
UNSEAL INLIEN 16/20/24WAY CONNECTOR

Contents/目录

1 GENERAL	5
1 综述	5
1.1 Purpose	5
1.1 目的	5
1.2 Customer Drawing/ Documents.....	5
1.2 客户图纸/文档	5
1.3 Applicable Contact.....	5
1.3 适配端子.....	5
1.4 Product list.....	6
1.4 产品清单.....	6
2 Product Description	7
2 产品说明	7
2.1 16Pos plug connector.....	7
2.1 16位母端连接器	7
2.1.1 Component Introduction.....	7
2.1.1 零件组成介绍	7
2.1.2 Delivery Status	7
2.1.2 出货状态.....	7
2.2 16Pos Tab connector	7
2.2 16位公端连接器	7
2.2.1 Component Introduction	4
2.2.1 零件组成介绍	4
2.2.2 Delivery Status	4
2.2.2 出货状态	4
2.3 24Pos plug connector.....	5
2.3 24位母端连接器.....	5
2.3.1 Component Introduction.....	5
2.3.1 零件组成介绍	5
2.3.2 Delivery Status	5
2.3.2 出货状态.....	5
2.4 24Pos Tab connector	6
2.4 24位公端连接器	6
2.4.1 Component Introduction	6
2.4.1 零件组成介绍	6
2.4.2 Delivery Status	6
2.4.2 出货状态	6
2.5 20Pos Plug connector	7
2.5 20位母端连接器.....	7

2.5.1	Component Introduction.....	3
2.5.1	零件组成介绍	4
2.5.2	Delivery Status	4
2.5.2	出货状态.....	4
2.6	20Pos Tab connector	7
2.6	20位公端连接器.....	7
2.6.1	Component Introduction.....	3
2.6.1	零件组成介绍	4
2.6.2	Delivery Status	4
2.6.2	出货状态.....	4
3	CONNECTOR ASSEMBLY	5
3	连接器对配.....	12
3.1	16Pos connector assembly.....	5
3.1	16位连接器的对配.....	5
3.1.1	Terminal insertion	12
3.1.1	端子插入	12
3.1.1.1	Insertion 1.2mm terminal.....	12
3.1.1.1	1.2mm 端子的插入.....	12
3.1.1.2	Insertion 2.8mm terminal.....	6
3.1.1.2	2.8mm 端子的插入.....	6
3.1.2	Locking Secondary Lock	13
3.1.2	二次锁 (TPA) 插入到位	13
3.1.3	Clip mount	13
3.1.3	卡扣安装.....	7
3.1.4	Mating connector.....	8
3.1.4	连接对配端	14
3.1.4.1	Check before mating.....	8
3.1.4.1	对配前确认.....	8
3.1.4.2	mating process.....	8
3.1.4.2	对配.....	8
3.1.5	mount connectors to module	8
3.1.5	安装连接器到模块.....	8
3.1.5.1	Clip mount panel size.....	8
3.1.5.1	卡扣安装的面板尺寸.....	8
3.1.5.2	couple connectors 's mount	8
3.1.5.2	对配插件的安装.....	8
3.2	24Pos connector assembly.....	5
3.2	24位连接器的对配.....	5
3.2.1	Terminal insertion	12
3.2.1	端子插入	12
3.2.1.1	Insertion 0.64mm terminal.....	5
3.2.1.1	0.64mm 端子的插入.....	5
3.2.1.2	Insertion 1.2mm terminal.....	12

3.2.1.2	1.2mm 端子的插入.....	12
3.2.1.3	Insertion 2.8mm terminal.....	6
3.2.1.3	2.8mm 端子的插入.....	6
3.2.2	Locking Secondary Lock	13
3.2.2	二次锁 (TPA) 插入到位	13
3.2.3	Clip mount	13
3.2.3	卡扣安装.....	7
3.2.4	Mating connector.....	8
3.2.4	连接对配端	14
3.2.4.1	Check before mating.....	8
3.2.4.1	对配前确认.....	8
3.2.4.2	mating process	8
3.2.4.2	对配.....	8
3.2.5	mount connectors to module.....	8
3.2.5	安装连接器到模块.....	8
3.2.5.1	Clip mount panel size	8
3.2.5.1	卡扣安装的面板尺寸.....	8
3.2.5.2	couple connectors 's mount.....	8
3.2.5.2	对配插件的安装.....	8
4	CONNECTOR DISASSEMBLY.....	15
4	连接器拆装.....	19
4.1	16Pos connector disassembly.....	9
4.1	16 位连接器的拆卸.....	9
4.1.1	Depart the couple connectors from module.....	19
4.1.1	从模块上分离对配好的插件	19
4.1.2	release cable from wire dress (optional).....	9
4.1.2	绑线拆除 (可选).....	9
4.1.3	Un-mating connector.....	9
4.1.3	连接器分离.....	9
4.1.4	Release TPA from end-lock to pre-lock.....	9
4.1.4	二次锁 (TPA) 从终锁退回预锁位置.....	9
4.1.5	Terminals Extract.....	10
4.1.5	端子退出	10
4.1.5.1	Extract 1.2mm contact.....	10
4.1.5.1	1.2 端子的退出	10
4.5.1.2	Extract 2.8mm contact.....	10
4.5.1.2	2.8mm 端子的退出.....	10
4.2	24Pos connector disassembly.....	10
4.2	24 位连接器的拆卸.....	10
4.2.1	Depart the couple connectors from module	19
4.2.1	从模块上分离对配好的插件	19
4.2.2	release cable from wire dress (optional).....	9
4.2.2	将绑线拆除 (可选).....	9
4.2.3	Un-mating connector.....	9

4.2.3 连接器分离.....	9
4.2.4 Release TPA from end-lock to pre-lock.....	9
4.2.4 二次锁 (TPA) 从终锁退回预锁位置.....	9
4.2.5 Terminals Extract.....	10
4.2.5 端子退出	10
4.2.5.1 Extract 0.64mm contact	10
4.2.5.1 0.64mm 端子的退出	10
4.2.5.2 Extract 1.2mm contact.....	10
4.2.5.2 1.2mm 端子的退出.....	10
4.2.5.3 Extract 2.8mm contact.....	10
4.2.5.3 2.8mm 端子的退出.....	10
4.3 20Pos connector disassembly.....	9
4.3 20 位连接器的拆卸.....	9
4.3.1 Depart the couple connectors from module	19
4.3.1 从模块上分离对配好的插件	19
4.3.2 release cable from wire dress (optional).....	9
4.3.2 将绑线拆除 (可选).....	9
4.3.3 Un-mating connector.....	9
4.3.3 连接器分离.....	9
4.3.4 Release TPA from end-lock to pre-lock.....	9
4.3.4 二次锁 (TPA) 从终锁退回预锁位置.....	9
4.3.5 Terminals Extract.....	10
4.3.5 端子退出	10
4.3.5.1 Extract 1.2mm contact	10
4.3.5.1 1.2 端子的退出	10
4.3.1.2 Extract 2.8mm contact.....	10
4.3.5.2 2.8mm 端子的退出.....	10

1 GENERAL

1 综述

1.1 Purpose

1.1 目的

This application specification includes the guidelines to be followed during assembly, installation and disassembly of the 16P/24P/20P unsealed hybrid plug.

本规范用于指导 16P(2XMCP2.8+16XMONO1.2 or MCON1.2); 24P(6XMCP2.8+6XMONO1.2 or MCON1.2+12XMQS0.64); 20P(2XMCP2.8+14XMONO1.2 or MCON1.2);混合型线对线连接器的组装,安装和拆卸。

1.2 Customer Drawing/ Documents

1.2 客户图纸/文档

This application specification is based on the latest valid customer drawings.

本规范基于以下有效客户图纸的最新版本。

This application specification is based on the latest customer drawings/Documents.

产品尺寸、材料和表面

C-2301812 UNSEAL INLINE 16P REC ASSY

C-2316757 UNSEAL INLINE 16P CAP ASSY

C-2298622 UNSEAL INLINE 24P REC ASSY

C-2298627 UNSEAL INLINE 24P CAP ASSY

C-2298671 UNSEAL INLINE 20P REC ASSY

C-2298672 UNSEAL INLINE 20P CAP ASSY

108-101579 UNSEAL INLINE 16P PRODUCT SPECIFICATION

108-101431 UNSEAL INLINE 24/20P PRODUCT SPECIFICATION

The document is also a reference for the application

以下文档作为此应用规范的参考文件

114-18021 MQS0.64 Male Contact Application Spec (MQS公端子压接规范)

114-101042 MQS0.64 Female Contact Application Spec (MQS母端子压接规范)

114-101043 Mono1.2 Male & Female Contact Application Spec (Mono端子压接规范)

114-18051MCP2.8/K Male Contact Application Spec (MCP2.8/K公端子压接规范)

114-18148 MCP2.8Female Contact Application Spec (MCP2.8母端子压接规范)

114-18387 MCP2.8K Female Contact Application Spec (MCP2.8K母端子压接规范)

The release tool as below PN. However, it can be replaced by similar tool

以下是端子退出工具, 类似结构的退出工具经验证也可作为替代工具

6-1579007-1 MQS Extraction Tool (MQS端子退出工具)

1579007-8 & 1-1579007-0 (2-1579008-1) Mono1.2 Extraction Tool (Mono1.2退出工具)

1-1579007-2 MCP2.8/K Female Contact Extraction Tool (MCP2.8/K母端子退出工具)

1-1579007-6 MCP2.8/K Male Contact Extraction Tool (MCP2.8/K公端子退出工具)

1.3 APPLICABLE CONTACT

1.3 适配端子

Female Contact (table 1)

