



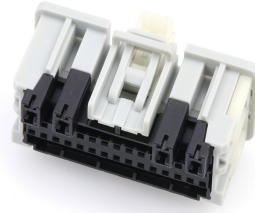
产品编号 : [349590341](#)

Product Description : Mini50 Unsealed Receptacle, 3 Rows, with CPA, 34 Circuits, Polarization Option B, Gray

系列号 : 34959

状态 : Active

Product Category : Connector Housings



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## 文件和资源

### 图纸

[图纸 349590341\\_sd.pdf](#)

[包装设计图 PK-31301-538-001.pdf](#)

### 3D 模型和设计文件

[3D模型 349590341\\_stp.zip](#)

### 规格

[应用规格 349590001-AS-CH-000.pdf](#)

[应用规格 AS-34959-001-001.pdf](#)

[产品规格 PS-34959-001-001.pdf](#)

[测试摘要 TS-34961-001-001.pdf](#)

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## 产物环境合规

### 合规

GADSL/IMDS	Compliant
China RoHS	
EU ELV	Compliant per 2000/53/EC
Low-Halogen Status	Low-Halogen per IEC 61249-2-21
REACH SVHC	Not Contained per D(2023)3788-DC (14 Jun 2023)
EU RoHS	Compliant per EU 2015/863

### [多部分产品合规性声明](#)

- Eu RoHS
- REACH SVHC
- Low-Halogen

### [多部分行业合规性文件](#)

- IPC 1752A Class C
- IPC 1752A Class D
- Molex Product Compliance Declaration
- IEC-62474
- chemSHERPA (xml)

欧盟 RoHS 合格证书

## 产品详情

### 常规

状态	活动
类别	Connector Housings
系列	34959
说明	Mini50 Unsealed Receptacle, 3 Rows, with CPA, 34 Circuits, Polarization Option B, Gray
应用	Automotive, Power, Wire-to-Board
产品系列	Mini50 Connection Systems
产品名称	Mini50
UPC	887191704425

### 物理

电路数（最多）	34
颜色-树脂	灰色
性别	Receptacle
符合灼热丝规范	否
插接极性	是
锁定插接部位	是
材料 - 树脂	Nylon
净重	5.700/g
行数	3
包装形式	Bag
面板安装式	否
间距 - 插配接口	2.00mm
间距 - 终端界面	2.00mm
极化	B
有极性的插配件	是

可堆叠的	否
运行温度范围	-40° to +105° C

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## 可配插/可连接使用的产品

### 可配插部件

描述	产品编号
Mini50 Unsealed Vertical Hybrid Header, 3 Rows, 34 Circuits, Polarization Option B, Gray, Tray	<u>0349580341</u>
Mini50 Unsealed Vertical Hybrid Header, 3 Rows, 34 Circuits, Polarization Option B, Gray, Tube	<u>0349587341</u>
Mini50 Unsealed Vertical Hybrid Header, 3 Rows, 34 Circuits, Polarization Option B, Gray, Tape and Reel	<u>0349588341</u>
Mini50 Unsealed Right-Angle Hybrid Header, UL 94 H-B, 34 Circuits, Polarization B, Gray, Tray	<u>0349610344</u>
Mini50 Unsealed Right-Angle Hybrid Header, UL 94 H-B, 34 Circuits, Polarization B, Gray, Tube	<u>0349617344</u>
Mini50 Unsealed Right-Angle Hybrid Header, UL 94 H-B, 34 Circuits, Polarization B, Gray, Tape and Reel	<u>0349618344</u>

### 可连接使用部件

描述	产品编号
CTX50 Unsealed Receptacle Terminals	<u>560023</u>



# PRODUCT SPECIFICATION

## 1.0 SCOPE

This Product Specification covers the 2.00 mm (0.079 inch) centerline (pitch) three row Mini50 0.50 & 1.20 mm hybrid and non-hybrid unsealed wire to board connection system terminated using wire crimp technology with tin plating.

