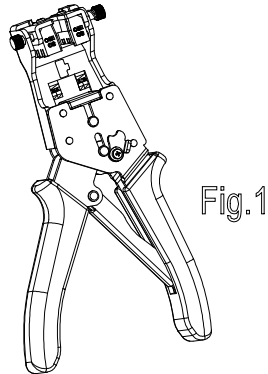# molex®

## INSTALLATION INSTRUCTIONS

## DATAGATE™ Four Pair Termination Tool

### 1. SCOPE

This document covers the instructions for the proper use and maintenance of the Four Pair Termination Tool. The tool is designed to terminate 23-24 AWG solid conductors used to terminate the Molex DataGate™ jacks.



Fig.1

| Order No. | SAP No. | Description |
|---|---|---|
| 31.0011 | 182520002 | DATAGATE TERMINATION TOOL FRAME |
| 31.0012 | 182520003 | UTP Termination Head |
| 31.0013 | 182520004 | C6A (F/UTP or U/FTP cable) Termination Head |

### 2. COMPONENTS



Fig.2
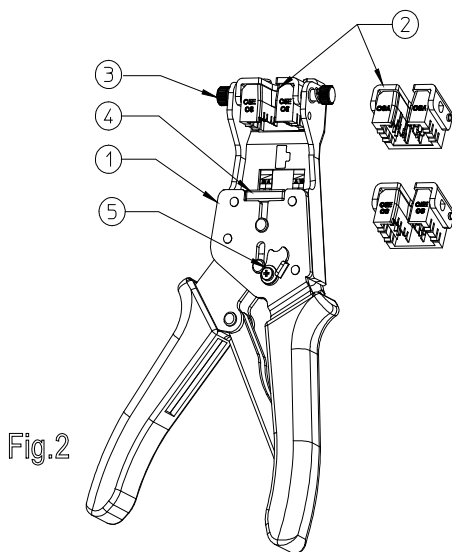
1) Tool frame

2) Cable termination heads

3) Termination head pivot

4) Jack pusher

5) Handle latch

### 3. TOOL SET UP

Ensure that the correct lacing head is assembled in the tool frame.

1. For DataGate™ UTP jacks and MOLEX KEYSTONE UTP the UTP termination head should be used (Refer Fig.3)

2. For C6A DataGate™ and C6A MOD-Clip™ Jacks, C6A termination head should be used (Refer Fig. 3).The C6A MOD-Clip™ adapter to be fitted after the termination.



Fig.3
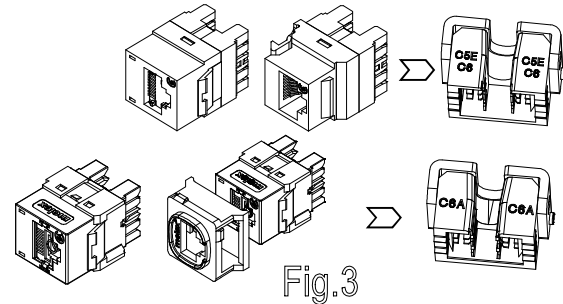
### 4. TO CHANGE THE TERMINATION HEAD.

1. Remove the two (2) Termination head screws with Allen key provided fig 4.

2. Position the UTP Termination head as shown in fig. 4.

3. Install the two (2) Termination head screws.



SCREW M2.5x8

UTP Termination head

ALLEN KEY

Fig.4
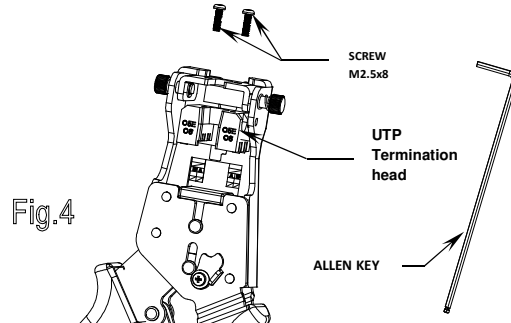
### OPERATION:

CAUTION: Terminate only Molex DataGate™ and KEYSTONE™ Jacks with this tool. Do not terminate other products or hardened objects as damage can occur to the tool.

While squeezing the handles together, pivot the handle latch away from the pin, and tool handles will spring open.