CONTACT SIZE (MM)	WIRE SIZE (MM ²)	INSULATION DIA (MM)	CONTACT	PLATING
1.2mm	0.22-0.35	1.1-1.4	2296537-1	PRE-TIN
	0.5-0.75	1.4-1.9	2296537-2	PRE-TIN
	1.0-1.5	1.9-2.4	2296537-3	PRE-TIN
0.64mm	>0.2-0.35	0.9-1.6	928999-1	PRE-TIN
			5-928999-1	PRE-TIN
	0.5-0.75	1.4-1.9	963715-1	PRE-TIN
			5-963715-1	PRE-TIN
2.8mm	0.5-1.0	1.4-2.1	1241388-1	PRE-TIN
	>1.0-2.5	2.2-3.0	1241390-1	PRE-TIN
	>2.5-4.0	2.7-3.7	1-968853-1	PRE-TIN

Male Contact (table 2)

CONTACT SIZE (MM)	CABLE SIZE (MM ²)	INSULATION DIA (MM)	CONTACT	PLATING
0.64	0.22-0.35	1.1-1.4	2297494-1	PRE-TIN
	0.5-0.75	1.4-1.9	2293362-1	PRE-TIN
1.2	0.22-0.35	1.1-1.4	2294463-1	PRE-TIN
	0.5-0.75	1.4-1.9	2294463-2	PRE-TIN
	1.0-1.5	1.9-2.4	2294463-3	PRE-TIN
2.8	0.5-1.0	1.4-2.1	2-964294-1	PRE-TIN
	>1.0-2.5	2.2-3.0	2-964296-1	PRE-TIN
	>2.5-4.0	2.7-3.7	1-968946-1	PRE-TIN
			2-968946-1	PRE-TIN

1.4 Product List

1.4 产品清单

Product Describe	P/N of Rec assy		P/N of Tab assy	
	p/n	Code & color	p/n	Code & color
Unseal inline 24way	2298622-1	Code a black	2298627-1 1-2298627-1	Code a black
	2-2298622-1	Code a brown	2-2298627-1	Code a brown
	2298622-2	Code b nature	2298627-2 1-2298627-1	Code b nature
Unseal inline 20way	2298671-1	Code a black	2298672-1	Code a black
	2298671-2	Code b black	2298672-1	Code b black

Unseal inline 16way	2301812-1	Code a black	2316757-1	Code a black
	2301812-2	Code b brown	2316757-2	Code b brown

Table 3

2 Product Description

2 产品说明

The unseal inline 16way connectors are used for signal & current power transmit in the body & chassis of car,

16way 连接器系统用于连接车辆车身或者地盘上系统的信号及电流传输

2.1 16 Pos plug connector

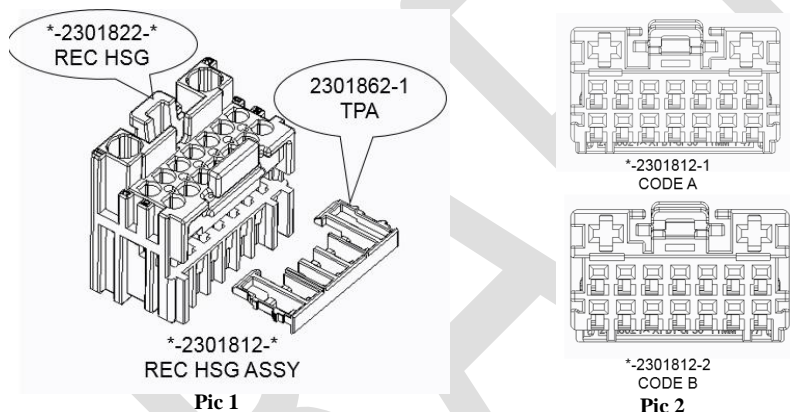
2.1 16 位母端连接器

2.1.1 Component Introduction 零件组成介绍

The plug connector contains below parts. 母端连接器包含以下零件。

16way Rec Assy connector contains below part.

16way 母端连接器组装件由以下部分组成。



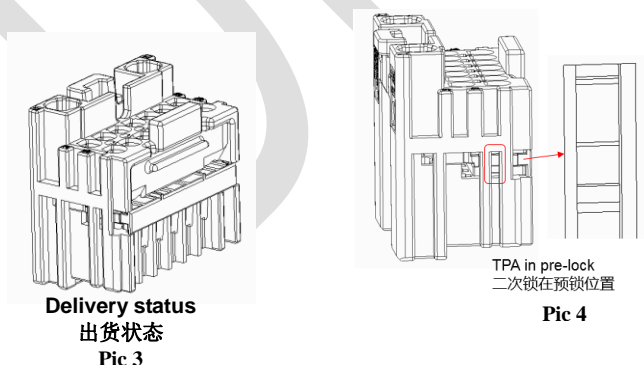
Pic 1

Pic 2

2.1.2 Delivery Status

2.1.2 出货状态

TPA should be in pre-lock position when delivery (出货状态: TPA 在预锁位置)



Delivery status
出货状态
Pic 3

TPA in pre-lock
二次锁在预锁位置
Pic 4

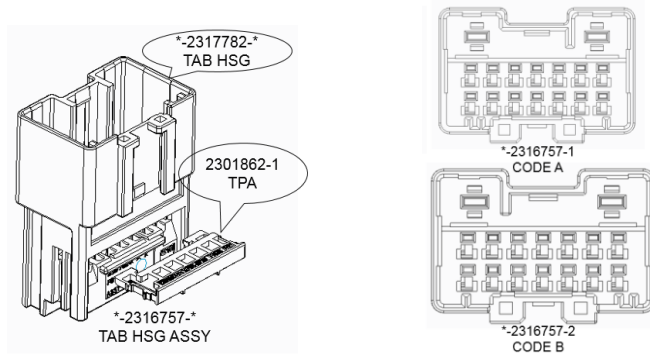
2.2 16way Tab ASSY connector

2.2 16 位公端连接器

2.2.1 Component Introduction 零件组成介绍

ASSY 16way Tab connector contains below part.

16 位公端连接器组装件由以下部分组成。



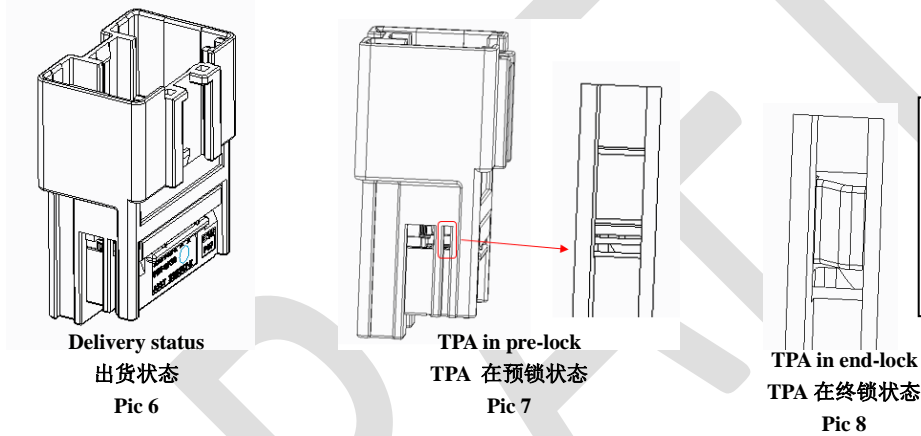
Pic 5

2.2.2 Delivery Status

2.2.2 出货状态

When delivery, there is below: 出货状态如下:

TPA in pre-lock TPA 在预锁位置 (pic 6)



2.3 24Pos plug connector

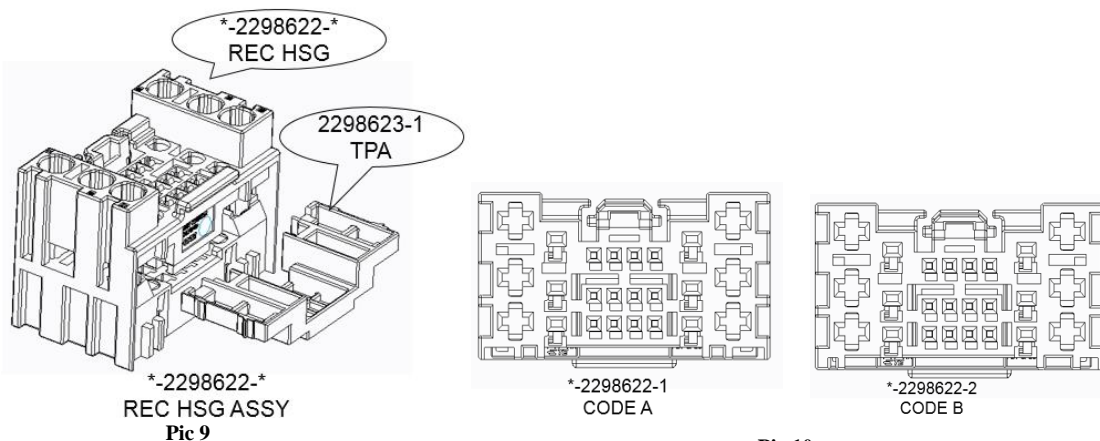
2.3 24 位母端连接器

2.3.1 Component Introduction 零件组成介绍

The plug connector contains below parts. 母端连接器包含以下零件。

24way Rec Assy connector contains below part.

