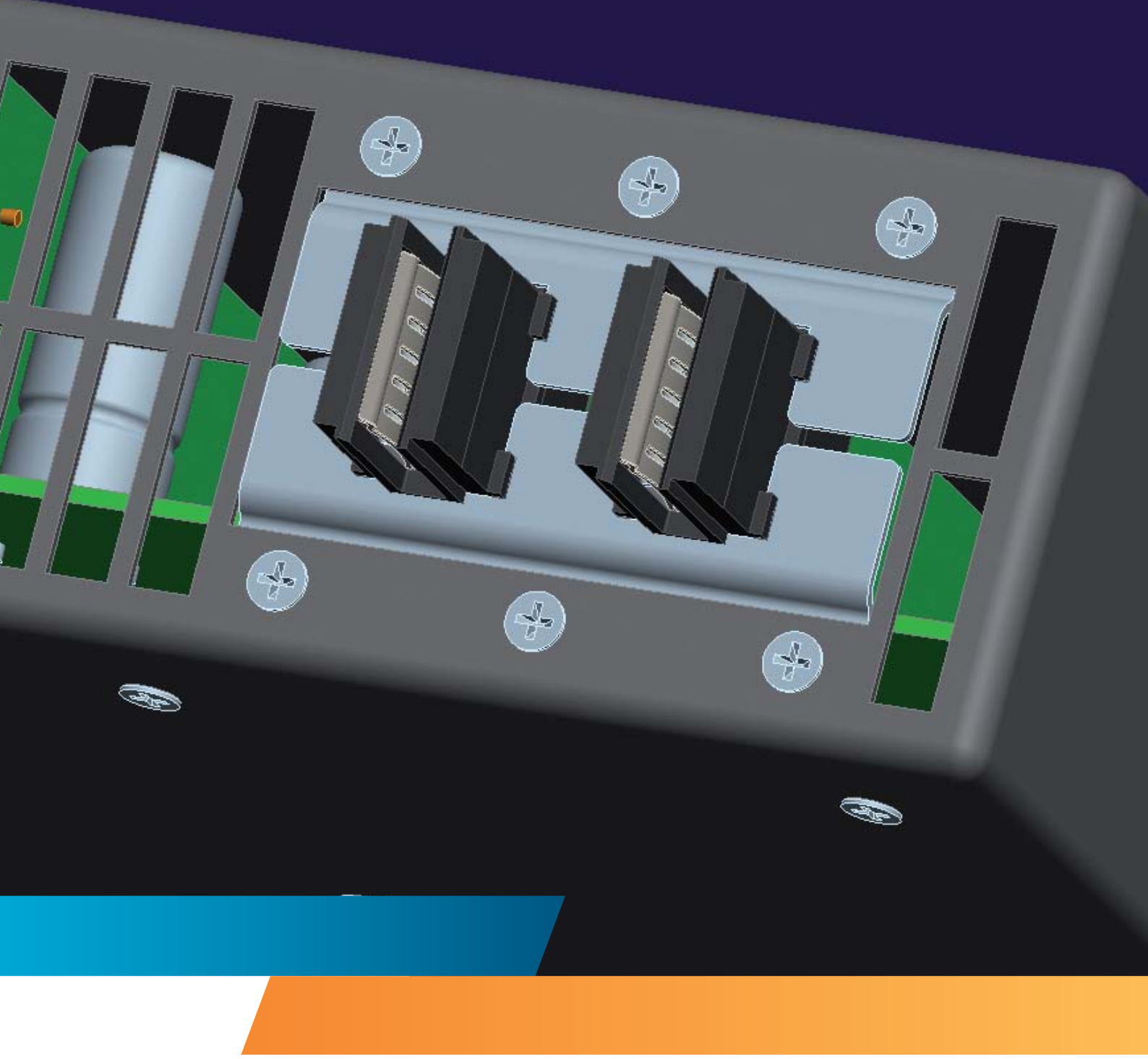


# CROWN CLIP JUNIOR

## Direct Power Connection for Bus Bars

RoHS Ready

Tyco Electronics

## Introduction

### Features and Benefits

**Current:**
150 A

**Mating Force:**
40 N max.

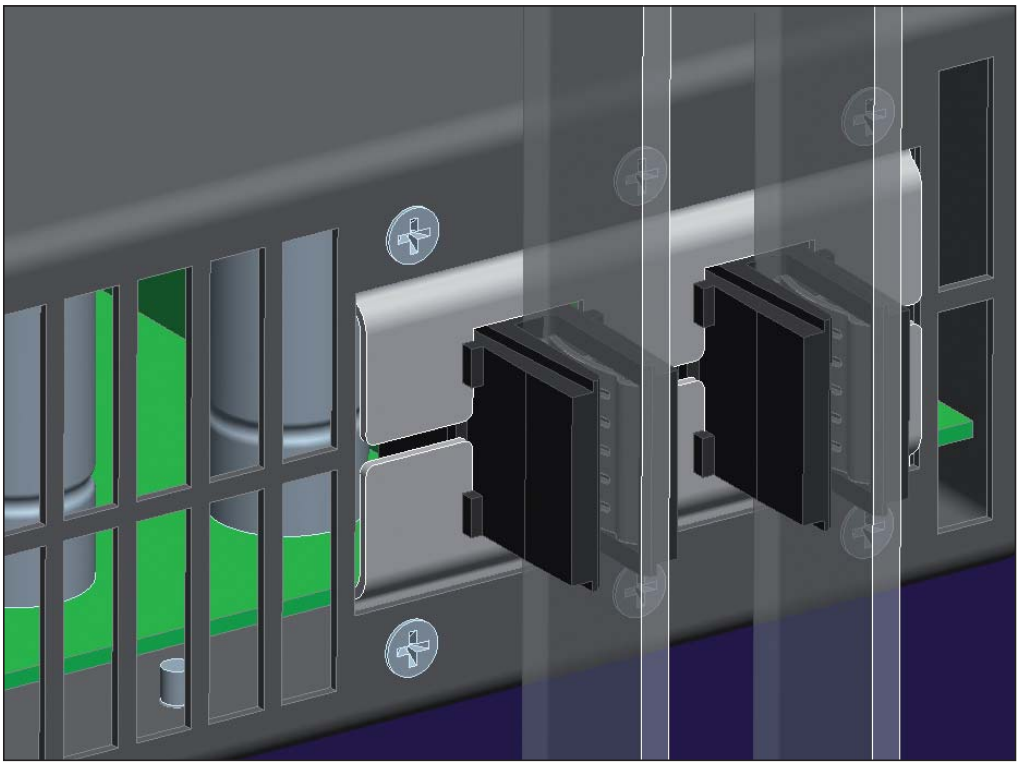
**Mating Bus Bar Thickness:**
3.0 ±0.1 mm

**Bus Bar Misalignment:**
±0.75 mm max.

**Hot Pluggable:**
Yes

**Contact Resistance:**
0.2 milliohms max.

- **Blind Mate**
- **Anti Over Stress Feature**
- **Reduced Installation Costs**
- **Screw Fix or PC Tail Option**