## 2.0 PRODUCT DESCRIPTION

### 2.1 PRODUCT NAME AND SERIES NUMBERS

Product Name	Series
34/38 Way Mini50 Vertical Header Assembly	34958
34/38 Way Mini50 Right Angle Header Assembly	34961
34/38 Way Mini50 Receptacle Assembly	34959

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# PRODUCT SPECIFICATION

## 2.2 ASSOCIATED TERMINALS

Product Description	Vendor Part Number
Molex CTX50 Female Receptacle Terminal (0.35 mm <sup>2</sup> )	560023-0428
Molex CTX50 Female Receptacle Terminal (0.22 mm <sup>2</sup> )	560023-0421
Molex CTX50 Female Receptacle Terminal (0.13 mm <sup>2</sup> )	560023-0422
Tyco MCON 1.2mm Female Receptacle Terminal (1.00 mm <sup>2</sup> )	7-1452659
Tyco MCON 1.2mm Female Receptacle Terminal (0.50/0.75 mm <sup>2</sup> )	7-1452656
Tyco MOCN 1.2mm Female Receptacle Terminal (0.35 mm <sup>2</sup> )	7-1452653

## 2.3 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

Harness Housings: 35% glass fiber nylon  
 TPAs: 50% glass filled nylon  
 CPAs: 50% glass filled nylon  
 Header Housing: 30% glass fiber SPS  
 Pins & Blades: C26800 Alloy  
 Tin Plating: Tin with nickel under-plate  
 Pin Alignment Plate: 30% glass fiber SPS

## 2.4 SAFETY AGENCY APPROVALS

UL File Number	Not Applicable
CSA File Number	Not Applicable
TUV License number	Not Applicable

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# PRODUCT SPECIFICATION

## 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

Description	Document Number
34/38 Way Right Angle Sales Drawing	SD-34961-030
34/38 Way Vertical Sales Drawing	SD-34958-300
34/38 Way Connector Sales Drawing	SD-34959-030
Female 0.50mm Receptacle Terminal Sales Drawing	SD-560023-002
Tray Packaging Specification	PK-31302-070
Tube Packaging Specification	PK-31301-688
Bulk Packaging Specification	PK-31301-538
Application Specification	AS-34959-001

## 4.0 RATINGS

### 4.1 VOLTAGE

500 VDC MAXIMUM; Per GMW3191, All measured isolation resistances shall be >100MΩ.

### 4.2 CURRENT AND APPLICABLE WIRES

Current is dependent on connector size, ambient temperature, blade size and related factors. Actual maximum current rating is application dependent and should be evaluated for each use.

AWG	Amperes	Wire range	Insulation Diameter
Molex CTX50 TERMINAL SYSTEM:			
0.35mm <sup>2</sup>	4.0	1.10 – 1.40 mm	(0.043 – 0.055 inch)
0.22mm <sup>2</sup>	4.0	0.95 – 1.20 mm	(0.037 – 0.047 inch)
0.13mm <sup>2</sup>	4.0	0.75 – 1.05 mm	(0.030 – 0.041 inch)

Tyco MCON TERMINAL SYSTEM:			
0.35mm <sup>2</sup>	10.0	1.50 – 1.65 mm	(0.059 – 0.065 inch)
0.50mm <sup>2</sup>	12.0	1.70 – 1.85 mm	(0.067 – 0.073 inch)
0.75mm <sup>2</sup>	13.5	1.91 – 2.06 mm	(0.075 – 0.081inch)
1.00mm <sup>2</sup>	16.0	2.18 – 2.34 mm	(0.086 – 0.092 inch)

