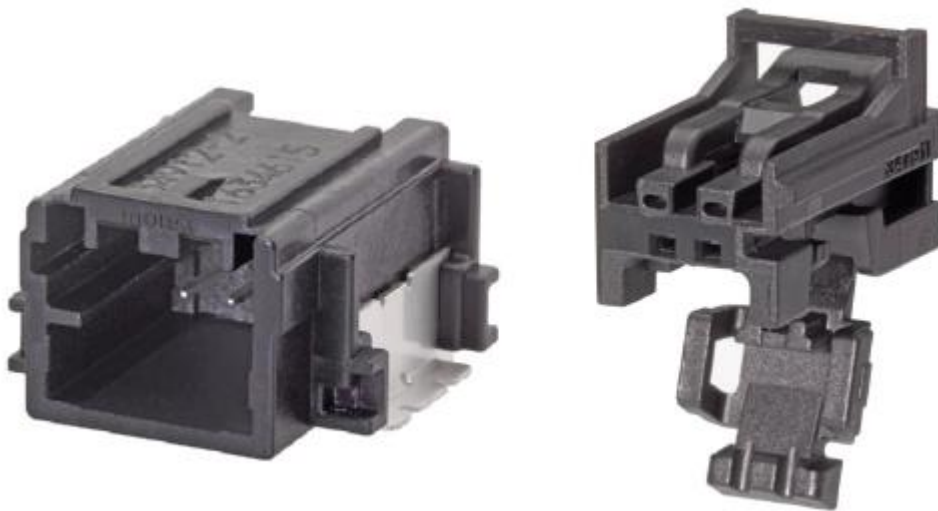


## Molex Mini50 0.50mm Unsealed Connector System

### Application Specification



REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>1 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

## REVISION HISTORY

Rev	Description	Section	Date
D	Added 12ckt information		2013/07/24
E	Added 12 circuit option information Added CPA option information Added note concerning hinge cracking / breaking		2014/02/05
F	Added service instructions for 4 & 8 circuit connector and SMT header		2014/05/22
G	Adding 16, 20 and 24 ways		2015/09/30
H	Added Best Practices and Troubleshooting section		2016/03/30
I-J	Revision not identified by ECTR release process		
K	Added Electrical probes location	4.J	2017/02/16
K1	Added disclaimer regarding pre-seated CPA	4.C	2017/06/06
K2	Release Error		2017/06/20
L	Adding 2 Way connector Adding terminal servicing tool	2 4.I	2017/10/19
M	Updated document formatting Added pictures of 2 Way connector / headers Added information regarding seated CPA Added pictures of SMT headers	All 2 4.A 2	2018/07/12
N	Updated pictures to better show recommended and not recommended mating angles Updated Section 5 regarding issues attributed to improperly crimped/bent terminals including pin push-outs and ISL bowing	4.F 5.A/B/C	2019/12/11
N2	Updated wording on page 26 to mitigate confusion	5E	2020/10/26
N3	Add general taping recommendation on page 13	4	2021/03/08

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
<b>N3</b>	EC No: <b>657418</b> DATE: <b>See Rev Date</b>	<b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	<b>2 of 26</b>
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
<b>AS-34791-020</b>	<b>JGESKE</b>	<b>TSKIVER</b>	<b>JDUNAJ</b>

## TABLE OF CONTENTS

Section	Description
1.0	Scope
2.0	Product Description
3.0	Reference Documents
4.0	Procedure
5.0	Best Practices / Troubleshooting

REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: <b>657418</b> DATE: <b>See Rev Date</b>	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>3 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>		CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>
		APPROVED BY: <b>JDUNAJ</b>	

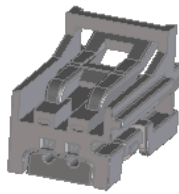
## 1. SCOPE

This procedure applies to all Mini50 Unsealed part numbers in the single row series (2, 4, and 8ckt) and dual row series (12, 16, 20, and 24ckt). See Section 3 for relevant drawing numbers.

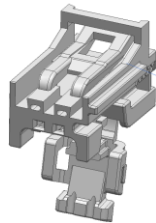
## 2. PRODUCT DESCRIPTION

- 0.50mm, unsealed connector system with 2, 4, 8, 12, 16, 20 and 24 circuits
- 4 polarization options for the 2 and 4 circuit systems; 3 polarization option 8, 12, 16, 20, and 24 circuit systems
- Wire range 0.08mm<sup>2</sup> -- 0.35mm<sup>2</sup>
- Utilizes the Molex CTX50 terminal (Molex series 560023)

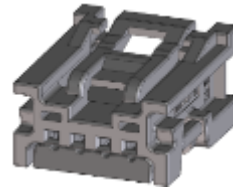
### RECEPTACLES



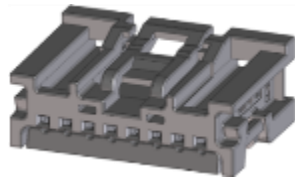
**2 ckt**



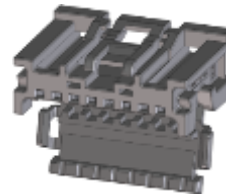
**4 ckt**



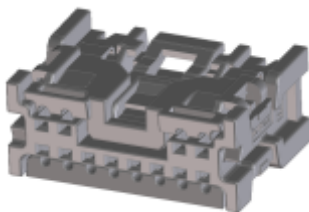
**8 ckt**



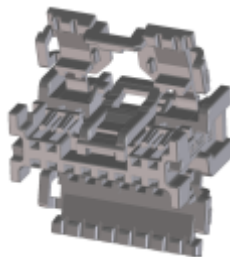
**12 ckt**



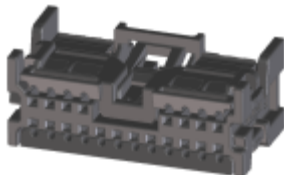
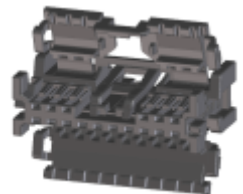
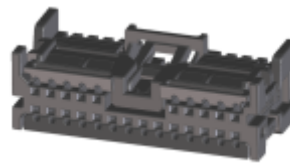
**16 ckt**



**20 ckt**



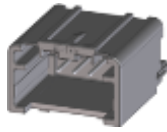
**24 ckt**



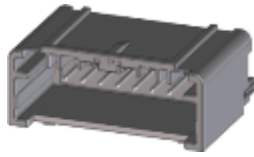
REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>4 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

## THROUGH HOLE HEADERS

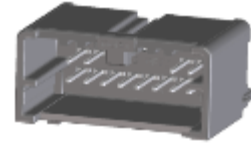
Vertical



**4 ckt**



**8 ckt**



**12 ckt**



**16 ckt**

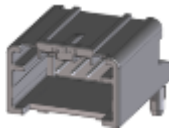


**20 ckt**

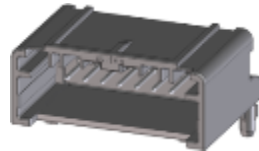


**24 ckt**

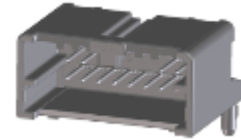
Right Angle



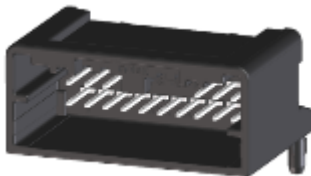
**4 ckt**



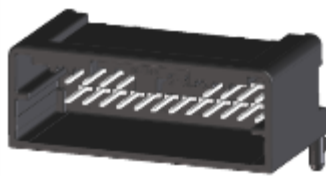
**8 ckt**



**12 ckt**



**16 ckt**



**20 ckt**

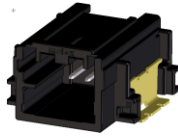


**24 ckt**

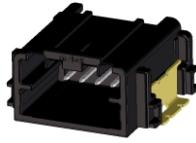
REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>5 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>		CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>
		APPROVED BY: <b>JDUNAJ</b>	

## SMT HEADERS

Right Angle



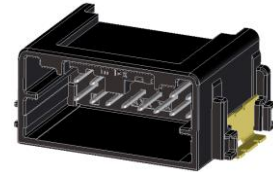
**2 ckt**



**4 ckt**



**8 ckt**



**12 ckt**



**16 ckt**



**20 ckt**



**24 ckt**

REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: <b>657418</b> DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>6 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>		CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>
		APPROVED BY: <b>JDUNAJ</b>	

### 3. REFERENCE DOCUMENTS

Single Row Sales Drawings (2, 4, 8ckt):  
 Receptacle – SD-34791-001  
 Header (Vertical) – SD-34792-001  
 Header (Right Angle) – SD-34793-001  
 Header (SMT) – SD-34912-001

Dual Row Sales Drawings (12, 16, 20, 24ckt):  
 Receptacle – SD-34824-002  
 Header (Vertical) – SD-34825-001  
 Header (Right Angle) – SD-34826-001  
 Header (SMT) – SD-34897-001