### Technical Features

**Product Specification:**
108-19360

**Application Specification:**
114-19128

The CROWN CLIP JUNIOR connector provides a space efficient connector in solder or screw mount configurations ideal for power supply/distribution applications. Satisfying the demand for low insertion/extraction forces it is hot plug capable for controlled and reliable separation of high power.

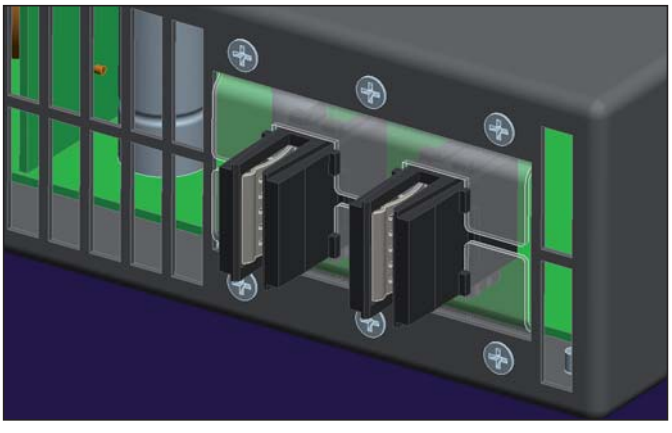
The connector mates to a 3.0 mm thick plated Bus Bar that provides a separable interface to ease assembly, inspection and trouble shooting.

