



# OPERATING INSTRUCTIONS

HTV10 Hand Tool, Tandem Spring,  
TE P/N 169481-2

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## 1 Revisions

### 1.1 Revision history

Rev.	Date	Description	Name
A	17.01.2017	First version	L. Sandhu

Table 1: Revision history

## 2 Introduction

### 2.1 About these operating instructions

These operating instructions describe the use and operation of the HTV10 hand tool and the necessary maintenance measures.

All persons using the hand tool must therefore be familiar with these operating instructions and follow them.

These operating instructions must be available with the hand tool at all times.

The owner and/or user is obliged to supplement these operating instructions with instructions in line with existing national regulations on accident prevention and environmental protection.

These operating instructions apply to the following TE Connectivity hand tool:

- HTV10 HAND TOOL, TANDEM SPRING TE P/N 169481-2

#### Warranty claims and liability

TE Connectivity disclaims all liability for any loss or damage arising from the failure to observe instructions on the hand tool or in the operating instructions.

The manufacturer is not liable for any loss or damage arising from unauthorised changes or modifications to the hand tool.

## 3 Intended use

The hand tool is used to crimp Tandem Spring terminals according to the TE processing specification and drawing listed in Table 2.

The hand tool may only be used for repair purposes or for making samples, and not for series production.

The following terminals can be processed with the hand tool:

Cross-section	Terminal	Terminal P/N	TE processing specification
0.03 - 0.09 mm <sup>2</sup> AWG 32-28	Tandem Spring	167042-1	114-25021
0.2 - 0.56 mm <sup>2</sup> AWG 24-20	Tandem Spring	166722-1	114-25021
0.12 - 0.14 mm <sup>2</sup> AWG 26	Tandem Spring	166722-1	114-25021

Table 2: Terminals suitable for processing

#### Operational environment

The hand tool may only be used in a dry and dust-free environment. Do not use the hand tool in environments with a gas atmosphere.

## 4 Description

### 4.1 Functional description

The hand tool essentially consists of a terminating head, two locking pins for the crimping head, moveable handles, a locking mechanism and a crimping die. The crimping die contains three crimping nests covering the entire cross-section range of the wires to be processed and marked accordingly.



Figure 1: The hand tool, front (left), rear)

Item	Description	Item	Description
1	Terminating head	2	Handles
3	Locking mechanism	4	Crimping die
5	Crimping nest	6	Locking pin
7	Terminal stop	-	-

Table 3: Hand tool components

## 5 Operation

### 5.1 Crimping terminals

Based on the wire cross-section and the relevant processing specification, determine the right crimping die for the terminal to be processed. Proceed as follows to crimp the terminal:

- Close the hand tool until the locking mechanism allows you to open the handles.



The locking mechanism of the hand tool has a ratchet that makes audible clicks when you close the handles. Upon the final click, the unlocking device is released and the hand tool can be opened again. To open in an emergency, the lever of the unlocking mechanism needs to be operated.

- Open the hinged terminal holder.

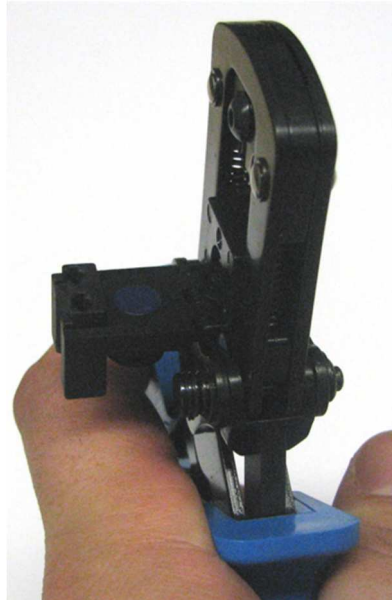


Figure 2: Open the hinged terminal holder (as illustrated)

- Insert the terminal to be processed into the terminal holder. Make sure the terminal is pushed as far as the stop in the terminal holder.
- Carefully close the hinged terminal holder.
- Close the hand tool until the first click.