Single/Dual Row with CPA Option Sales Drawing:  
 Receptacle – SD-34824-003

Connector System Product Specification:  
 PS-34791-020

Packaging Drawing:  
 Receptacle – PK-31301-538  
 Header – PK-31301-440

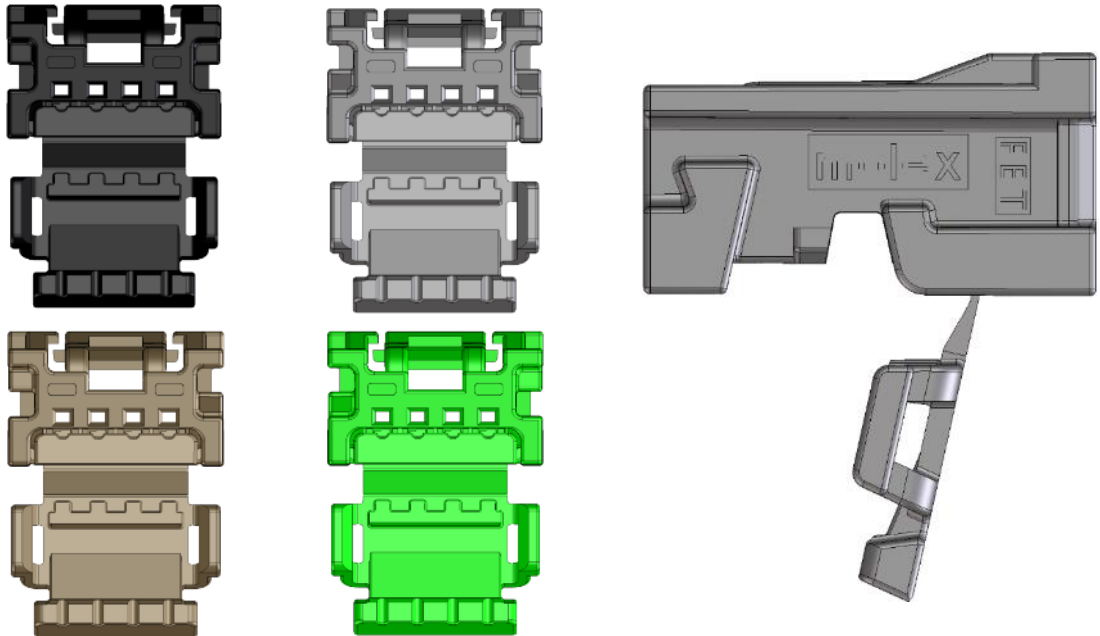
Terminal System:  
 CTX50 Terminal Drawing – SD-560023-002  
 CTX50 Product Specification – PS-560023-001

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
<b>N3</b>	EC No: <b>657418</b> DATE: <b>See Rev Date</b>	<b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	<b>7 of 26</b>
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
<b>AS-34791-020</b>	<b>JGESKE</b>	<b>TSKIVER</b>	<b>JDUNAJ</b>
<small>TEMPLATE FILENAME: APPLICATION_SPEC[SIZE_A](V.1).DOC</small>			

## 4. PROCEDURE

### A. Connector “As-Shipped”

Connector ISL shown in “as shipped” condition (open). The ISL must remain in the open position until all circuits are loaded.

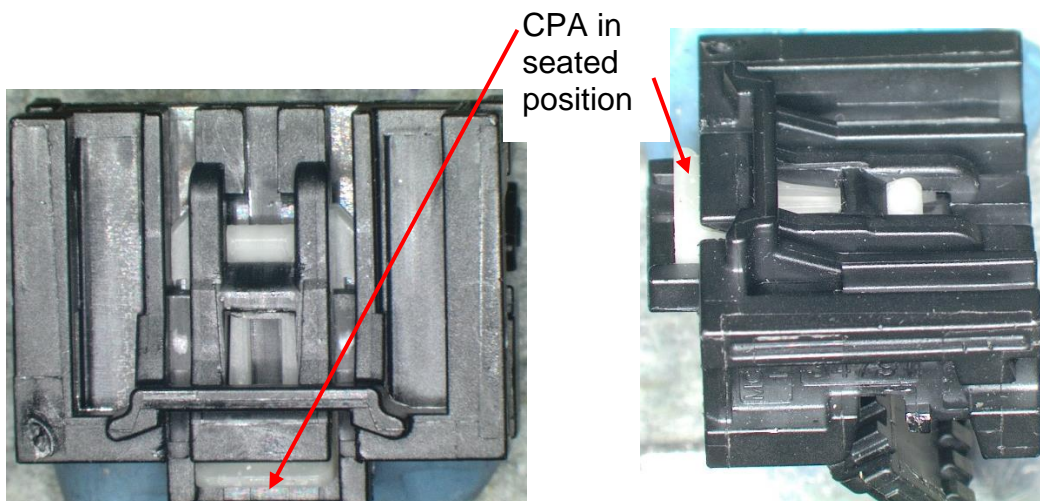


***THERE IS A SMALL CHANCE THAT THE CPA COULD SEAT DURING TRANSIT. IF THIS OCCURS, PLEASE SCRAP THAT SPECIFIC CONNECTOR.***

Pictures of a CPA seated in its final lock position in unmated connector are shown below:

TOP VIEW:

ANGLED TOP/SIDE VIEW:



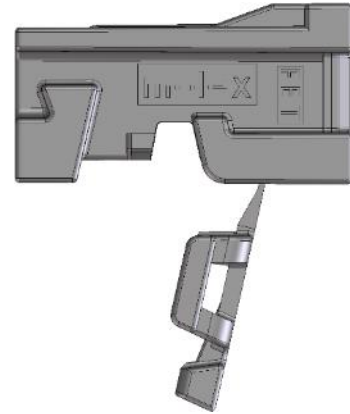
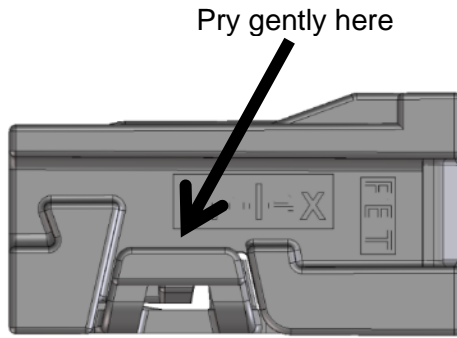
REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>8 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>



**B. ISL “lift to open”**

ISL must be in pre-lock position to populate the connector. If during shipping the Connector ISL moves from its pre-lock position. Simply slide a small screwdriver (width 2-2.5mm) behind the latch on each side of the connector and pry to open the ISL

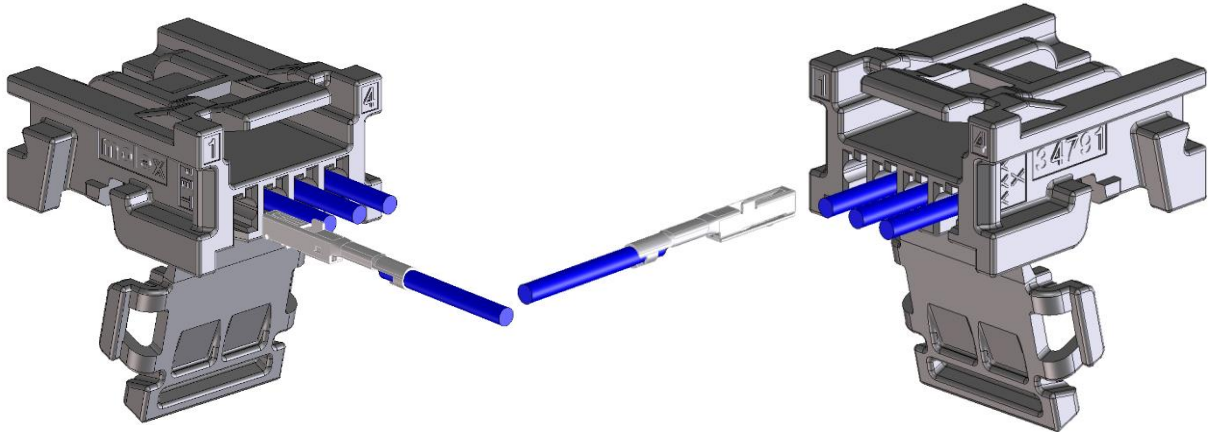
**IF THE ISL OR HOUSING IS DAMAGED IN ANY WAY, DO NOT USE THE CONNECTOR**



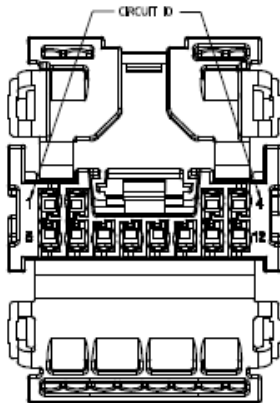
REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: <b>657418</b> DATE: <b>See Rev Date</b>	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>9 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>		CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>
		APPROVED BY: <b>JDUNAJ</b>	

## C. Terminal Installation

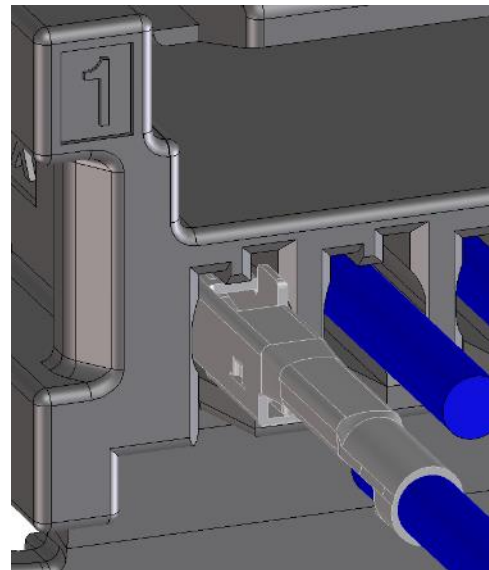
With ISL still in the pre-lock position, orient the terminal to the rear of connector as shown below. Grip the wire behind the terminal insulation crimp and insert it through the appropriate circuit opening. If resistance is encountered, retract the terminal and adjust the angle of insertion. Continue inserting the terminal until it stops and locks up on the lock finger with an audible click or tactile feedback.