The selective plated, high conductivity copper contacts offer low resistance and low millivolt drop for efficient power distribution. In blind mate applications this connector can handle adverse tolerances through the unique antistress feature allowing reliable mating to misaligned bus bars.

The CROWN CLIP JUNIOR connector can be soldered direct to a PCB or screwed to a Bus Bar for a 150 A maximum current capacity.

### Applications

- **Core Network Energy Systems**
- **Cellular Base Stations**
- **PSU Power Distribution**
- **Servers, Storage & Network Routers**
- **Industrial**



## Screw Mount

### Materials and Plating

#### Bus Bar

**Conductor:**
Copper

**Plating:**
Nickel or suitable alternative

**Temperature:**
–40 °C to +125 °C

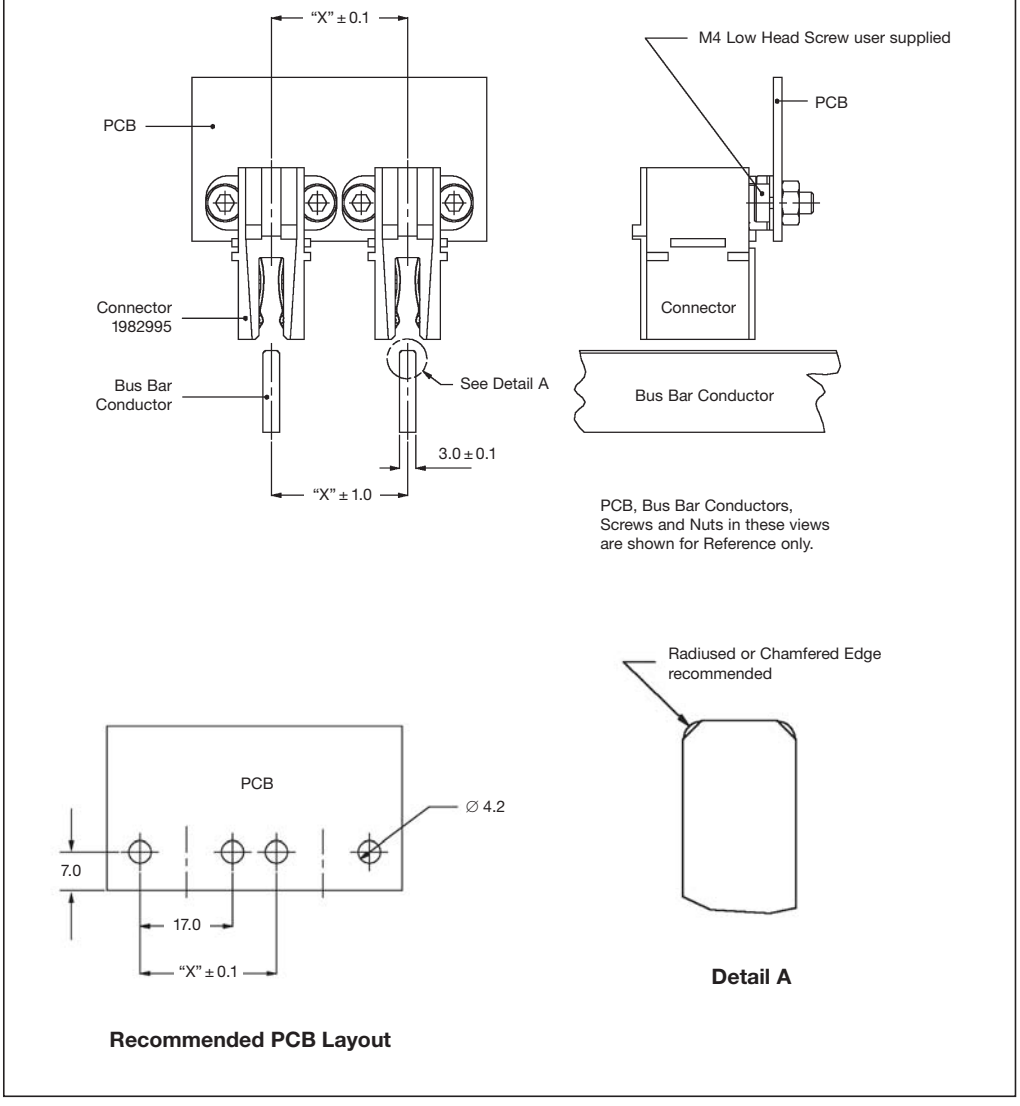
#### Connector

**Conductor:**
High Conductivity Copper Alloy

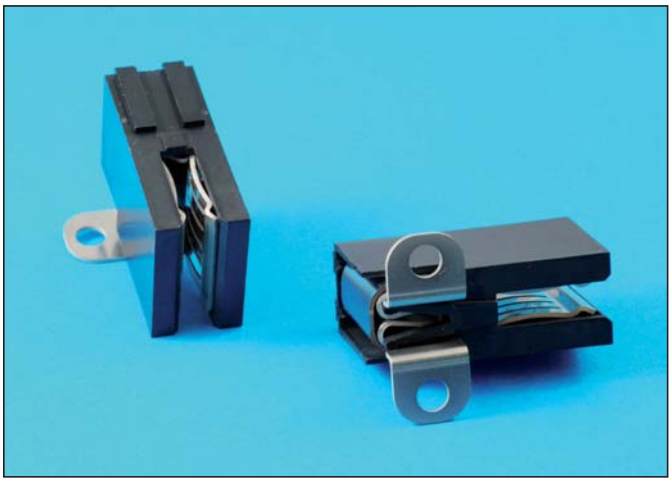
**Plating:**
Nickel or suitable alternative