24way 母端连接器组装件由以下部分组成。

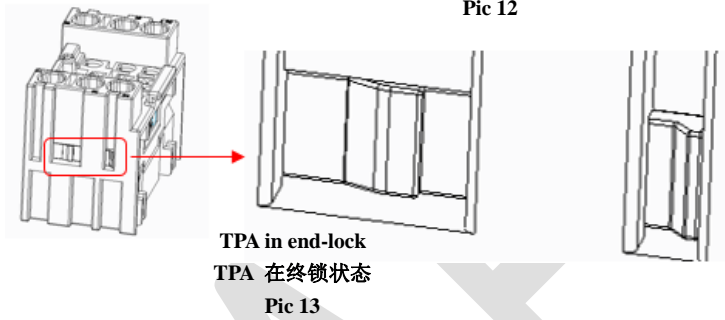
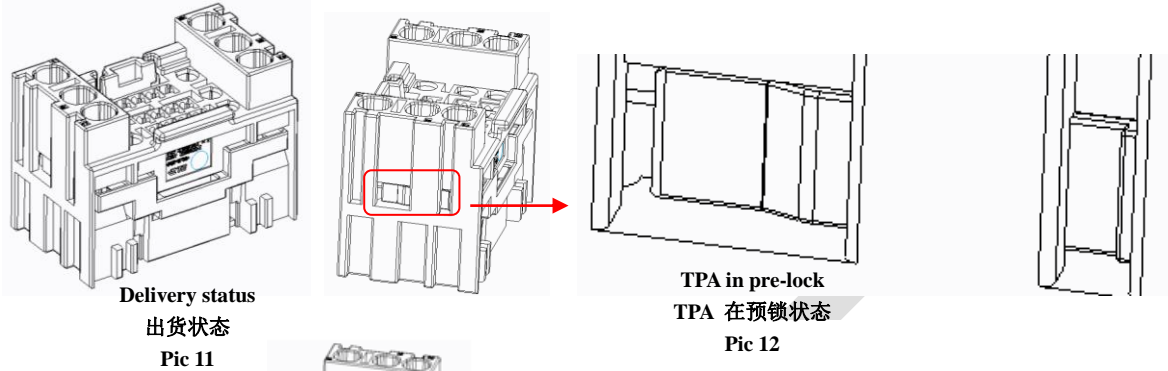


Pic 10

2.3.2 Delivery Status

2.3.2 出货状态

TPA should be in pre-lock position when delivery (出货状态: TPA 在预锁位置)



2.4 24Pos Tab connector

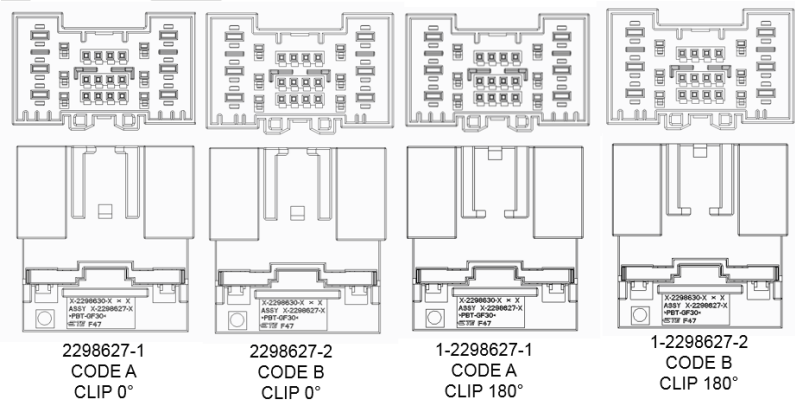
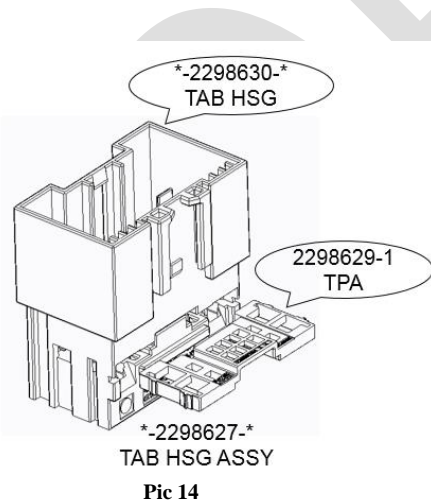
2.4 24 位公端连接器

2.4.1 Component Introduction 零件组成介绍

The Tab connector contains below parts. 公端连接器包含以下零件。

24way Tab assy connector contains below part.

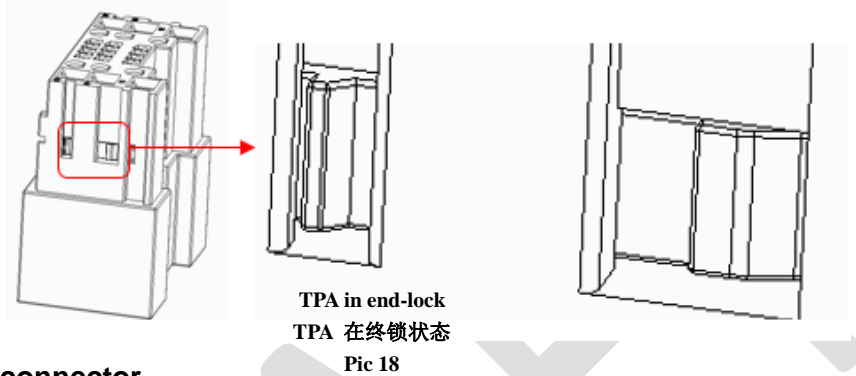
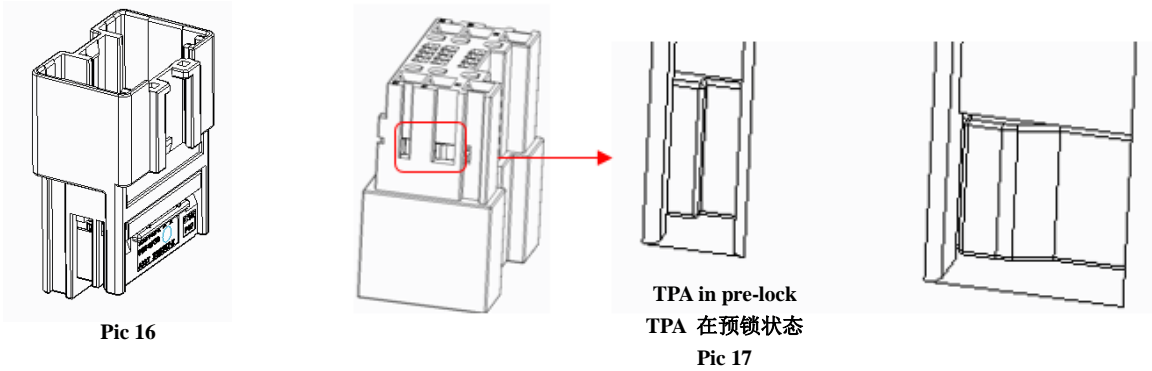
24way 公端连接器组装件由以下部分组成。



2.4.2 Delivery Status

2.4.2 出货状态

TPA should be in pre-lock position when delivery (出货状态: TPA 在预锁位置)



2.5 20Pos plug connector

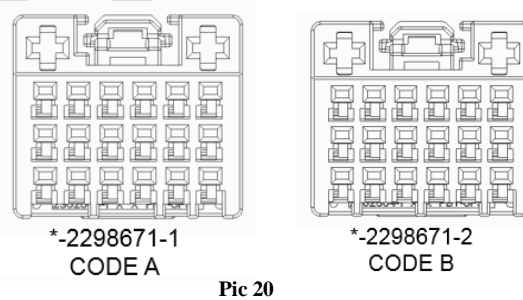
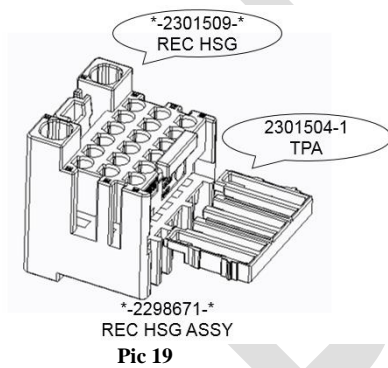
2.5 20 位母端连接器

2.5.1 Component Introduction 零件组成介绍

The plug connector contains below parts. 母端连接器包含以下零件。

20way Rec Assy connector contains below part.

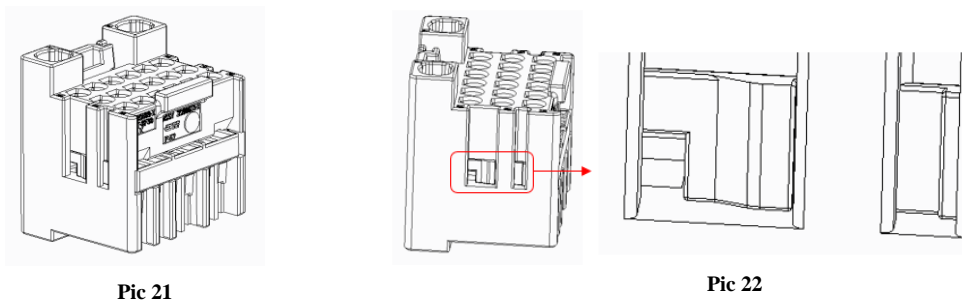
20 位母端连接器组装件由以下部分组成。

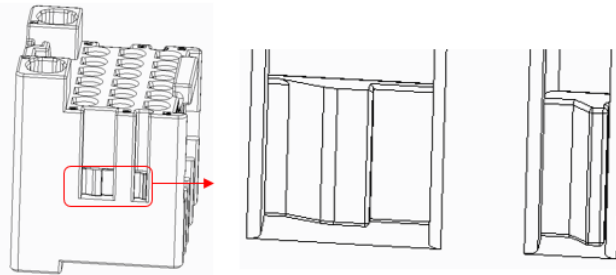


2.5.2 Delivery Status

2.5.2 出货状态

TPA should be in pre-lock position when delivery (出货状态: TPA 在预锁位置 pic22)





Pic 23

2.6 20Pos Tab connector

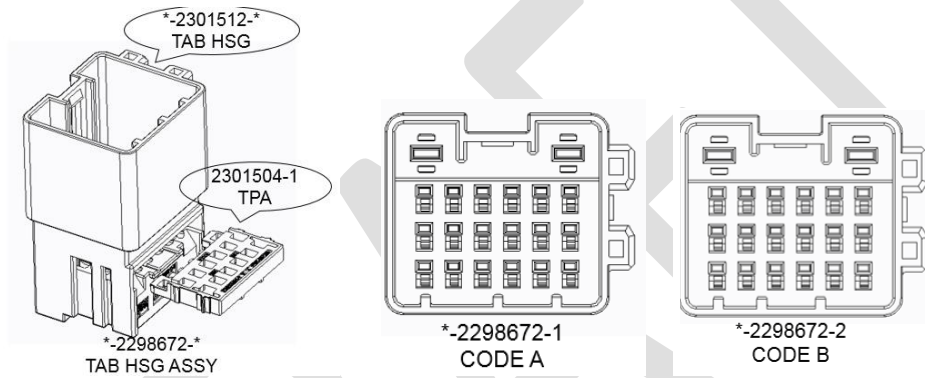
2.6 20 位公端连接器

2.6.1 Component Introduction 零件组成介绍

The Tab connector contains below parts. 公端连接器包含以下零件。

20 way Tab assy connector contains below part.