**ISL MUST BE IN OPEN POSITION TO POPULATE THE CONNECTOR**



12ckt receptacle shown above as reference.  
The 16, 20, and 24ckt receptacles have similar circuit IDs

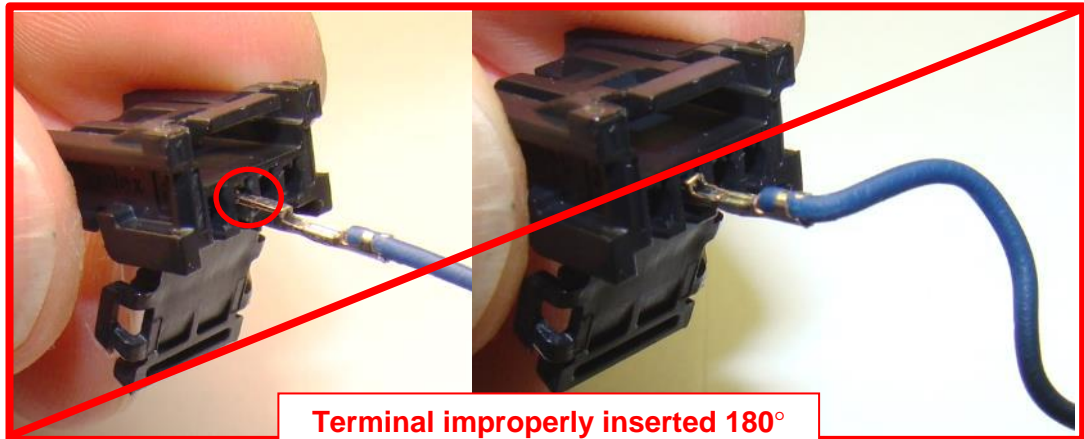
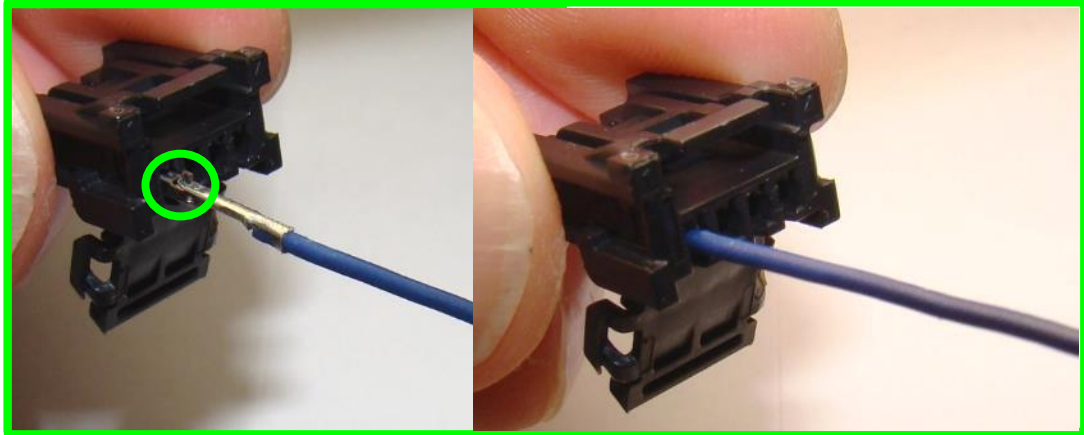


REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: <b>657418</b> DATE: <b>See Rev Date</b>	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>10 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

## C. Terminal Installation (continued)

Installing a terminal correctly will have low effort.

Improperly installing a terminal 180° will lead to a high effort and wire buckle.



**Terminal improperly inserted 180°  
NOTE WIRE BUCKLE**

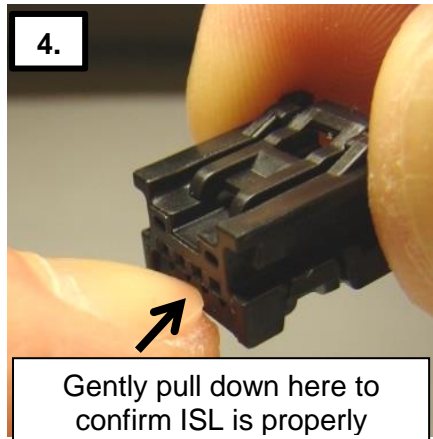
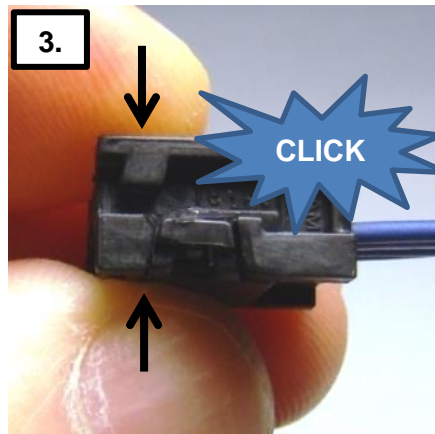
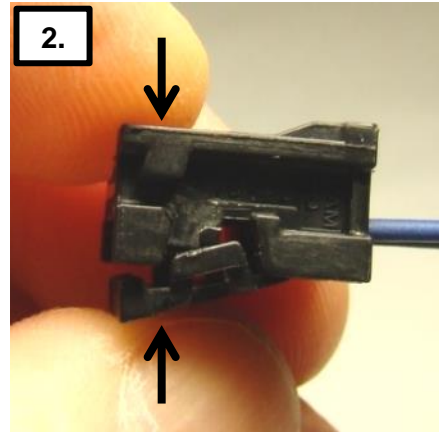
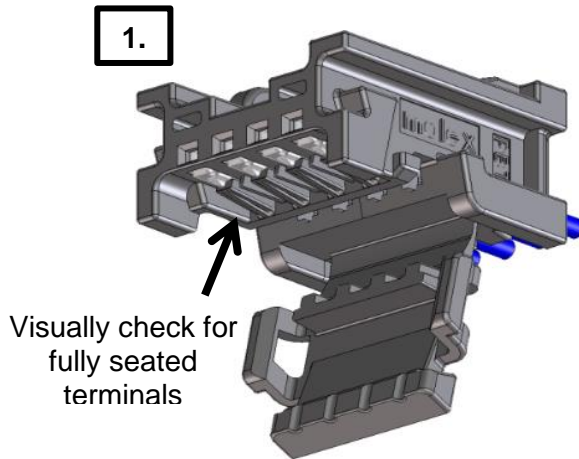
REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>11 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

# Application Specification

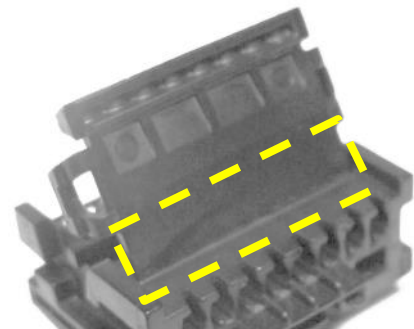
## D. Closing the ISL

Once all terminals are installed:

- 1.) Perform a visual check to confirm terminals are fully seated and in the correct position
- 2.) Close the ISL by applying force to the hinged portion of the connector
- 3.) The ISL will “click” into its final position
- 4.) Gently pull down on the front of the ISL to confirm it is properly closed



**NOTE REGARDING THE ISL:**  
WHILE CYCLING THE HINGE, THE USER MAY NOTICE STRESS LINES OR DELAMINATION IN THE AREA SHOWN BELOW. THIS WILL NOT AFFECT THE FUNCTION OF THE CONNECTOR IN ANY WAY. THE ISL WILL CONTINUE TO FUNCTION 100% EVEN IF THE HINGE IS COMPLETELY SEPERATED FROM THE CONNECTOR BODY.