### 4.3 TEMPERATURE

Operating: - 40 C° to + 105 C°

Non-operating: - 40 C° to + 105 C°

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## 5.0 PERFORMANCE

### 5.1 ELECTRICAL PERFORMANCE

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Contact Resistance (Low Level)	Mate terminal: apply maximum voltage of 20 mV and a max current of 100 mA.	0.50mm Terminal 20 milliohms MAXIMUM
			1.20mm Terminal 10.4 milliohms MAXIMUM
2	Contact Resistance @ Rated Current (Voltage Drop)	Mate terminal: apply maximum allowed current to maximum allowed terminal wire gauge	0.50mm Terminal 20 milliohms MAXIMUM
			1.20mm Terminal 10.4 milliohms MAXIMUM
3	Isolation Resistance	Apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	100 Meg ohms MINIMUM
4	Dielectric Strength	Apply an AC rms voltage of 1000V at 60 Hz across each adjacent cavity and between the terminals to ground	No dielectric breakdown or flash-over shall occur between cavities or between the cavities and the outside of a connector at any time during the test.
5	Temperature Rise (via Current Cycling)	Mate terminals: measure the temperature rise at the rated current after: 1008 hours of bench top testing (45 minutes ON and 15 minutes OFF per hour).	Temperature rise over Ambient: +55 C° MAXIMUM

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## 5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	<b>Connector Mate/ Unmate Forces</b>	Mate and unmate connector (male to female) at a rate of $50 \pm 6$ mm ( $2 \pm \frac{1}{4}$ inch) per minute.	Mate <b>82 Newtons MAXIMUM</b>
			Unmate w/o latch <b>100 Newtons MAXIMUM</b>
			Unmate w/latch <b>80 Newtons MINIMUM</b>
2	<b>Terminal Retention Force (in Housing)</b>	Axial pullout force on the terminal in the housing at a rate of $50 \pm 6$ mm ( $2 \pm \frac{1}{4}$ inch) per minute.	<b>0.50mm:</b> TPA in Pre-Lock <b>20 Newtons MINIMUM</b>
			<b>0.50mm:</b> TPA in Final-Lock <b>55 Newtons MINIMUM</b>
			<b>1.20mm:</b> TPA in Pre-Lock <b>50 Newtons MINIMUM</b>
3	<b>Terminal Insertion Force (into Housing)</b>	Apply an axial insertion force on the terminal at a rate of $50 \pm 6$ mm ( $2 \pm \frac{1}{4}$ inch) per minute.	<b>0.50mm:</b> TPA in Pre-Lock <b>15 Newtons MINIMUM</b>
			<b>0.50mm:</b> TPA in Final-Lock <b>30 Newtons MAXIMUM</b>
			<b>1.20mm:</b> TPA in Pre-Lock <b>30 Newtons MINIMUM</b>
4	<b>Connector Position Assurance (CPA) Engage Force</b>	Apply an axial insertion force on the CPA at a rate of $50 \pm 6$ mm ( $2 \pm \frac{1}{4}$ inch) per minute.	Mated Connector: <b>22 Newtons MAXIMUM</b>
			Unmated Conenctor: <b>50 Newtons MINIMUM</b>
5	<b>Connector Position Assurance (CPA) Disengage Force</b>	Apply an axial pullout force on the CPA at a rate of $50 \pm 6$ mm ( $2 \pm \frac{1}{4}$ inch) per minute	<b>10 Newtons MINIMUM</b> <b>30 Newtons MAXIMUM</b>
6	<b>Connector Position Assurance (CPA) Extraction Force</b>	Apply an axial pullout force on the CPA at a rate of $50 \pm 6$ mm ( $2 \pm \frac{1}{4}$ inch) per minute	<b>25 Newtons MINIMUM</b>
7	<b>Connector Audible Feedback</b>	The connector lock must provide audible feedback during connector mating at a rate of $50 \pm 6$ mm ( $2 \pm \frac{1}{4}$ inch) per minute.	<b>7dB over Ambient (C scale)</b>
8	<b>Polarization Feature Effectiveness</b>	Connector must be polarized to prevent mating with similar connectors or incorrect orientation	<b>225 Newtons MINIMUM</b>