20 位公端连接器组装件由以下部分组成。



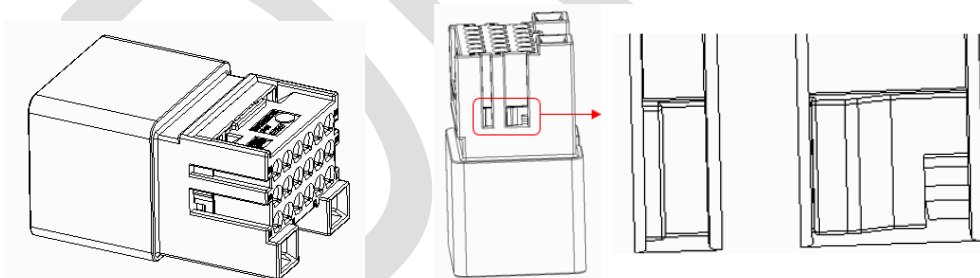
Pic 24

Pic 25

2.6.2 Delivery Status

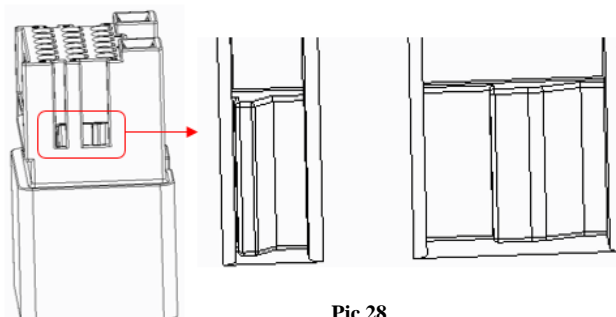
2.6.2 出货状态

TPA should be in pre-lock position when delivery pic 27 (出货状态: TPA 在预锁位置 pic 27)



Pic 26

Pic 27



Pic 28

3 CONNECTOR ASSEMBLY

3 连接器组装

3.1 16Pos Connector assembly

3.1 16 位连接器组装

3.1.1 Terminal insertion

3.1.1 端子插入

The contact cavities are polarized to prevent the contacts from being inserted upside-down.

Check before inserting contacts if the TPA is in Pre-lock position. If not, move it to the pre-lock position as described in chapter 4.4.

端子与塑壳孔都有方向性来防止端子不正确的插入。**插入端子前，确认 TPA 在预锁位置。**如发现 TPA 偏离预锁位置，请参考 4.4 节操作复位。

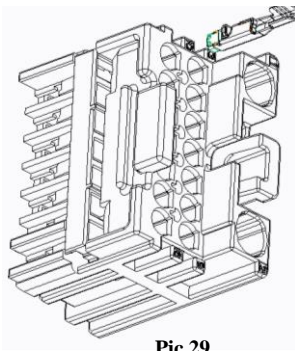
3.1.1.1 Insert 1.2mm terminal

3.1.1.1 1.2 mm 端子的插入

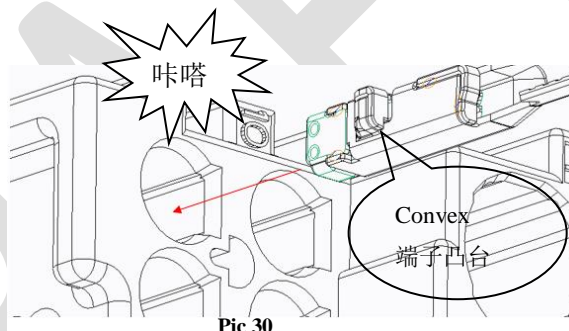
After crimp, Insert the terminal (as below direction) till an audible click. Complete locking can be examined by gently pulling back the terminal.

端子压接后，按照如下方向插入端子（注意图示端子凸台方向），插入到位后有轻微咔嗒声。

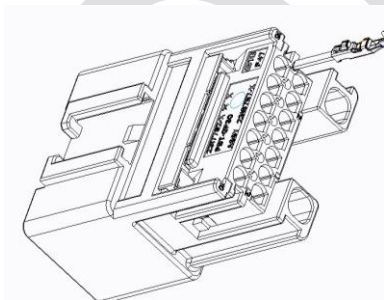
确保插入到位，可轻微回拉线材检查。



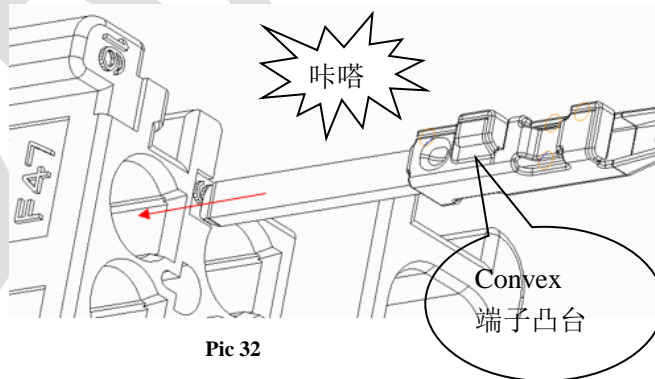
Pic 29



Pic 30



Pic 31



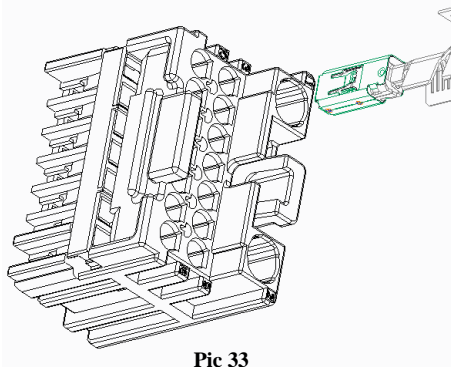
Pic 32

3.1.1.2 Insertion 2.8mm terminal

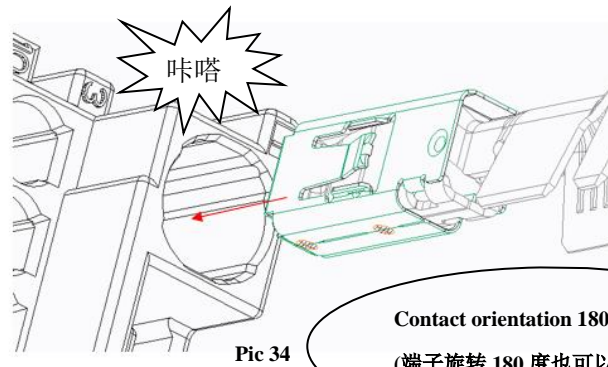
3.1.1.2 2.8 mm 端子的插入

Insert the terminal (as below direction) as far as the end of the spring engages and produces an audible click. Complete locking can be examined by gently pulling back the terminal.

按照如下方向插入端子（注意图示端子方向），插入到位后有轻微咔嗒声。为确保插入到位，可轻微回拉线材检查。

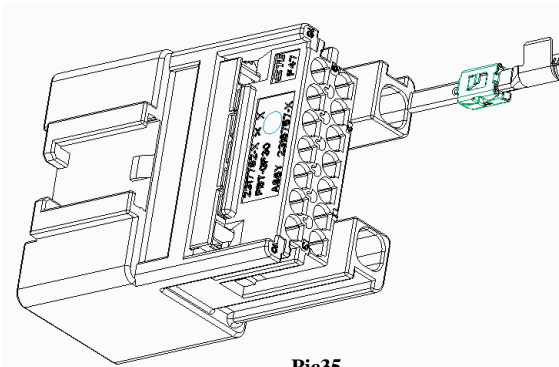


Pic 33

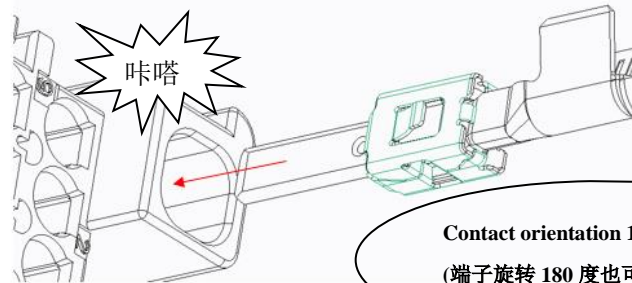


Pic 34

Contact orientation 180° also ok
(端子旋转 180 度也可以插入)



Pic 35



Pic 36

Contact orientation 180° also ok
(端子旋转 180 度也可以插入)

3.1.2 Locking Secondary Lock Plate

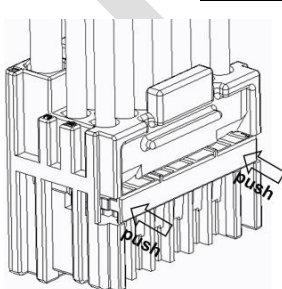
3.1.2 二次锁 (TPA) 插入到位

Locking TPA to final position by pushing TPA top surface.