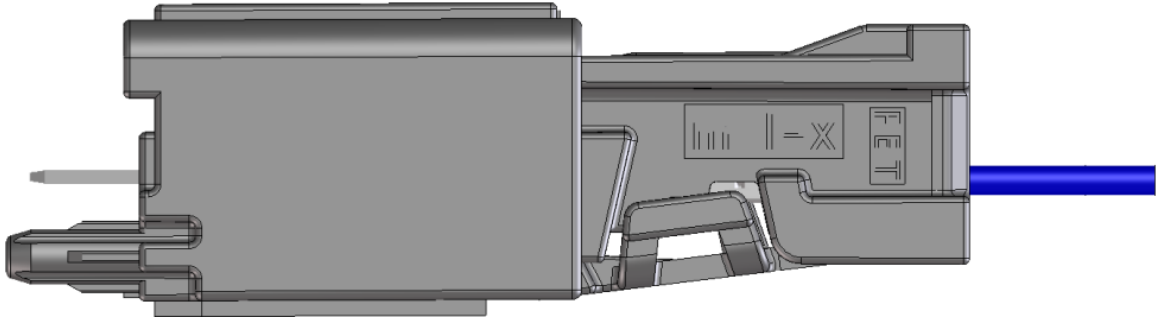
Stress lines or delamination in this area of the hinge may be noticed, but it will not affect the function of the ISL

REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>12 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

# Application Specification

## E. Detecting a partially installed terminal

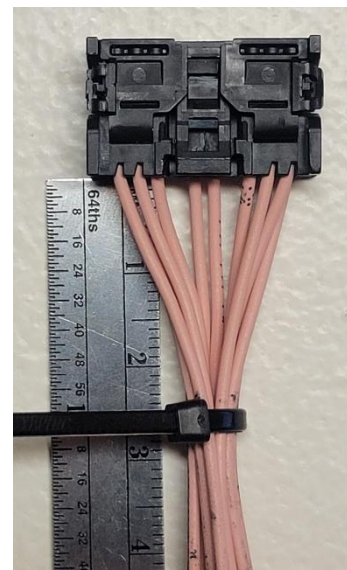
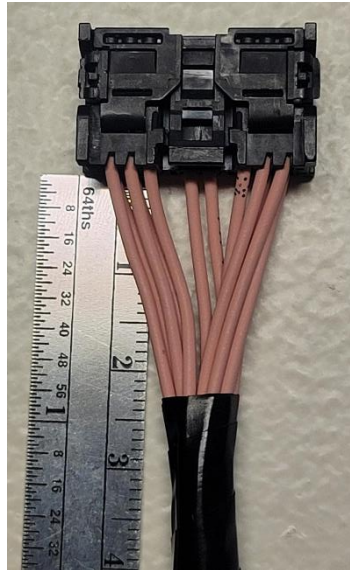
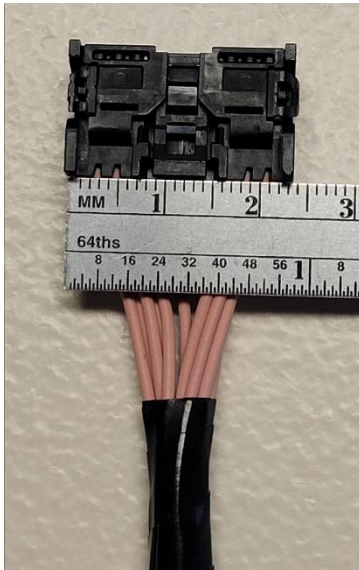
The ISL will not close with a partially installed terminal. If the ISL will not close, confirm all terminals are fully installed. The operator will not be able to mate the connector to the header if the ISL is not closed.



**DO NOT FORCE THE ISL CLOSED WHEN THERE ARE PARTIALLY INSTALLED TERMINALS OR DAMAGE TO THE TERMINAL AND CONNECTOR ISL MAY OCCUR**

## F. General Taping Recommendation

- 1.) The recommended minimum distance between the body of the connector and the start of harness tape (or any other item that constrains the wires) for an unsealed connection system is equal to the width of the connector where the wires are installed.

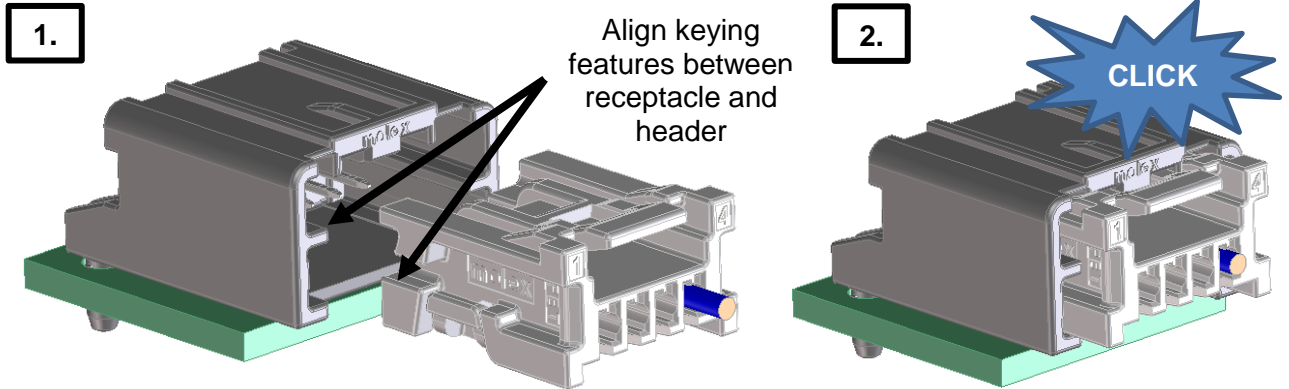


REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: <b>657418</b> DATE: <b>See Rev Date</b>	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>13 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

## G. Connector Mating

To properly mate the connector:

- 2.) First align the keying features from the receptacle connector to the mating header
- 3.) Slide the receptacle connector fully into the header assembly until you hear an audible “click”

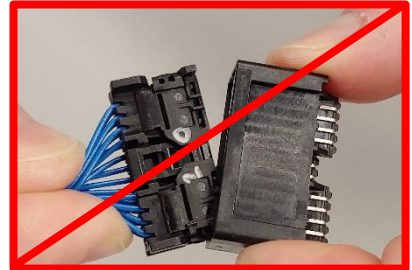
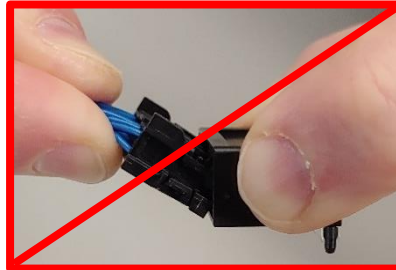
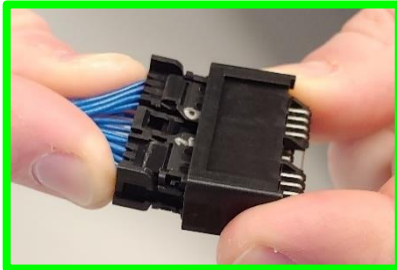


***IF RESISTANCE IS ENCOUNTERED DURING MATING, CONFIRM THE ISL IS FULLY LOCKED AND ALL TERMINALS ARE FULLY INSTALLED (SEE SECTION E. DETECTING A PARTIALLY INSTALLED TERMINAL).***

REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>14 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>		CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>
		APPROVED BY: <b>JDUNAJ</b>	

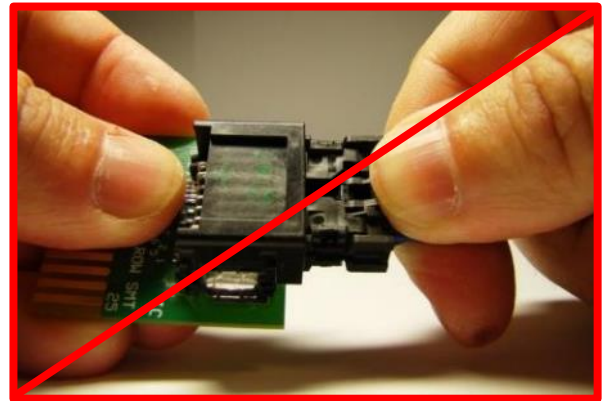
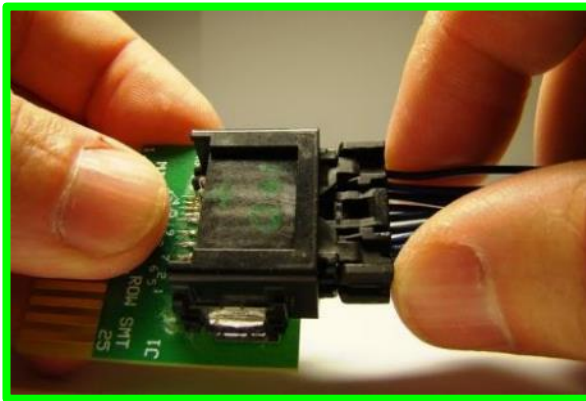
## G. Connector Mating (continued)

Never mate the system at an angle or with bias. This may cause damage to the header or connector.