HANDLE LATCH

PIN

Fig.5
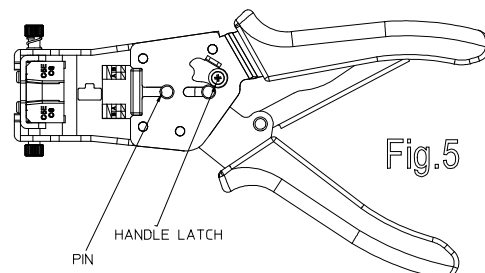
## 5. TERMINATION PROCEDURE

### 5.0. C6A Jacks
Fit C6A termination head to 4 pair termination tool frame (see Fig.4)

Tools Required:
   a) Cable Stripper
   b) Screwdriver
   c) Wire clipper

### 5.1 Cable Preparation

NOTE: The tool is designed to be used with Molex Premise Networks branded C6A U/FTP and F/UTP Cable.

**U/FTP cable preparation:**

1. Ensure rear housing cable clamp is open
2. Slide rear housing on to cable (see Fig 6)
3. Remove 75mm (3") of cable sheath with cable stripper (Fig 8)
4. Unwrap the foil from the 4 pairs and remove the foil from the green, orange and brown pairs.
5. Straighten the foil of the blue pair and flatten it against the cable sheath. Ensure the cable foil conductive surface is facing out.
6. Straighten the drain wire and fold it back on to the cable sheath (Fig 8) Separate the pairs and straighten the wires (Fig. 8A)
7. Once termination is completed (see steps 5.2 -5.2.9), wrap foil around cable sheath and coil the drain wire around the foil.
8. Slide the rear can on to the jack. Ensure that the clamp on the rear can makes contact with the drain wire.



Fig.6   Fig.7   Fig.8   Fig.8A
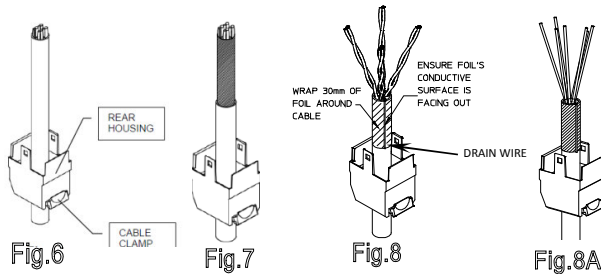
### F/UTP cable preparation:

1. Ensure rear housing cable clamp is open
2. Slide rear housing on to cable (Fig 6)
3. Remove 75mm (3") of cable sheath with cable stripper (Fig 7)
4. Unwrap overall foil from cable
5. Cut the central spline and cellophane wrap back to the sheath with cable clippers
6. Straighten the foil and flatten it against the cable sheath (Fig 8).
7. Ensure the cable foil conductive surface is facing out.
8. Straighten the drain wire and fold it back on the cable sheath (Fig 8A) Separate the pairs and straighten the wires (Fig. 8A)
9. Once termination is completed (see steps 5.2 -5.2.9), wrap foil around cable sheath and coil the drain wire around the foil.
10. Slide the rear can on to the jack. Ensure that the clamp on the rear can makes contact with the drain wire.

### 5.2. Lacing Wires into the Termination Head.

Pivot the Termination Head 90° so the wire comb grooves face out from the tool. This is done by pushing the Termination Head to the left and pivoting it until it locks in place. See Fig.9.
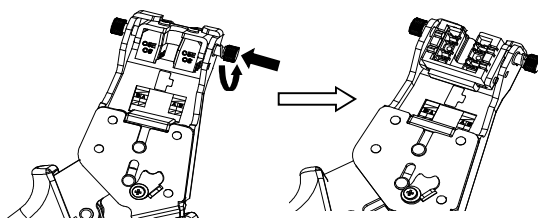


Fig.9

**5.2.2**   Place the prepared cable end in the slot of the Termination Head.  Note: For C6A shielded cable do not trim the drain wire, straighten the drain wire and keep it free from the 4 pairs to be terminated, but available to coil around the cable sheath 3 times after termination.  Position the end of the cable jacket near the bottom of the wire comb. (Fig. 10)
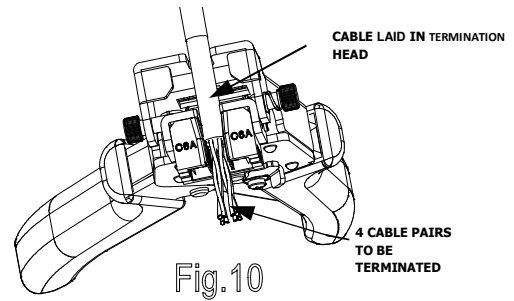