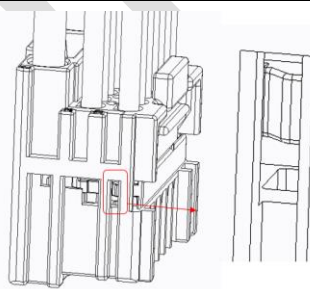
按压 TPA 上表面，使 TPA 压入位位，到位后会有咔嗒声。

If the TPA does not fully close, move it to the OPEN position, ensure that all contacts are fully seated, then try again. **DO NOT force the TPA to close.**

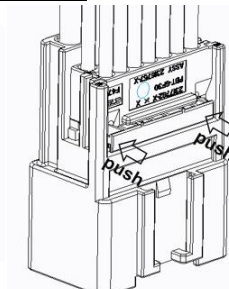
如果 TPA 无法组装到位，请将 TPA 退到预锁位置(pic 3&pic 6)，确认每个端子都插入到位后再次锁 TPA。切不可在端子未插入到位时强行锁上 TPA。



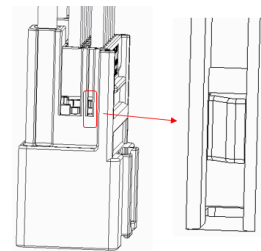
Pic 37



TPA in end-lock
二次锁在终锁位置
Pic 38



Pic 39



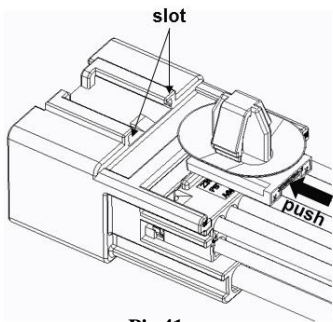
TPA in end-lock
二次锁在终锁位置
Pic 40

3.1.3 Clip Mount

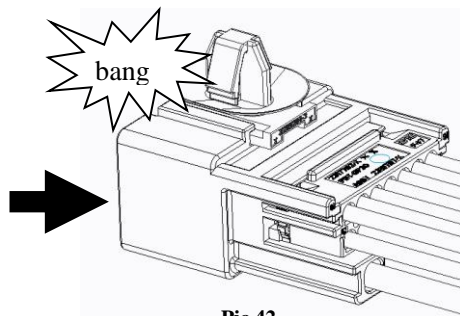
3.1.3 卡扣安装

Push the clip into the slot in male connector according to below pic, ensure the clip seated completely, and there is “bang” sounds when clip seat completely.

按照下图安装 clip 到公端连接器的槽中，确保 clip 安装到位： clip 安装到位时会有“bang” 的声音

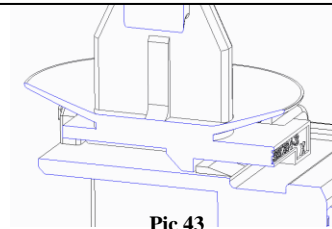


Pic 41



Pic 42

retention structure between clip and hsg
扣和塑壳之间的保持结构示意图



Pic 43

Applicable clip is as below shown:

TE P/N	Pic	mount panel size
2299284-3		
2299284-4		

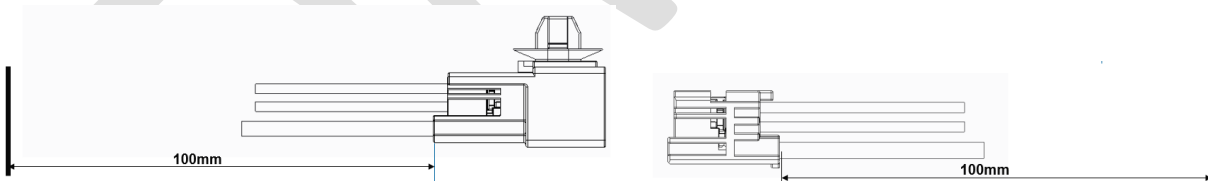
Pic 44

After, tie cable by fix tie at the 100mm distance, and fix wire harness on module;

之后， 在距离 100mm 的地方， 用扎带固定线束在模块或支架上；

Caution: (with 100mm, the cable is loose , can't be fasten)

注意: (在这 100mm 内的 cable, 是放松的, 不能被拉紧)



Pic 45

3.1.4 Mating the connectors

3.1.4 对配连接器

3.1.4.1 Before mating, Check(在公母对配前确保如下)

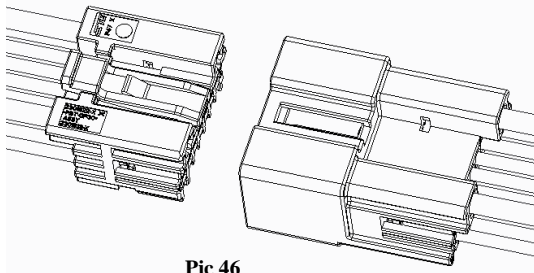
- 1) the contact has been inseted; 端子已插到位
- 2) TPA in end-lock location; TPA 在终锁位置 (pic 17&pic 19)
- 3) clip has been mout; 卡扣安装到位 (pic 42)

3.1.4.2 Assembly Step

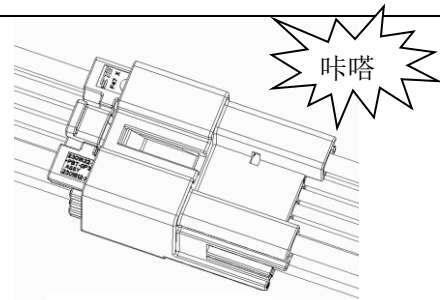
3.1.4.2 对配过程

Push the connector into mating interface until the latch feedback audible click.

推动连接器到对配界面， 直到听到连接器锁扣弹片的咔嗒回弹声。



Pic 46



Pic 47

3.1.4.3 mount couple connectors to system module

3.1.4.3 安装对配好的插件到整车模块

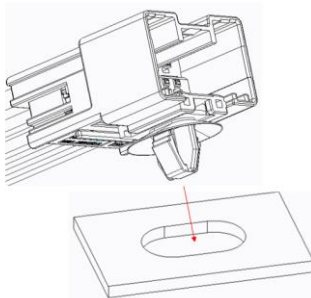
3.1.4.3.1 clip mount panel size (pic 44)

3.1.4.3.1 卡扣安装的面板尺寸(pic 44)

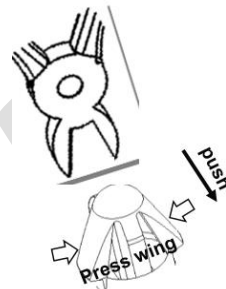
3.1.4.3.2 couple connectors mount to the module by clip

3.1.4.3.2 对配接插件通过 clip 安装到模块上

clip align to the hole, and then press the couple connectors towards the module till “ka ta” sounds
确保卡扣特征和面板孔特征对齐(pic 48), 然后朝着模块方向压插件, 直到听到” 咔嗒“声。



Pic 48



Pic 49

注意:

当由需要使得 clip 和接插件分离时, clip 从接插件上强行分离时会有损伤, 若是 clip 从插件上拆下来, 不建议插件和 clip 二次使用。

建议做法: 返修时, Clip 和插件的分离, 直接破坏 clip, 而不损伤插件, 更换新的 clip 使用。

3.2 24Pos Connector Assembly

3.2 24 位连接器的安装

3.2.1 Terminal insertion

3.2.1 端子插入

The contact cavities are polarized to prevent the contacts from being inserted upside-down.

Check before inserting contacts if the TPA is in Pre-lock position. If not, move it to the pre-lock position as described in chapter 4.4.

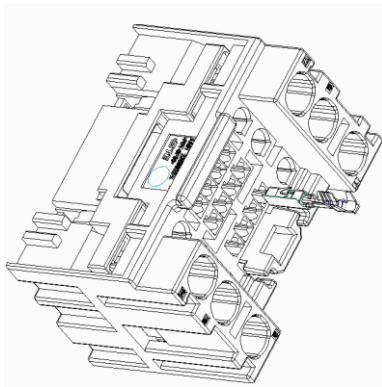
端子与塑壳孔都有方向性来防止端子不正确的插入。插入端子前, 确认 TPA 在预锁位置。如发现 TPA 偏离预锁位置, 请参考 4.4 节操作复位。

3.2.1.1 Insertion 0.64mm terminal

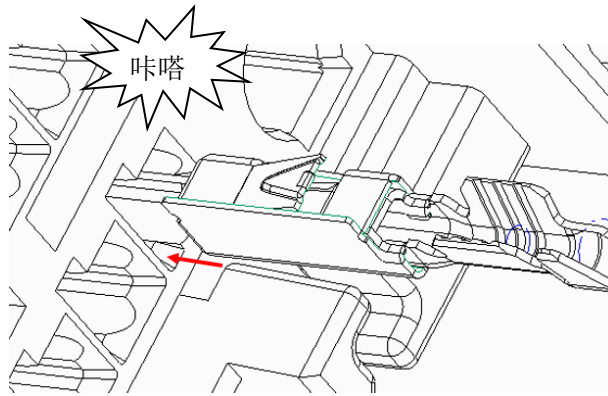
3.2.1.1 0.64 端子的插入

Insert the terminal (as below direction) as far as the end of the spring engages and produces an audible click. Complete locking can be examined by gently pulling back the terminal.