Always push on the connector housing while mating.

**DO NOT PUSH ON THE LATCH WHILE MATING**



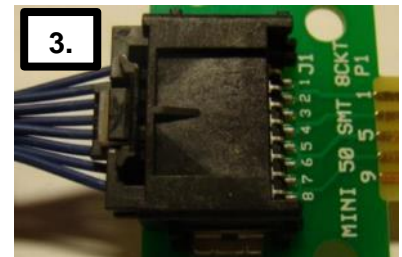
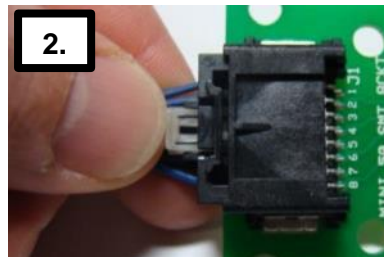
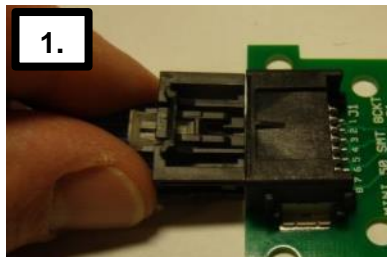
### When mating the connector with a CPA:

1.) Align the connector and push evenly on the connector body to mate.

**DO NOT PUSH ON THE CPA DURING THE MATING PROCESS.**

2.) After mating the connector, push on the CPA to engage.

3.) Check to ensure the CPA is fully seated.



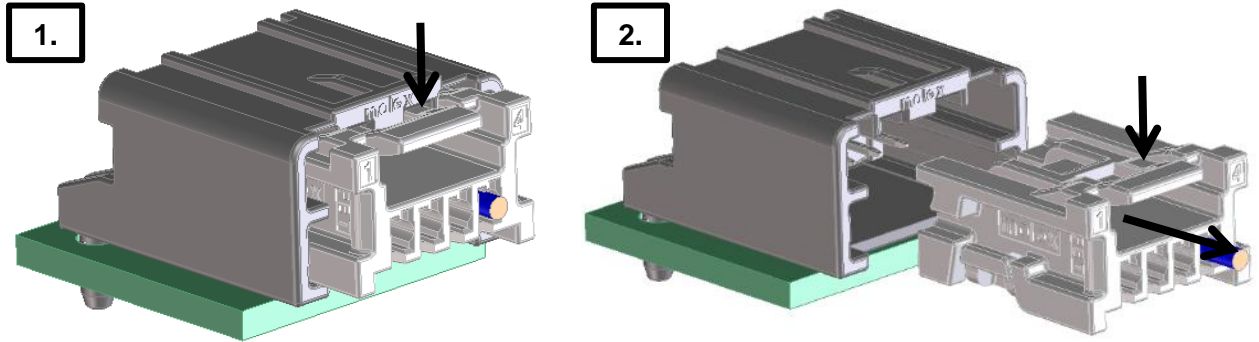
REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>15 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

# Application Specification

## H. Connector Un-mating

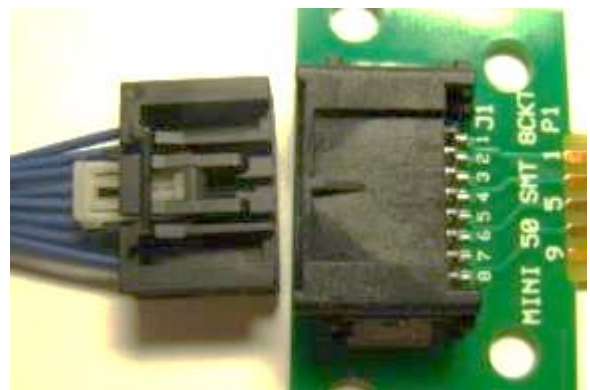
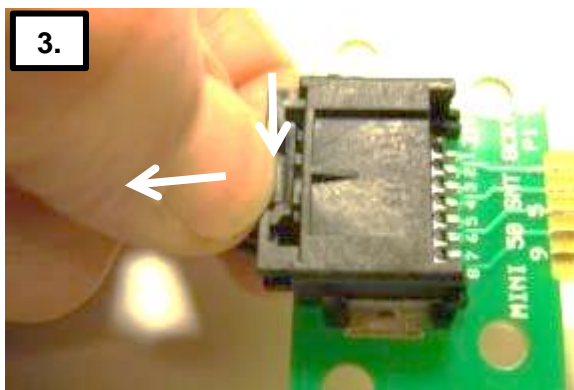
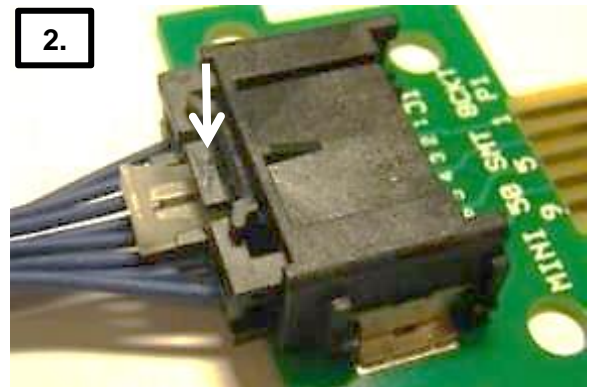
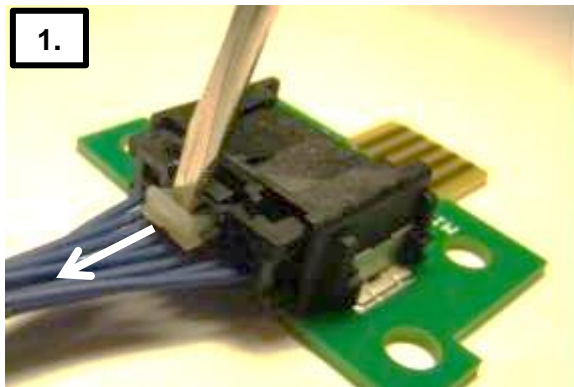
To un-mate the connectors, push connectors together to unload the latch system, then:

- 1.) Depress the latch with your thumb.
- 2.) Continue to depress the latch, and gently pull apart connector assemblies.



### When un-mating the connector with a CPA:

- 1.) Use a small flat tip screwdriver (width 2-2.5mm) to disengage the CPA
- 2.) Push connectors together to unload the latch system, then depress the latch with your thumb.
- 3.) Continue to depress the latch, and gently pull apart connector assemblies.



REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>16 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

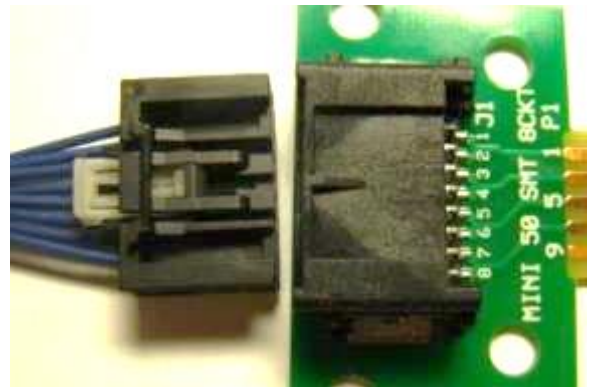
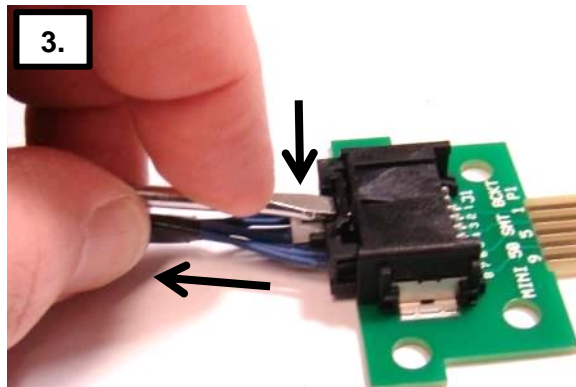
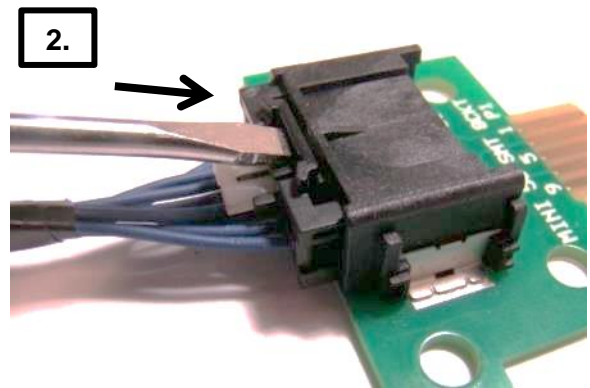
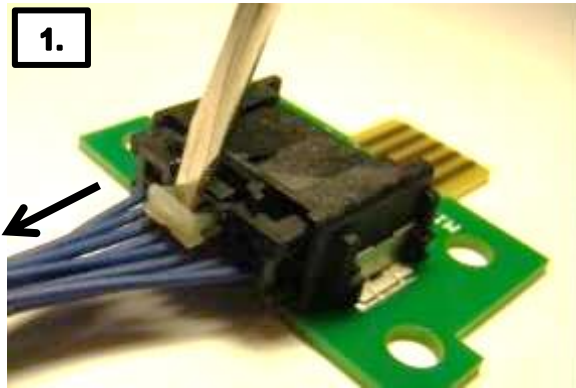