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9	<b>Terminal Position Assurance (TPA) Insertion Force (into housing)</b>	The force to insert the TPA from the preload (as shipped) position to the final position at a rate of $50 \pm 6$ mm ( $2 \pm \frac{1}{4}$ inch) per minute.	<b>20 Newtons MINIMUM</b> <b>45 Newtons MAXIMUM</b>
10	<b>Terminal Position Assurance (TPA) Extraction Force (in housing)</b>	The force to extract the TPA from the final position to the preload position (as shipped) at a rate of $50 \pm 6$ mm ( $2 \pm \frac{1}{4}$ inch) per minute.	<b>20 Newtons MINIMUM</b> <b>45 Newtons MAXIMUM</b>
11	<b>Header Pin Retention Force (in Housing)</b>	Axial pushout force on the terminal in the housing at a rate of $50 \pm 6$ mm ( $2 \pm \frac{1}{4}$ inch) per minute.	<b>0.50mm Terminal</b> <b>15 Newtons MINIMUM</b>
			<b>1.20mm Terminal</b> <b>50 Newtons MINIMUM</b>
12	<b>Terminal Cavity Polarization</b>	Connector must be designed to withstand terminals inserted at any misorientation	<b>0.50mm Terminal</b> <b>15 Newtons MINIMUM</b>
			<b>1.20mm Terminal</b> <b>22.5 Newtons MINIMUM</b>
13	<b>Connector Lock Mechanical Overstress</b>	Pull on connector lock assembly in both horizontal and vertical directions	Horizontal: <b>70 Newtons MINIMUM</b>
			Vertical: <b>150 Newtons MINIMUM</b>

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## 5.3 ENVIROMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Durability	Mate connectors up to <b>10</b> cycles prior to environmental tests.	<b>0.50mm</b> Terminal <b>20</b> milliohms MAXIMUM
			<b>1.20mm</b> Terminal <b>12</b> milliohms MAXIMUM
2	Thermal Shock (Electrical)	Mate connectors per durability; expose to <b>300</b> cycles of: Temperature C°      Duration (Minutes) <b>-40 +0/-3</b> <b>30</b> <b>+105 +3/-0</b> <b>30</b>	<b>0.50mm</b> Terminal <b>20</b> milliohms MAXIMUM
			<b>1.20mm</b> Terminal <b>10.4</b> milliohms MAXIMUM
			Discontinuity < 1 microsecond
3	Vibration/ Mechanical Shock (Electrical)	Mate connectors per durability. Connector assembly shall be vibrated for ( <b>22</b> hours / axes @ <b>2.13</b> Grms, <b>132</b> shocks @ <b>25</b> Gs / axes, <b>3</b> shocks @ <b>100</b> Gs / axes) Not coupled to engine.	<b>0.50mm</b> Terminal <b>20</b> milliohms MAXIMUM
			<b>2.8mm</b> Terminal <b>10.4</b> milliohms MAXIMUM
			Discontinuity < 1 microsecond
4	Humid Heat Cyclic (Electrical)	Mate connectors per durability. Subject connector system GMW3191 2012 temperature/humidity profile	<b>0.50mm</b> Terminal <b>20</b> milliohms MAXIMUM
			<b>1.20mm</b> Terminal <b>10.4</b> milliohms MAXIMUM
5	Humid Heat Constant (Electrical)	Mate connectors per durability. Subject connector system to <b>10</b> days @ <b>85 +/-3</b> °C and <b>90 +/-5</b> % humidity	<b>0.50mm</b> Terminal <b>20</b> milliohms MAXIMUM
			<b>1.20mm</b> Terminal <b>10.4</b> milliohms MAXIMUM
6	High Temperature Exposure (Electrical)	Mate connectors per durability. Subject connector system to <b>105</b> C° for <b>1008</b> hours.	<b>0.50mm</b> Terminal <b>20</b> milliohms MAXIMUM
			<b>1.20mm</b> Terminal <b>10.4</b> milliohms MAXIMUM
7	Solderability	Per <b>SMES-152</b>	Solder coverage: <b>95% MINIMUM</b> (per <b>SMES-152</b> )
8	IR Process Soldering	Molex IR Profile: <b>ES-40000-5013</b> Maximum Temperature: <b>260C</b>	Dimensional: Conformance to Sales Drawing requirements

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## 6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.  
TPA's may become seated during transit, please refer to PS-34646-001 for more information.

## 7.0 GAGES AND FIXTURES

All applicable gages and fixtures are referenced in the appropriate control plans.

## 8.0 OTHER INFORMATION

Products conform to GMW3191 class II environment.

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