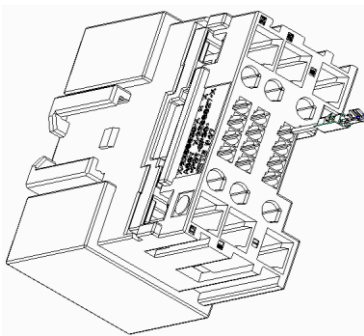
按照如下方向插入端子, 插入到位后有轻微咔嗒声。为确保插入到位, 可轻微回拉线材检查。



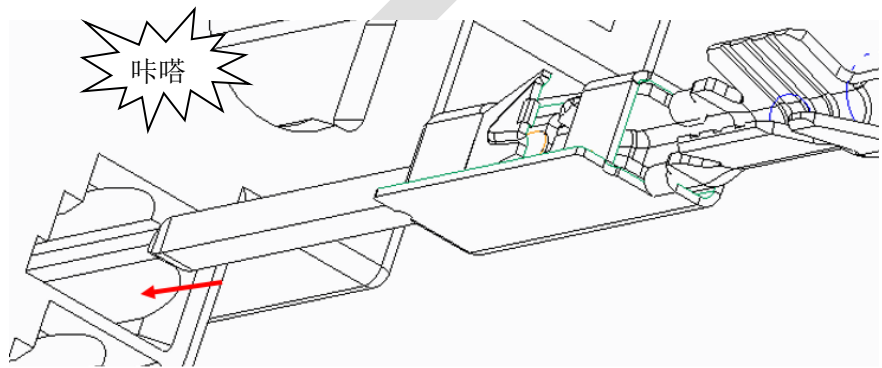
Pic 50



Pic 51



Pic 52



Pic 53

3.2.1.2 Insert 1.2mm terminal

3.2.1.2 1.2 mm 端子的插入

After crimp, Insert the terminal (as below direction) till an audible click. Complete locking can be examined by gently pulling back the terminal; take the 16POS as reference (pic 17&19)
端子压接后，按照如下方向插入端子（注意图示端子凸台方向），插入到位后有轻微咔嗒声。确保插入到位，可轻微回拉线材检查；(参考 16 位母端连接器，图 17 和图 19)

3.2.1.3 Insertion 2.8mm terminal

3.2.1.3 2.8 mm 端子的插入

Insert the terminal (as below direction) as far as the end of the spring engages and produces an audible click. Complete locking can be examined by gently pulling back the terminal. Detail take the 16pos connector as reference pic 21& pic 23
按照如下方向插入端子（注意图示端子方向），插入到位后有轻微咔嗒声。为确保插入到位，可轻微回拉线材检查；细节参考 16 位连接器的图 21 和图 23

3.2.2 Locking Secondary Lock Plate

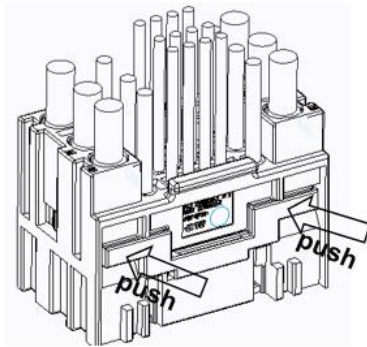
3.2.2 二次锁（TPA）插入到位

Locking TPA to final position by pushing TPA top surface.

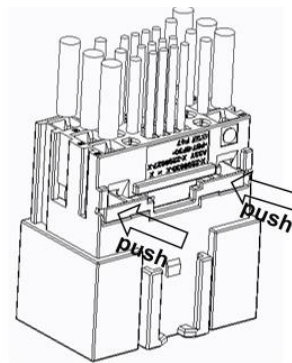
按压 TPA 上表面，使 TPA 压入位位，到位后会有咔嗒声。

If the TPA does not fully close, move it to the OPEN position, ensure that all contacts are fully seated, then try again. **DO NOT force the TPA to close.**

如果 TPA 无法组装到位，请将 TPA 退到预锁位置(pic 3&pic 6)，确认每个端子都插入到位后再次锁 TPA。切不可在端子未插入到位时强行锁上 TPA。



Pic 54



Pic 55

3.2.3 Clip Mount

3.2.3 卡扣安装

Push the clip into the slot in male connector according to pic 28&29,ensure the clip seated completely, and there is “ bang “ sounds when clip seat completely.

按照图 pic 28&pic 29 安装 clip 到公端连接器的槽中，确保 clip 安装到位；clip 安装到位时会有“ bang” 的声音

Applicable clip is as pic 31.

可用的卡扣见图 31.

After, tie cable by fix tie at the 100mm distance, and fix wire harness on module;

之后，在距离 100mm 的地方，用扎带固定线束在模块或支架上；

Caution: (with 100mm, the cable is loose , can't be fasten)

注意：（在这 100mm 内的 cable，是放松的，不能被拉紧

3.2.4 Mating the connectors

3.2.4 对配连接器

Before mating, Check(在公母对配前确保如下)

- 1) the contact has been inseted; 端子已插到位
- 2) TPA in end-lock location; TPA 在终锁位置 (pic 17&pic 19)
- 3) clip has been mout; 卡扣安装到位 (pic 21)

Push the connector into mating interface until the latch feedback audible click.

推动连接器到对配界面，直到听到连接器锁扣弹片的咔嗒回弹声。

3.2.5 mount couple connectors to system module

3.2.5 安装对配好的插件到整车模块

3.2.5.1 clip mount panel size (pic 38)

3.2.5.1 卡扣安装的面板尺寸(pic 38)

3.2.5.2 couple connectors mount to the module by clip

3.2.5.2 对配接插件通过 clip 安装到模块上

clip align to the hole, and then press the couple connectors towards the module till “ ka ta “ sounds 确保卡扣特征和面板孔特征对齐(pic 39)，然后朝着模块方向压插件，直到听到” 咔嗒“声。

注意：

当由需要使得 clip 和接插件分离时，clip 从接插件上强行分离时会有损伤，若是 clip 从插件上拆下来，不建议插件和 clip 二次使用。

建议做法：返修时，Clip 和插件的分离，直接破坏 clip，而不损伤插件，更换新的 clip 使用。

3.3 20Pos Connector Assembly

3.3 20 位连接器的安装

3.3.1 Terminal insertion

3.3.1 端子插入

The contact cavities are polarized to prevent the contacts from being inserted upside-down.

Check before inserting contacts if the TPA is in Pre-lock position. If not, move it to the pre-lock position as described in chapter 4.4.

端子与塑壳孔都有方向性来防止端子不正确的插入。插入端子前，确认 TPA 在预锁位置。如发现 TPA 偏离预锁位置，请参考 4.4 节操作复位。

3.3.1.1 Insert 1.2mm terminal

3.3.1.1 1.2 mm 端子的插入

After crimp, Insert the terminal (as below direction) till an audible click. Complete locking can be examined by gently pulling back the terminal; take the 16POS as reference (pic 17&19)

端子压接后，按照如下方向插入端子（注意图示端子凸台方向），插入到位后有轻微咔嗒声。

确保插入到位，可轻微回拉线材检查；(参考 16 位母端连接器，图 17 和图 19)

3.3.1.2 Insertion 2.8mm terminal

3.3.1.2 2.8 mm 端子的插入

Insert the terminal (as below direction) as far as the end of the spring engages and produces an audible click. Complete locking can be examined by gently pulling back the terminal. Detail take the 16pos connector as reference pic 21& pic 23

按照如下方向插入端子（注意图示端子方向），插入到位后有轻微咔嗒声。为确保插入到位，可轻微回拉线材检查；细节参考 16 位连接器的图 21 和图 23

3.3.2 Locking Secondary Lock Plate

3.3.2 二次锁（TPA）插入到位

Locking TPA to final position by pushing TPA top surface. Take the 16Pos (3.1.2) as ref.

按压 TPA 上表面，使 TPA 压入位位，到位后会有咔嗒声。参考 16 位（3.1.2）。

If the TPA does not fully close, move it to the OPEN position, ensure that all contacts are fully seated, then try again. **DO NOT force the TPA to close.**

如果 TPA 无法组装到位，请将 TPA 退到预锁位置(pic 3&pic 6)，确认每个端子都插入到位后再次锁 TPA。切不可在端子未插入到位时强行锁上 TPA。

3.3.3 Clip Mount

3.3.3 卡扣安装

Push the clip into the slot in male connector according to pic 28&29,ensure the clip seated completely, and there is “bang” sounds when clip seat completely.

按照图 pic 28&pic 29 安装 clip 到公端连接器的槽中，确保 clip 安装到位；clip 安装到位时会有“bang”的声音

Applicable clip is as pic 31.

可用的卡扣见图 31.

After, tie cable by fix tie at the 100mm distance, and fix wire harness on module;

之后，在距离 100mm 的地方，用扎带固定线束在模块或支架上；

Caution: (with 100mm, the cable is loose , can't be fasten)

注意：（在这 100mm 内的 cable，是放松的，不能被拉紧

3.3.4 Mating the connectors

3.3.4 对配连接器

Before mating, Check(在公母对配前确保如下)

- 1) the contact has been inseted; 端子已插到位
- 2) TPA in end-lock location; TPA 在终锁位置 (pic 17&pic 19)
- 3) clip has been mout: 卡扣安装到位 (pic 21)

Push the connector into mating interface until the latch feedback audible click.