# Application Specification

## H. Connector Un-mating (continued)

If difficulty is encountered while attempting to un-mate the connector from an SMT header, the following procedure may be used:

- 1.) Use a small flat tip screwdriver (width 2-2.5mm) to disengage the CPA
- 2.) Push connectors together to unload the latch system, then insert a small flat tip screwdriver (width 2-2.5mm) between the latch and the latch cover.
- 3.) While pressing down on the latch with the screwdriver (width 2-2.5mm), gently pull on the wire bundle and the screwdriver (width 2-2.5mm) to remove the connector

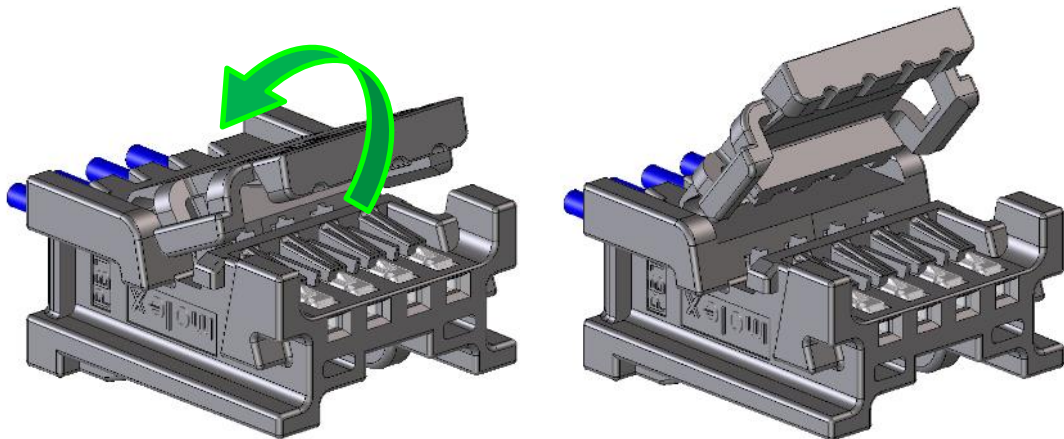
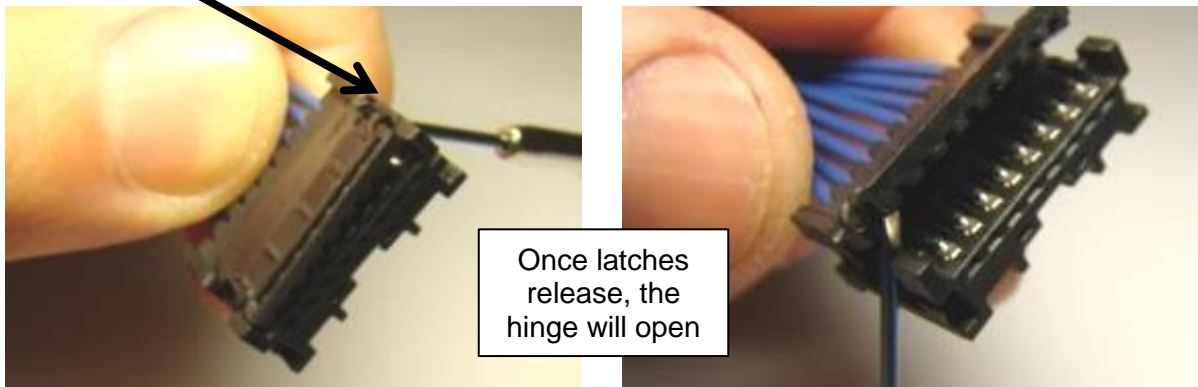
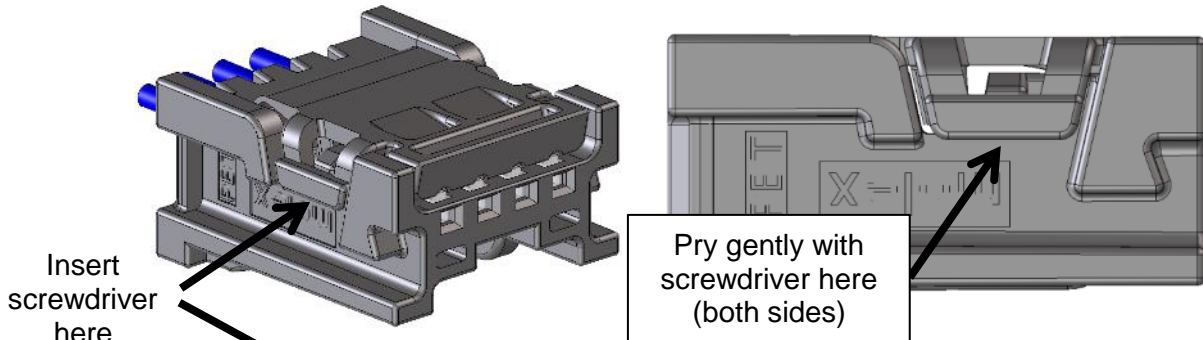


REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>17 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

# Application Specification

## I. Opening the ISL

Use a small flat tip screwdriver (width 2-2.5mm) to gently pry on the ISL latch features one side at a time. Once each ISL latch is released, the ISL will open.

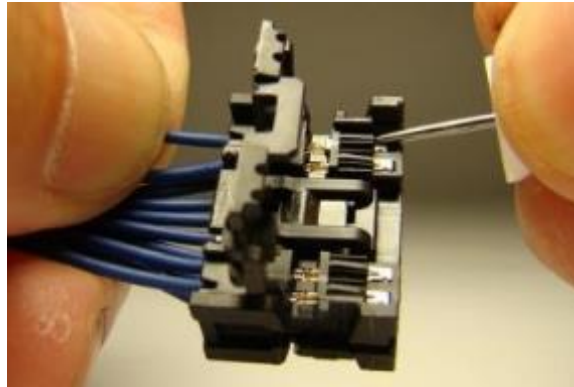


REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>18 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

## J. Terminal Servicing

With a small thumbtack gently pry up on the terminal lock finger. Once the lock finger is released, pull on the terminal to remove it from the housing

**THE CONNECTOR HOUSING MAY BE DAMAGED WITH IMPROPER SERVICING. INSPECT THE TERMINAL, HOUSING, AND LOCK FINGER FOR DAMAGE AND REPLACE THE CONNECTOR IF DAMAGE IS EVIDENT. THE CONNECTOR HOUSING CAN BE SERVICE UP TO TWO TIMES, THEN IT MUST BE REPLACED.**

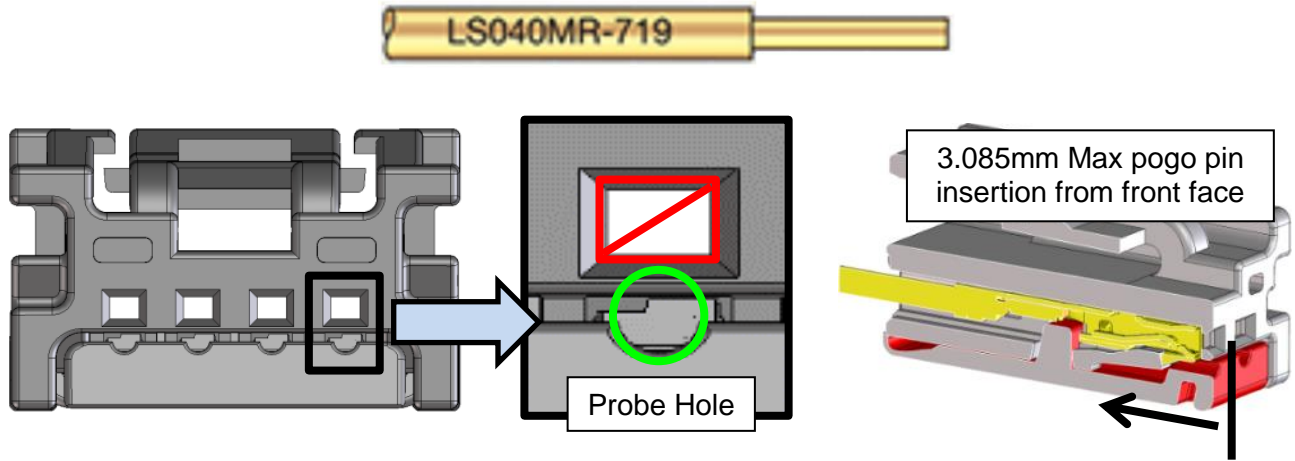


REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>19 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>		CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>
		APPROVED BY: <b>JDUNAJ</b>	