**Insulator:**
Thermoplastic, glass reinforced

**Temperature:**
–40 °C to +125 °C




Part No. **1982995-1**



## PCB Mount

### Materials and Plating

#### Bus Bar

**Conductor:**
Copper

**Plating:**
Nickel or suitable alternative

**Temperature:**
–40 °C to +125 °C

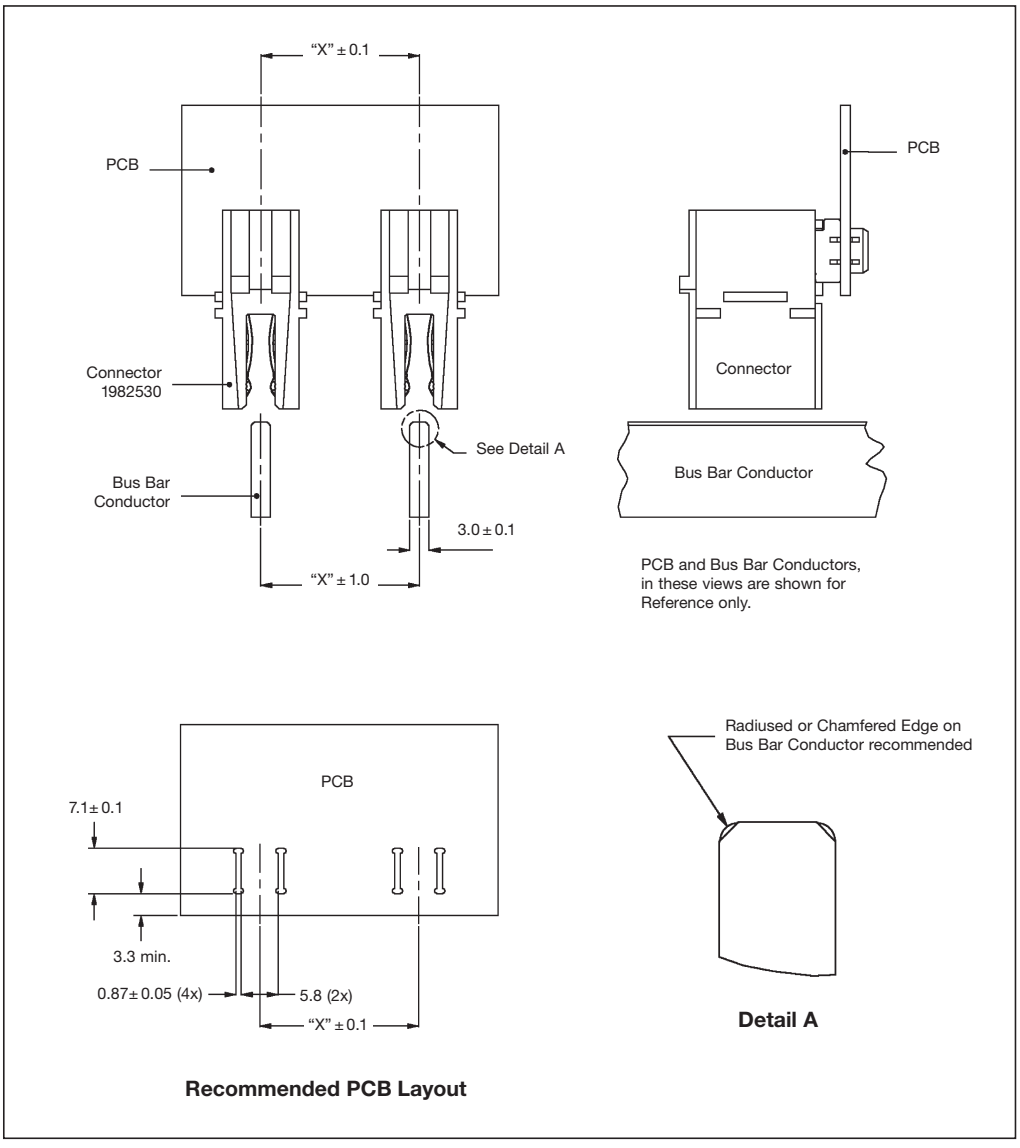
#### Connector

**Conductor:**
High Conductivity Copper Alloy

**Plating:**
Nickel or suitable alternative

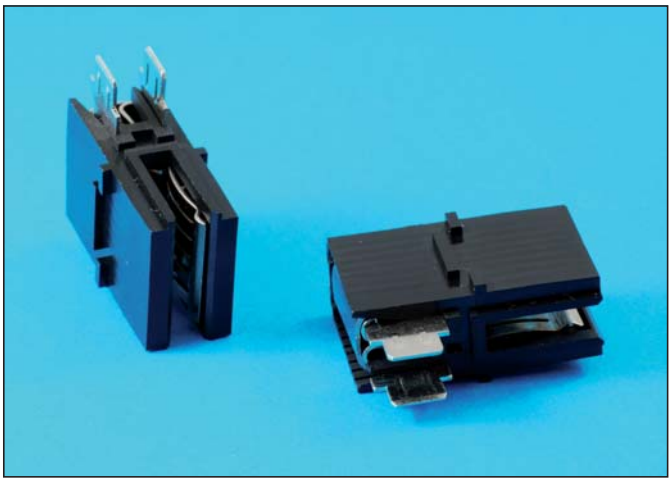
**Insulator:**
Thermoplastic, glass reinforced

**Temperature:**
–40 °C to +125 °C




**Recommended PCB Layout**

Part No. **1982530-1**



## Technical Data

### Performance and Test Description

The product is designed to meet electrical, mechanical and environmental performance specified in Design Objectives 108-19360.

Unless otherwise specified, all tests are performed at ambient environmental conditions per IEC specification 60068-1 clause 5.3 and are performed with connectors in mated condition.

### Visual

| Para-graph | Test Title | Performance / Severity Requirements | Procedure |
|---|---|---|---|
| **1.1.1** | Examination of product | Meets requirements of product drawing and applicable instructions on customer drawing, and application specification. | Visual, dimensional and functional per applicable inspection plan.<br>In acc. with IEC 60512-1-1<br>Magnification 10x |

### Electrical

| | | | |
|---|---|---|---|
| **1.1.2** | Contact resistance | 0.2 milliohms max. | Subject contacts assembled in housing and mated to a bus bar conductor to 50 mV maximum open circuit at 100 mA DC maximum. |
| **1.1.3** | Insulation resistance | 5000 MΩ min. initial<br>(After moisture 1000 MΩ min.) | Test voltage 500 V DC, duration 1 minute.<br>In acc. with IEC 60512-3-1 |
| **1.1.4** | Voltage proof | Requirement: no break-down or flash-over. | Test voltage: 1000 V AC<br>Duration 1 minute.<br>In acc. with IEC 60512-4-1<br>Test between 2 connectors when mounted on a PCB with a pitch of 25 ± 1 mm. |
| **1.1.5** | Hot insertion/extraction | Contact resistance after test 0.2 milliohms maximum. | Min. 10 mating/unmating cycles. Mating/unmating speed between max. 750 mm/s and min. 50 mm/s. Current: 150 A |