推动连接器到对配界面, 直到听到连接器锁扣弹片的咔嗒回弹声。

3.3.5 mount couple connectors to system module

3.3.5 安装对配好的插件到整车模块

3.3.5.1 clip mount panel size (pic 38)

3.3.5.1 卡扣安装的面板尺寸(pic 38)

3.3.5.2 couple connectors mount to the module by clip

3.3.5.2 对配接插件通过 clip 安装到模块上

clip align to the hole, and then press the couple connectors towards the module till “ka ta “ sounds
确保卡扣特征和面板孔特征对齐(pic 39), 然后朝着模块方向压插件, 直到听到” 咔嗒“声。

注意:

当由需要使得 clip 和接插件分离时, clip 从接插件上强行分离时会有损伤, 若是 clip 从插件上拆下来, 不建议插件和 clip 二次使用。

建议做法: 返修时, Clip 和插件的分离, 直接破坏 clip, 而不损伤插件, 更换新的 clip 使用。

4 CONNECTOR DISASSEMBLY

4 连接器拆卸

4.1 16Pos Connector Disassembly

4.1 16 位连接器的拆卸

4.1.1 Depart the couple connectors from module

4.1.1 从模块上拆下对配的插件

Option1 : Press the wing of clip , and pull the clip away from panel, depart the couple connectors from module.

方法一: 摁压卡扣上的翅膀, 并压或者拉卡扣脱离模块, 分离接插件和模块。(pic 26)

Option 2 destroy the clip , and change a new clip

方法 2: 破坏卡扣, 重新使用时, 更换新的卡扣

4.1.2 release cable from wire dress (optional)

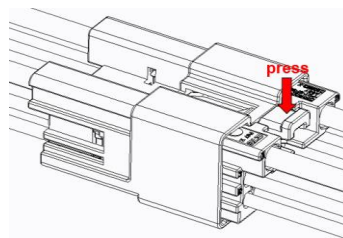
4.1.2 将绑线拆除 (可选)

Customer do it according to real situation, it is optional.

4.1.3 un-mating connector

4.1.3 连接器拔出

拔出时抓连接器
以及线束一起!



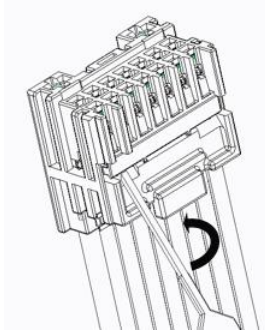
Pic 56

4.1.4 Pull the TPA from end-lock to pre-lock

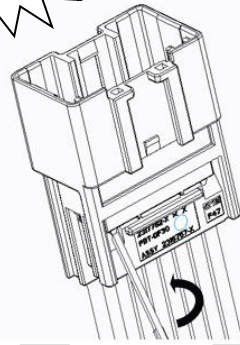
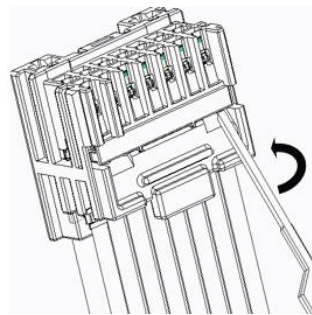
4.1.4 将二次锁从终锁位置退回到预锁位置

Use Extraction tool 2-1579008-1 OR similar pin to raise the TPA until to pre-lock

用退端子工具 2-1579008-1 或类似工具，将尖头伸入连接器 TPA 上的两个小槽，转动工具使 TPA 退回到预锁位置，到位后会有咔嗒声



Pic 57



Pic 58

4.1.5 Terminal Extract

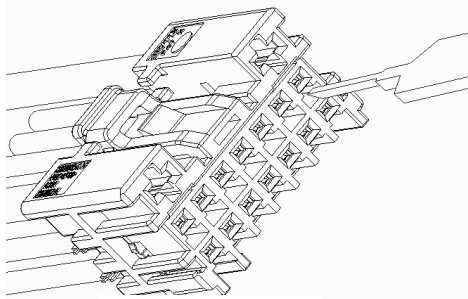
4.1.5 端子退出

4.1.5.1 Extract 1.2mm Terminal

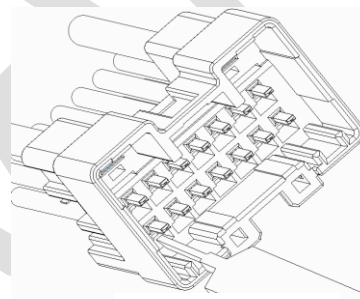
4.1.5.1 1.2mm 端子退出

rotate the extract tool(as picture shown) till the latch touch the surface c , and then pull the cable till the terminal be away from connectors.

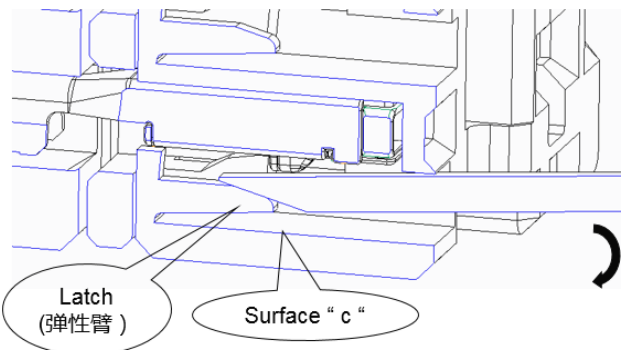
如图旋转退端子工具，使塑壳里的弹性臂碰触到面 c ，然后轻拉线束直至端子脱离接插件。



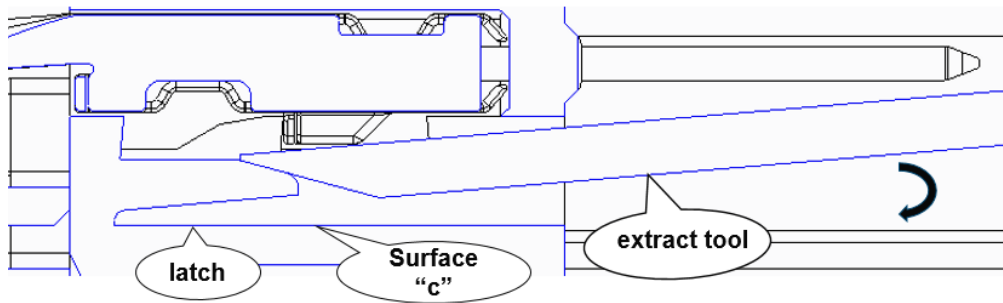
Pic 59



Pic 60



Pic 61

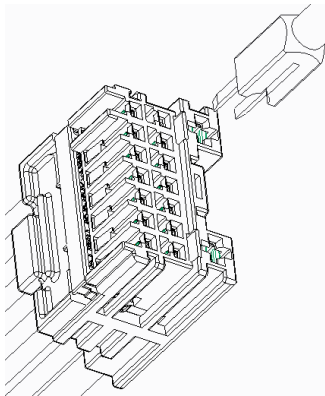


Pic 62

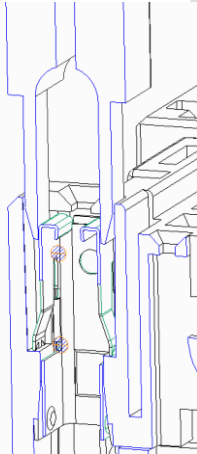
4.1.5.2 Extract 2.8mm Terminal

4.1.5.2 2.8mm 端子退出

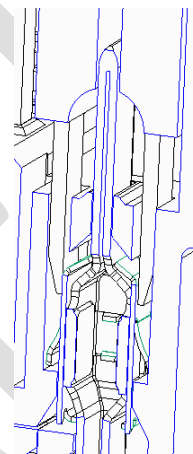
Insert the extract tool till the surface b, and pull the cable till the terminal be away from connectors.
插入退端子工具到面“b”，然后轻拉线束直至端子脱离接插件。



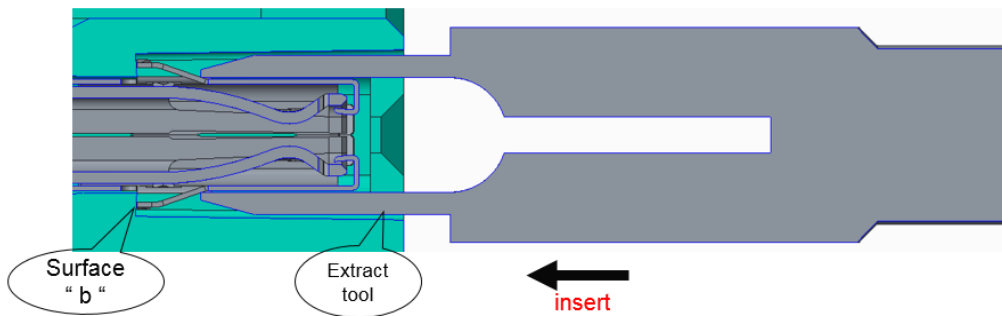
Pic 63



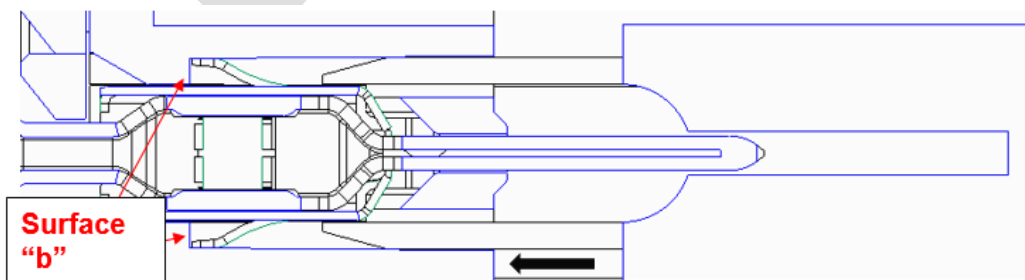
Pic 64



Pic65



Pic 66



Pic 67

4.2 24Pos Connector Disassembly

4.2 24 位连接器的拆卸

4.2.1 Depart the couple connectors from module

4.2.1 从模块上拆下对配的插件

Option1 : Press the wing of clip , and pull the clip away from panel, depart the couple connectors from module.