CABLE LAID IN TERMINATION HEAD

4 CABLE PAIRS TO BE TERMINATED

Fig.10

**5.2.3**. Lace the straight wires into the comb groove in the Termination Head following the jack wiring schematic (Fig 12).
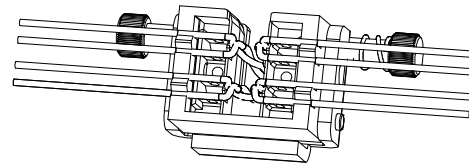
Termination Head



Fig.11

### Notes:
1. Individual wires must be completely straightened inside the Lacing head.(Fig. 11)
2. There are color code labels on the inside of the tool frame for reference (Fig. 12)
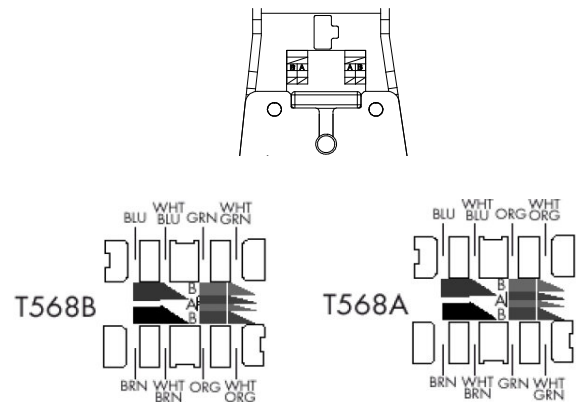
**Jack Wiring Schematic**



T568B    T568A

Fig.12

**5.2.4** After all wires have been laced in the Termination Head, place the jack over the Wires See Fig. 13.

**Caution**: - Ensure that the DataGate™ Jack is free of any icon labels before placing in termination head.
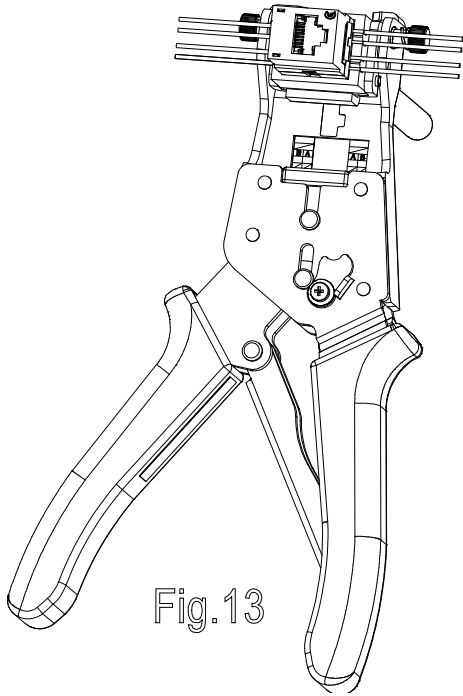
Fig.13

**5.2.5** While holding the jack against the wires push the Termination Head    to the left and pivot it 90° into the tool. Start to close the tool handles (Fig. 14)
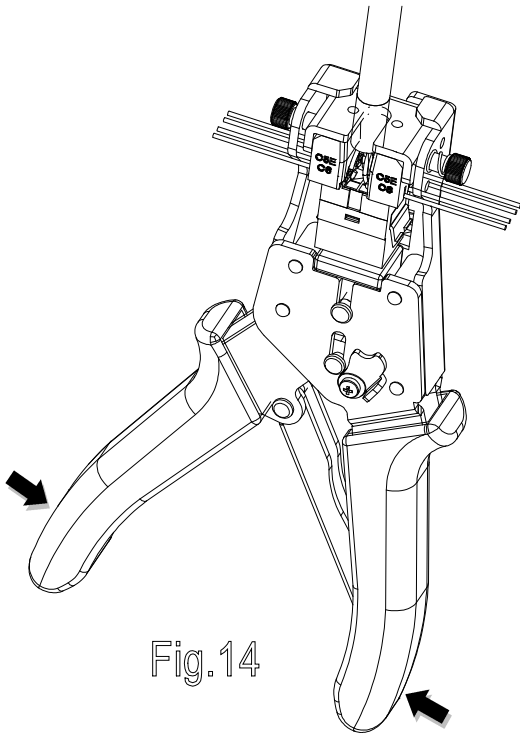


Fig.14

Continue closing the tool handles until the wires are seated in the jack and the excess wire is cut off (The wire cutoff is the indication that the tool stroke is complete).