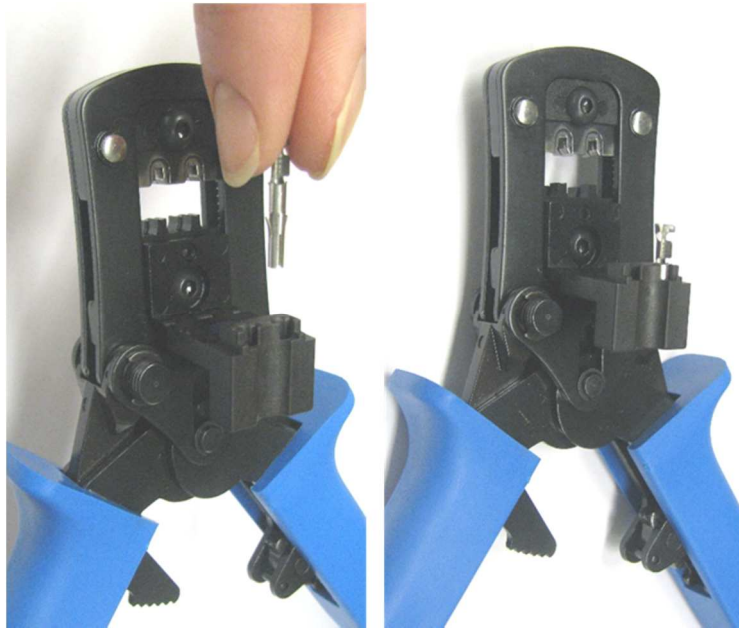


Figure 3: Insert the terminal in the terminal holder (left); Terminal in place (right) (as illustrated)

- Feed the stripped wire into the insulation stop of the upper crimping die in accordance with the processing specifications (see Table 2) and the details shown on the drawing.
- Hold the wire against the insulation stop and press the handles together until the locking mechanism releases. Let the crimping tool open fully.



Figure 4: Insert the wire into the crimping zone (left), close the hand tool (right) (as illustrated)

- Remove the crimped terminal from the crimping die. If the terminal is stuck, jiggle it slightly to remove it from the hinged terminal holder.
- Check the crimp height of the crimped terminal, Please refer to the information in the processing specification (see Table 2) and the drawing provided by TE Connectivity for this.

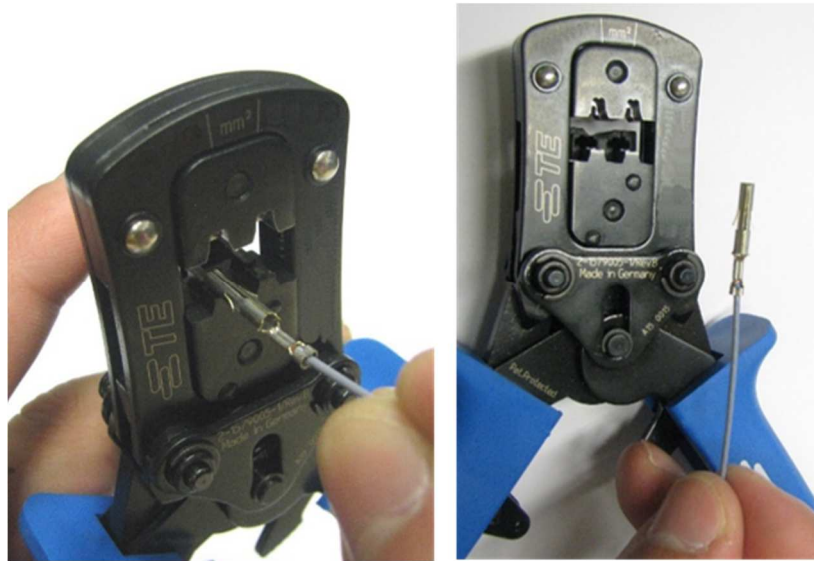


Figure 5: Remove the terminal (left) and check the crimped terminal (right) (as illustrated)

- ✓ The cables are firmly attached together in the connector.

## 6 Repair and maintenance

### 6.1 Daily maintenance

The following maintenance tasks should be performed daily by the responsible operator:

- Using a soft, clean brush or a lint-free cloth, remove dirt, dust, moisture and other residue from the hand tool. Do not use any hard or abrasive tools or materials that could damage the hand tool.
- Apply sewing-machine oil to all pivot points and bearing surfaces. Do not lubricate excessively.
- When the hand tool is not needed, store it in a clean and dry location.

### 6.2 Periodic inspection

- The hand tool should be inspected periodically by suitably qualified staff according to the level of use, and the inspections should be documented.
- Check the hand tool for wear and damage, particularly in the crimping nest areas.

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## 7 Customer Service Europe, Middle East and Africa (EMEA)

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