方法一： 摁压卡扣上的翅膀，并压或者拉卡扣脱离模块， 分离接插件和模块。（pic 26）

Option 2 destroy the clip , and change a new clip

方法 2: 破坏卡扣， 重新使用时， 更换新的卡扣

4.2.2 release cable from wire dress (optional)

4.2.2 将绑线拆除 (可选)

Customer do it according to real situation, it is optional.

4.2.3 un-mating connector

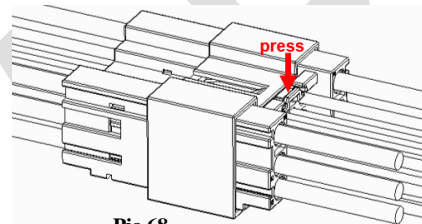
4.2.3 连接器拔出

Push the latch, hold the connector and wire and pull back the connector from interface

将连接器锁扣压下到底， 抓位连接器及绑线往外侧拉出

Caution: Be careful your hands during un-mating process!

注意： 拔出力量相对较大， 注意手的防护



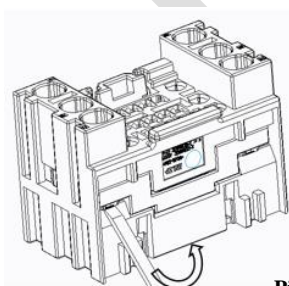
Pic 68

4.2.4 Pull the TPA from end-lock to pre-lock

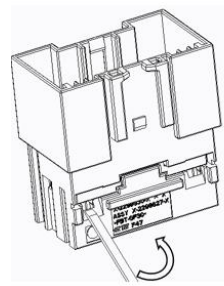
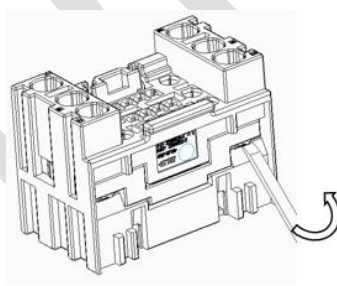
4.2.4 将二次锁从终锁位置退回到预锁位置

Use Extraction tool 2-1579008-1 OR similar pin to raise the TPA until to pre-lock

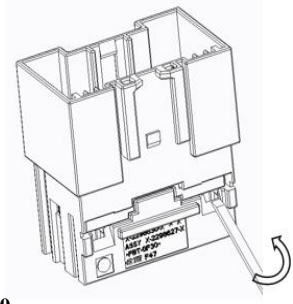
用退端子工具 2-1579008-1 或类似工具， 将尖头伸入连接器 TPA 上的两个小槽， 转动工具使 TPA 退回到预锁位置， 到位后会有咔嚓声



Pic 69



Pic 70



4.2.5 Terminal Extract

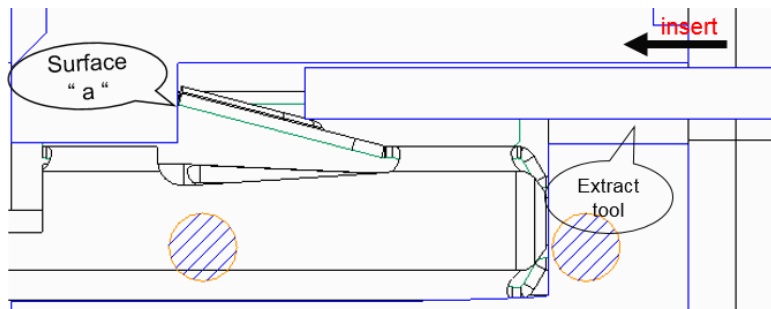
4.2.5 端子退出

4.2.5.1 0.64mm terminal extract

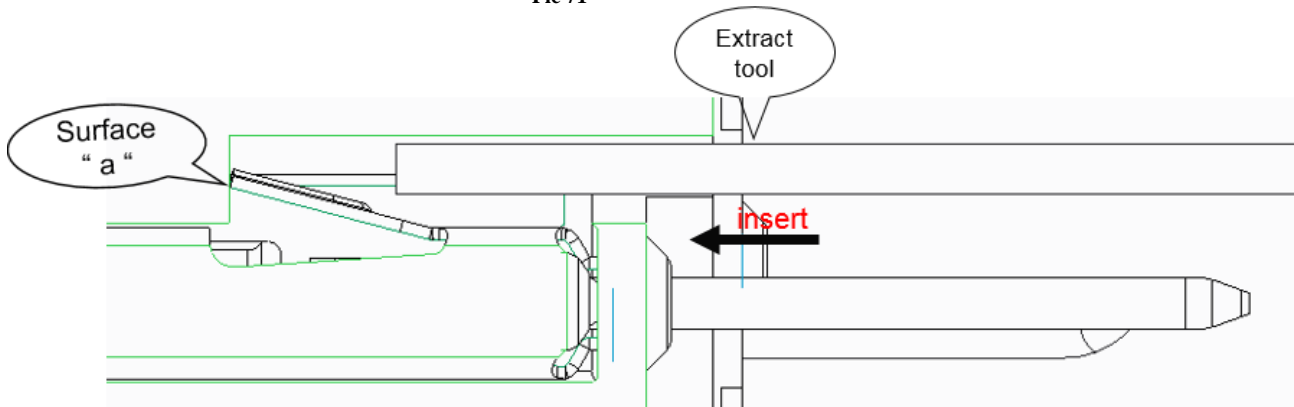
4.2.5.1 退出 0.64mm 端子

Insert the extract tool till the surface a, and pull the cable till the terminal be away from connectors.

插入退端子工具到面“ a”， 然后轻拉线束直至端子脱离接插件。



Pic 71



Pic 72

4.2.5.2 Extract 1.2mm Terminal

4.2.5.2 1.2mm 端子退出

rotate the extract tool(as picture shown) till the latch touch the surface c , and then pull the cable till the terminal be away from connectors. Take the 16way (4.1.5.1)

如图旋转退端子工具，使塑壳里的弹性臂碰触到面 c ，然后轻拉线束直至端子脱离接插件。参考 16way，第 4.5.1.1 条，图 36 和图 37；

4.2.5.3 Extract 2.8mm Terminal

4.2.5.3 2.8mm 端子退出

Insert the extract tool till the surface b, and pull the cable till the terminal be away from connectors.

插入退端子工具到面“b”，然后轻拉线束直至端子脱离接插件。

Take the 16way (4.1.5.2) reference.

参考 16 位 (4.1.5.2)

4.3 20Pos Connector Disassembly

4.3 20 位连接器的拆卸

4.3.1 Depart the couple connectors from module

4.3.1 从模块上拆下对配的插件

Option1 : Press the wing of clip , and pull the clip away from panel, depart the couple connectors from module.

方法一： 摁压卡扣上的翅膀，并压或者拉卡扣脱离模块，分离接插件和模块。(pic 26)

Option 2 destroy the clip , and change a new clip

方法 2： 破坏卡扣，重新使用时，更换新的卡扣

4.3.2 release cable from wire dress (optional)

4.3.2 将绑线拆除 (可选)

Customer do it according to real situation, it is optional.

4.3.3 un-mating connector

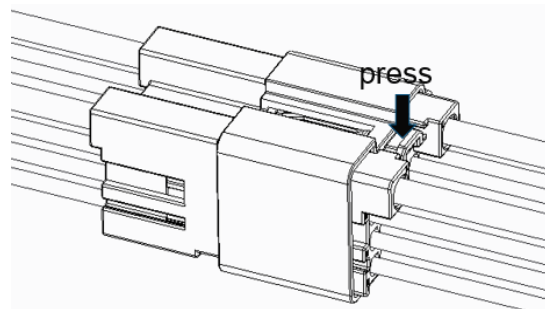
4.3.3 连接器拔出

Push the latch, hold the connector and wire and pull back the connector from interface

将连接器锁扣压下到底，抓位连接器及绑线往外侧拉出

Caution: Be careful your hands during un-mating process!

注意: 拔出力量相对较大，注意手的防护



Pic 73

4.3.4 Pull the TPA from end-lock to pre-lock

4.3.4 将二次锁从终锁位置退回到预锁位置

Use Extraction tool 2-1579008-1 OR similar pin to raise the TPA until to pre-lock;

用退端子工具 2-1579008-1 或类似工具，将尖头伸入连接器 TPA 上的两个小槽，转动工具使 TPA 退回到预锁位置，到位后会有咔嗒声

Take the 16Pos(4.1.4) ref

参考 16 位 (4.1.4)

4.3.5 Terminal Extract

4.3.5 端子退出

4.3.5.1 Extract 1.2mm Terminal

4.3.5.1 1.2mm 端子退出

rotate the extract tool(as picture shown) till the latch touch the surface c , and then pull the cable till the terminal be away from connectors. Take the 16way (4.1.5.1)

如图旋转退端子工具，使塑壳里的弹性臂碰触到面 c ，然后轻拉线束直至端子脱离接插件。参考 16way，第 4.5.1.1 条，图 36 和图 37；

4.3.5.2 Extract 2.8mm Terminal

4.3.5.2 2.8mm 端子退出

Insert the extract tool till the surface b, and pull the cable till the terminal be away from connectors.

插入退端子工具到面“b”，然后轻拉线束直至端子脱离接插件。

Take the 16way (4.1.5.2) reference.

参考 16 位 (4.1.5.2)