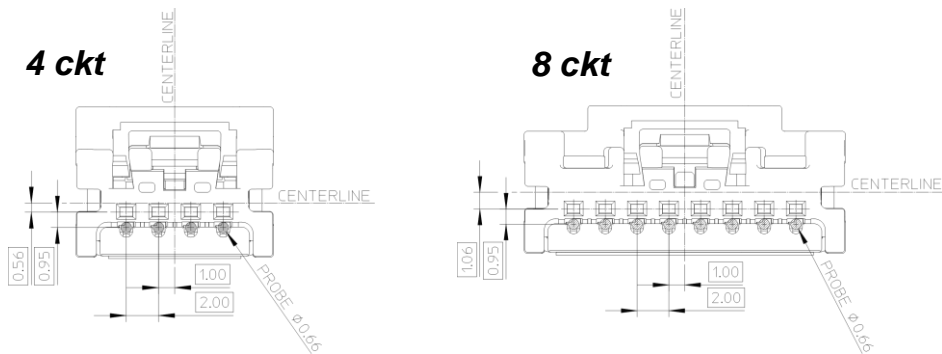
# Application Specification

## K. Electrical Probing / Continuity Checking

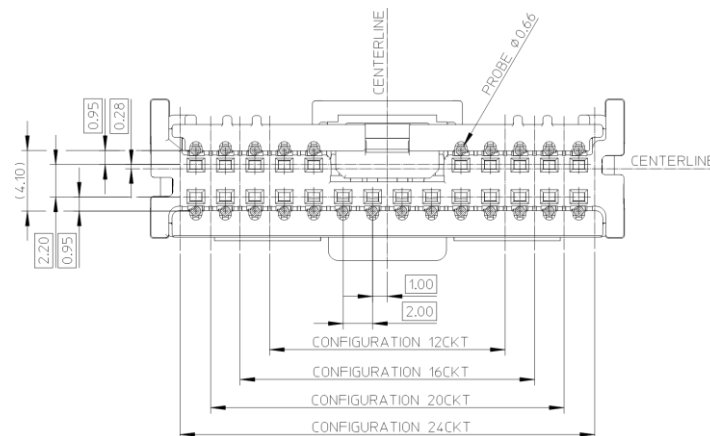
The preferred method of probing is to use the dedicated probe hole opening to check for electrical continuity. Use a 0.66mm (Lone Star part number LS040-MR-719), pin or smaller equivalent to prevent damaging the terminal.



### SINGLE ROW PROBE HOLE LOCATIONS



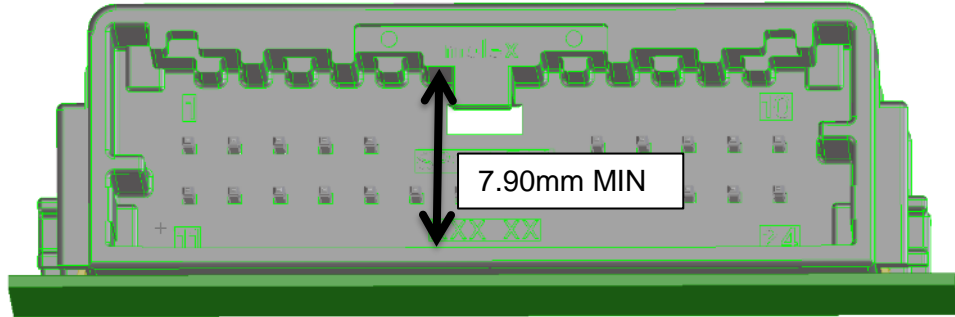
### DUAL ROW PROBE HOLE LOCATIONS



REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>20 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

## L. Post Solder Reflow Measurements

Header warpage during reflow soldering is expected. If the below dimension becomes less than 7.90mm, confirm processing temperatures are in accordance with SMES-152. The product is designed for a peak temp of 260°C is allowed.



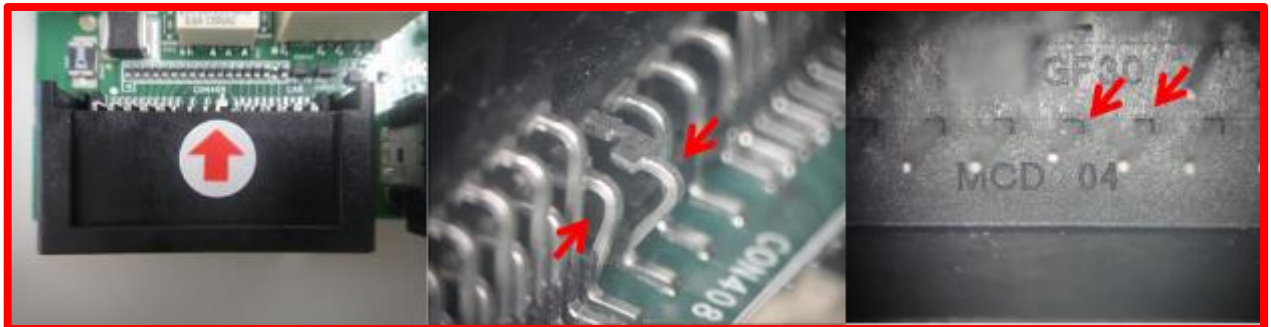
REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: <b>657418</b> DATE: <b>See Rev Date</b>	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>21 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>		CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>
		APPROVED BY: <b>JDUNAJ</b>	

## 5. BEST PRACTICES / TROUBLESHOOTING

Steps can be taken during harness assembly to ensure the product is used successfully by the customer. Terminal crimping that is in accordance with the CTX50 terminal application specification, AS-560023-001, has been found to prevent assembly issues such as bent header pins, pushed-out header pins, ISL bowing, and terminal stubbing. Examples of good and bad terminals and issues attributed to bad terminals are shown in the following pages

### A. **Issues Attributed to Improperly Crimped and/or Bent Female Terminals**

Header pin push-outs are typically the result of improperly crimped and/or bent female terminals. Below are images showing examples of header pin push-outs.



Improperly crimped and/or bent terminals may cause the terminal box to be out of position. When a terminal is out of position, the terminal box may be visible within the front cavity window as shown below, increasing the risk for pin push-outs. With improperly crimped and/or bent terminals, the ISL may also appear bowed/open.



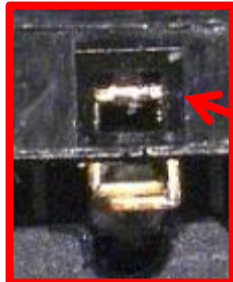
Improperly crimped and/or bent terminals causing out of position terminal boxes and bowed ISL



Terminals correctly crimped and positioned – ISL properly closed



Terminal damage from header pin



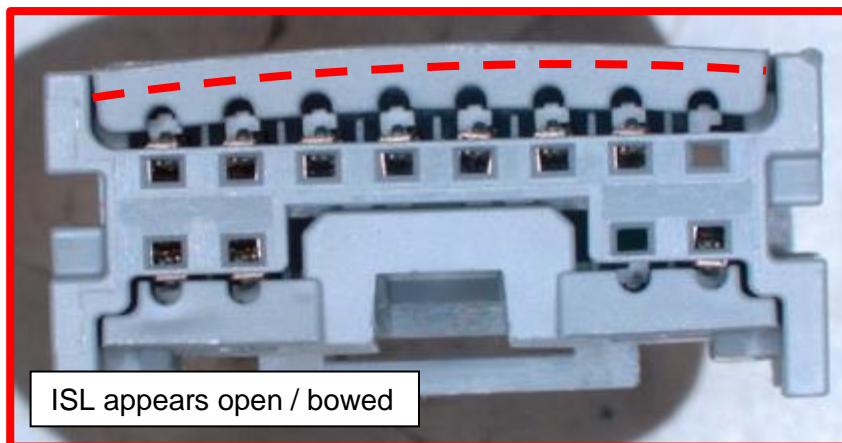
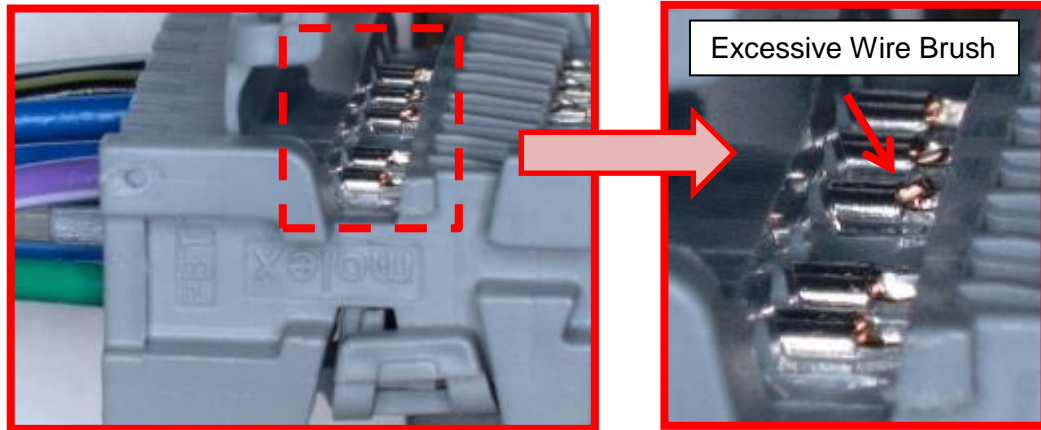
If the front edge of the terminal box can be seen through the connector cavity front window, terminal crimp dimensions should be confirmed to meet AS-560023-001.

REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: <b>657418</b> DATE: <b>See Rev Date</b>	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>22 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>
<small>TEMPLATE FILENAME: APPLICATION_SPEC[SIZE_A](V.1).DOC</small>			

# Application Specification

## B. Issues Attributed to Excessive Wire Brush

Excessive wire brush can lead to ISL bowing by interfering with ISL when the ISL is closed. ISL bowing is an indication that crimping was done incorrectly. If ISL bowing is noticed, terminal crimp dimensions should be checked to ensure they meet AS-560023-001. ISL bowing due to excessive wire brush can lead to increased mate force.



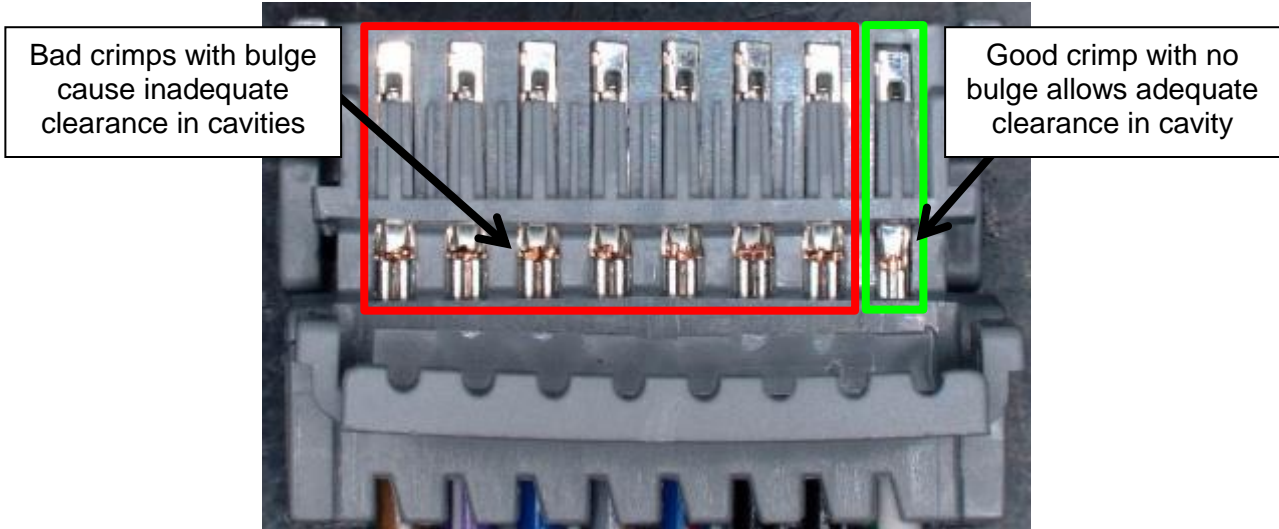
Finished harness assembly should not exceed 8.2mm Max

REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>23 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

# Application Specification

## C. Issues Attributed to Excessive Crimp Bulging

Excessive crimp bulge can lead to misaligned, improperly positioned terminals within the connector cavity and can contribute to ISL bowing and bent or pushed-out header pins.

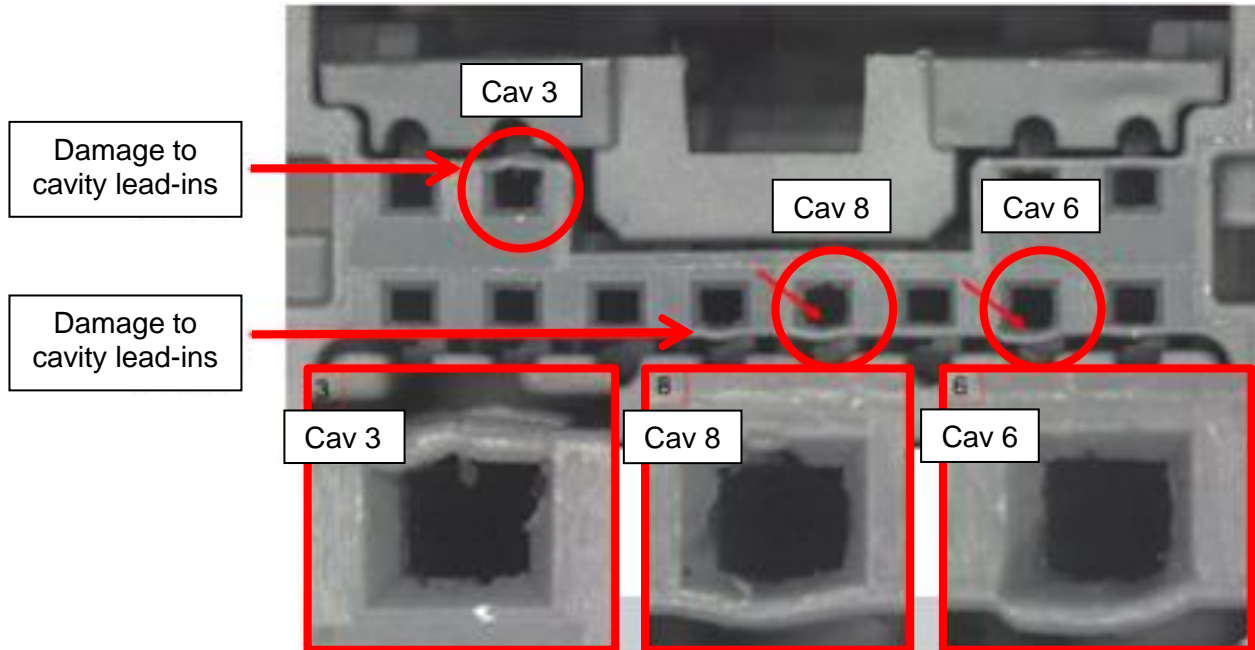


REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>24 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>



## D. Test Harness Cautions

Repetitive use of Mini50 connectors in test harnesses requires monitoring of the female connector for damage to the plastic lead-ins. The pictures below show examples of the type of damage that can occur, in which the lead-ins are bent or worn out due to repetitive mating. Damaged lead-ins can cause pin stubbing against the female terminal, bent header pins, pushed-out header pins, or connector stubbing. Test connectors should be inspected and replaced as needed.



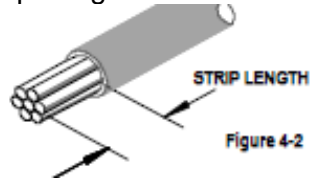
REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: 657418 DATE: See Rev Date	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>25 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>

# Application Specification

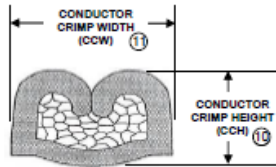
## E. CTX50 Terminal Dimensional Verification

The below features are critical to the performance of the CTX50 terminal and Mini50 connector system and must be in-spec as stated in AS-560023-001. To ensure high-quality crimps, the application tooling must be maintained in good condition. Reference the complete CTX50 Application Spec (AS-560023-001) for a list of all requirements.

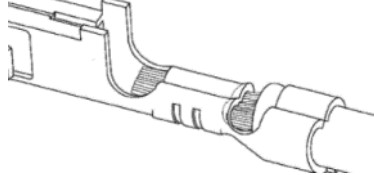
i. Strip Length



ii. Conductor Crimp Height and Width



iii. Wire Position



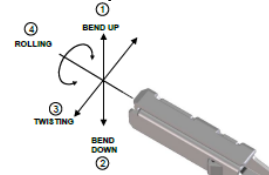
iv. Bell Mouth



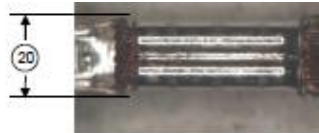
v. Insulation Crimp Height and Width



vi. Bend Up or Down; Twisting or Rolling



vii. Crimp Bulge



Good Crimp (No Bulge)

Bad Crimp (Bulge)

REVISION: <b>N3</b>	ECR/ECN INFORMATION: EC No: <b>657418</b> DATE: <b>See Rev Date</b>	TITLE: <b>Molex Mini50 0.50mm Unsealed Connector System Application Specification</b>	SHEET No. <b>26 of 26</b>
DOCUMENT NUMBER: <b>AS-34791-020</b>	CREATED / REVISED BY: <b>JGESKE</b>	CHECKED BY: <b>TSKIVER</b>	APPROVED BY: <b>JDUNAJ</b>