**NOTE: This tool does not have a full-cycle ratchet action – it is important for the operator to fully close the tool.**

**5.2.6** Release the tool handles to open the tool. The jack will remain in the Termination Head.

**5.2.7** Remove the terminated jack by pivoting the Wire Termination Head 90° and pulling the jack out of the wire comb.

For C6A terminations, coil the foil and drain wire around the cable sheath.

**5.2.8** Visually inspect the terminated jack for proper wire termination.The wires must be cleanly cut and fully seated to the bottom of the slots in the jack.

**5.2.9** Fit cable strain relief stuffer cap (Fig 17).

For C6A terminations, snap the rear can to jack body ensuring that the

drain wire makes contact with the rear can cable clamp.
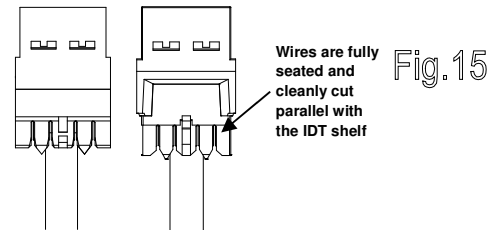


**Wires are fully seated and cleanly cut parallel with the IDT shelf**

Fig.15

### 6.0. UTP DataGate & Keystone.
### Fit UTP Termination Head to Termination Tool.

Tools required
1. Cable stripper
2. Wire clipper/scissors

**NOTE:** The tool is designed to be used with Molex Premise Networks branded C5E and C6 U/UTP Cable

### 6.1. Cable preparation:
Remove 50mm (2"Inches) of cable sheath with cable stripper. Cut the central spline of the UTP cable back to the sheath. See Fig. 16.
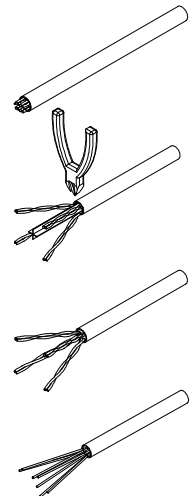Separate the pairs and separate the wires.



6.2. Follow procedures 5.2 – 5.2.8 above for termination Procedure.

Fig.16

### 6.3. Cable strain relief:

Once terminated, fit cable strain relief stuffer cap. See Fig. 17.
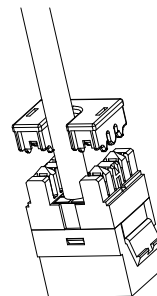


Fig.17

## 6. 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 grade machine oil. Do not oil excessively. The tool is engineered for durability but like any other equipment it needs cleaning and lubrication for a maximum service life of trouble free termination.

4. Use light oil (30 weight automotive oil), at all the oil points, every 5,000 terminations or every 3months. This will significantly enhance the tool life. (Fig. 18)

5. Keep oil away from the Wire Lacing Head and color code labels. Oil transferred from the wire termination area may affect the electrical characteristics of the termination or cause color code labels to fall off.

6. When tool is not in use, keep the handles closed and store the tool in a clean, dry area
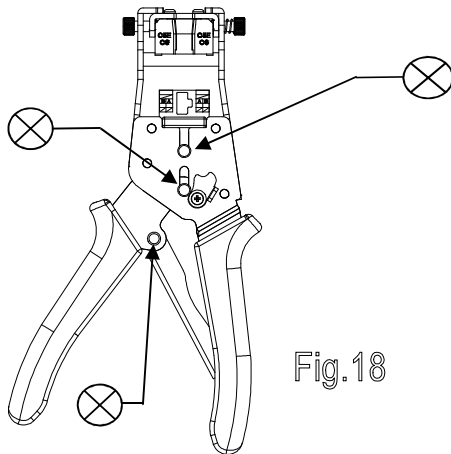
Fig.18

⊗ **Lubrication points (both sides) light oil every 3 months or   5,000 crimps.**

## 7. CAUTIONS

1. Repetitive and prolonged use of this tool can result in repetitive strain to the user. This tool is intended for standard Structured Cabling installation use and not high volume OEM factory production. The insulated rubber handles featured on this tool are not protection against electrical shock

2. This tool is intended for use on Molex DataGate™ and Keystone jacks only as specified above.

3. This tool is qualified to insert and cut off wires on the jacks as described above.

4. When the tool is no longer capable of fully inserting and cutting the cable, the termination head should be replaced. See replacement part no's above.

5. This tool is not designed to be disassembled. Customer repair is not recommended and is not covered by the warranty