6

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 **turning** the ratchet release **screw**. See Figure 7.

Tool Calibration

A Certificate of Calibration (see last page) was supplied with the tool. To verify calibration of this tool, pin gauge measurements should be taken in each conductor nest and compared to this chart. The tool should be lubricated before checking calibration to ensure consistent measurements. Handle preload is factory set to 25-45 LBS.

Nest Color Code	Wire Range		"X" Dimension Conductor Crimp			Crimp Inspection Marking
	AWG	mm ²	Mean	Go	No Go	
Red	18 - 22	0.35 - 0.80	.094	.090	.098	---
Blue	14 - 16	1.30 - 2.00	.115	.110	.119	---
Yellow	10 - 12	3.30 - 5.00	.161	.156	.167	---

Warranty

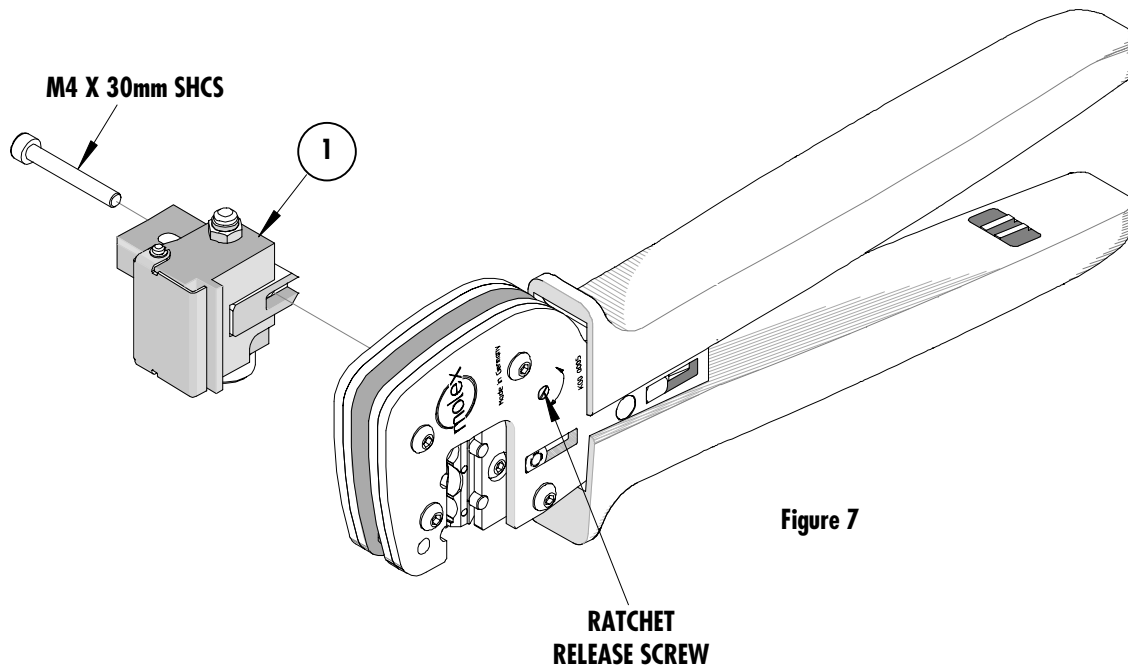
This tool is for electrical terminal crimping purposes only. This tool is made of the best quality materials. All vital components are long life-tested. All tools are warranted free of manufacturing defects for a period of **30 days**. Should such a defect occur, we will repair or exchange the tool free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

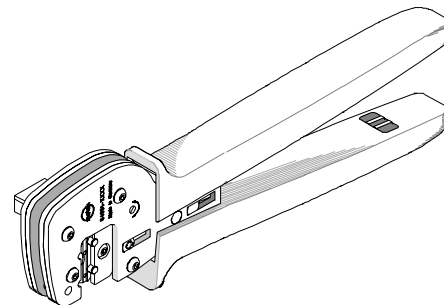
Hand held crimping tools are intended for low volume, prototyping, or repair requirements only.

Caution: Repetitive use of this tool should be avoided.

PARTS LIST

Item Number	Order Number	Description	Quantity
	64001-7400	Hand Crimp Tool	Figure 7
1	64001-7475	Locator Assembly	1





Certificate of Calibration

Tool Order Number 64001-7400

Tool Eng. Number 64001-7400

Tool Revision A

Serial Number _____

Date of Manufacture _____

Pin Gage of Conductor Nest/Nests or Slug height if the nest is the "F" Crimp style.

Range Conductor Nest # 1 = .090/.097 Actual = _____

Range Conductor Nest # 2 = .110/.118 Actual = _____

Range Conductor Nest # 3 = .156/.166 Actual = _____

Technician _____

Date of Calibration _____

Americas Headquarters
Lisle, Illinois 60532 U.S.A.
1-800-78MOLEX
amerinfo@molex.com

Far East North Headquarters
Yamato, Kanagawa, Japan
81-462-65-2324
feninfo@molex.com

Far East South Headquarters
Jurong, Singapore
65-6-268-6868
fesinfo@molex.com

European Headquarters
Munich, Germany
49-89-413092-0
eurinfo@molex.com

Corporate Headquarters
2222 Wellington Ct.
Lisle, IL 60532 U.S.A.
630-969-4550
Fax: 630-969-1352

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