## Technical Data

### Mechanical

| Para-graph | Test Title | Performance / Severity Requirements | Procedure |
|---|---|---|---|
| **1.1.6** | Mating force | 20 N maximum | Measure force necessary to mate samples with a Bus Bar conductor. |
| **1.1.7** | Unmating force | 5 N minimum | Measure force necessary to unmate samples with a Bus Bar conductor. |
| **1.1.8** | Durability | No damage allowed. | With connector mounted on PCB mate and unmate samples for 50 cycles with a Bus Bar conductor. |
| **1.1.9** | Solderability | 5 % maximum de-wetting. | Solder bath temperature 260 °C |

### Environmental

| | | | |
|---|---|---|---|
| **1.1.10** | Temperature cycling | –55 °C / 105 °C, 0.5 hrs / 0.5 hrs,<br>Transition time: <2 sec.<br>Number of cycles: 25 (unmated)<br>Recovery time: 1 hour. | In accordance with IEC 60512-11-4 |
| **1.1.11** | Damp/heat cyclic | 25 °C / 55 °C 12 hrs / 12 hrs<br>(= 1 cycle) RH 95 %<br>Number of cycles: 10 (unmated) | In accordance with IEC 60512-11-12 |

## Sample Kit

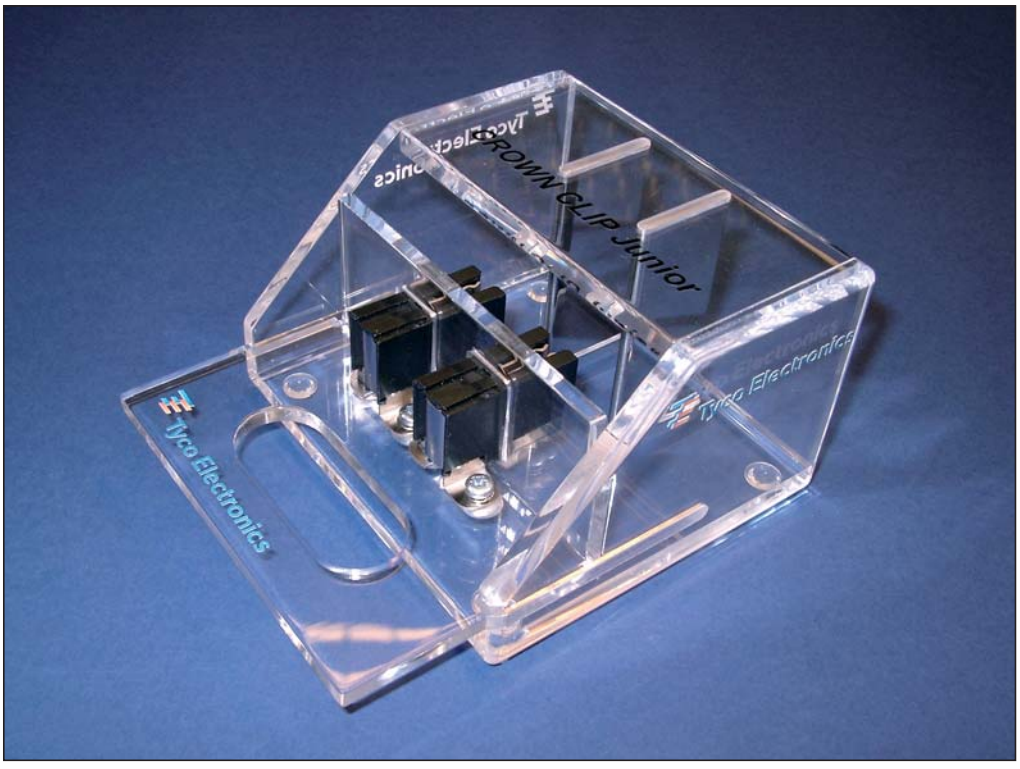
### CROWN CLIP JUNIOR – Demo Kits

**Demo Kit Complete:**
Part No. **2042631-1**

**Demo Kit – Slide only:**
Part No. **2042632-1**

The CROWN CLIP JUNIOR connector display model is manufactured from clear acrylic which allows you see right to the heart of the connector function. The compact display model interactively demonstrates the connector features, ease of configuration and space efficient design of the CROWN CLIP JUNIOR connector.

This sample kit is available to order using part number specified above.



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