



## Introducing SlimSeal SSL Connector

The SlimSeal SSL connectors are low profile, single row connectors developed for indoor and outdoor LED lighting applications. These connectors provide low power, sealed solutions for free hanging, wire-to-wire interconnects and for robust, stable electrical and mechanical wire-to-board connections used in solid state lighting.

### KEY FEATURES

- Available in 2, 3 & 4 positions
- SMT and thru hole
- Wire-to-wire and wire-to-board (vertical and right angle)
- 18 - 24 AWG stranded wire
- Positive integral latching
- Polarized connectors
- Pre-assembled seals & wire guides
- IP67 rating
- UV resistance (wire-to-wire)

### APPLICATIONS

- Billboards
- Live events lighting
- Wall wash lighting
- Spot lighting
- Street lighting
- Tunnel lighting
- Flood lights
- LED strip lighting

# SlimSeal SSL Connector

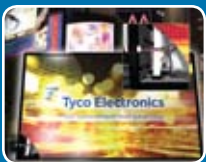
### LIGHTING APPLICATIONS



Channel/Sign



Emergency



Digital Signage



Architectural



Street & Stadium



Indoor



Office



Commercial Refrigeration

### ELECTRICAL

Operating Current : 5 AMPS (18-20 AWG) & 3.5 AMPS (22-24 AWG)

Maximum Operating Voltage : 250 VAC/250 VDC

Dielectric Withstanding Voltage : 1500 VAC

### MECHANICAL

Number of positions : 2, 3 and 4

Operating Temperature : -40°C to 105°C

Seal Rating : IP67

Durability : 30 mating cycles

### MATERIALS

Housings : UL 94 V0 rated high temperature resistant thermoplastic

Receptacle Contacts : Tin Plated Copper Alloy

Tab Contacts : Tin Plated Brass

Integral Seals : Silicone Rubber

### STANDARDS AND SPECIFICATIONS

UL 1977, CSA C22.2 No. 182.3

TE Application Specification : 114-13261

TE Product Specification : 108-2391

Exposure : UL 746C F1 (suitable for outdoor use, wire-to-wire only)

### APPLICATION TOOLING

#### 18-20 AWG Tab and Receptacle Terminals

| PART NUMBER | DESCRIPTION                     |
|-------------|---------------------------------|
| 2063957-1   | Hand Tool                       |
| 1530177-2   | HDI Applicator-Bench Terminator |
| 1530177-1   | HDI Applicator-Leadmaker        |

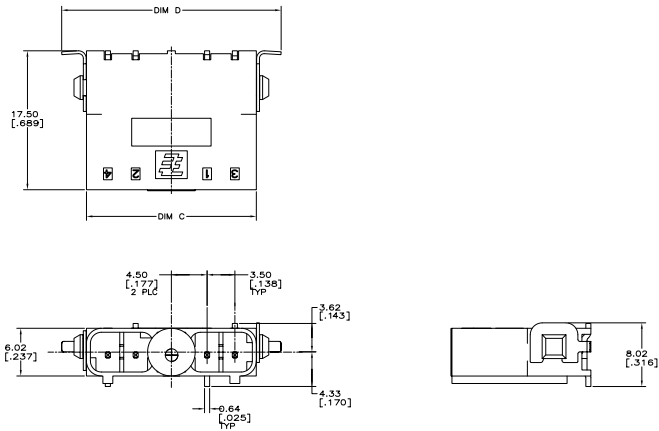
#### 22-24 AWG Tab and Receptacle Terminals

| PART NUMBER | DESCRIPTION                     |
|-------------|---------------------------------|
| 2063956-1   | Hand Tool                       |
| 1530178-2   | HDI Applicator-Bench Terminator |
| 1530178-1   | HDI Applicator-Leadmaker        |

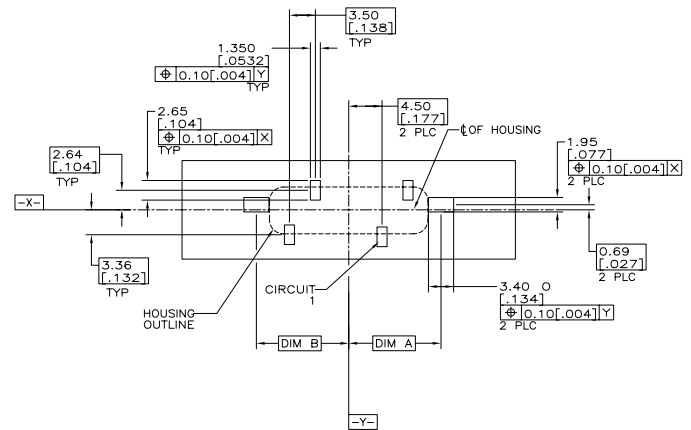


## PRODUCT DIMENSIONS

### Vertical SMT Header

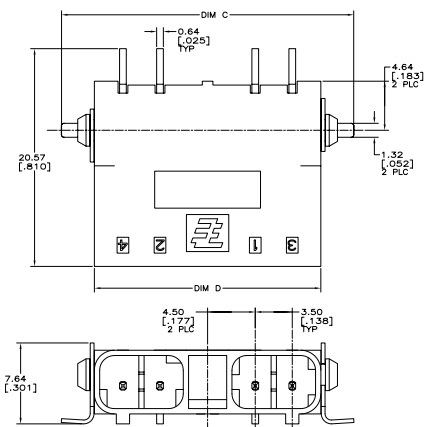


### Recommended PCB Layout

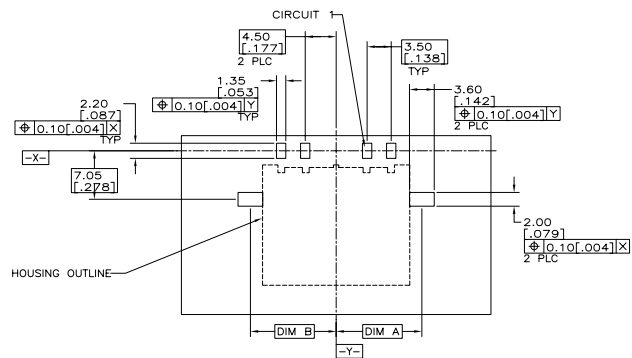


| PART NUMBER | POSITION SIZE | DESCRIPTION         | DIM "A"       | DIM "B"       | DIM "C"       | DIM "D"       |
|-------------|---------------|---------------------|---------------|---------------|---------------|---------------|
| 2106053-2   | 2             | SMT Vertical Header | 8.96 [0.353]  | 8.96 [0.353]  | 14.40 [0.567] | 20.65 [0.813] |
| 2106053-4   | 3             | SMT Vertical Header | 12.46 [0.491] | 8.96 [0.353]  | 17.90 [0.705] | 24.15 [0.951] |
| 2106053-6   | 4             | SMT Vertical Header | 12.46 [0.491] | 12.46 [0.491] | 21.40 [0.843] | 27.65 [1.089] |

### Right Angle SMT Header



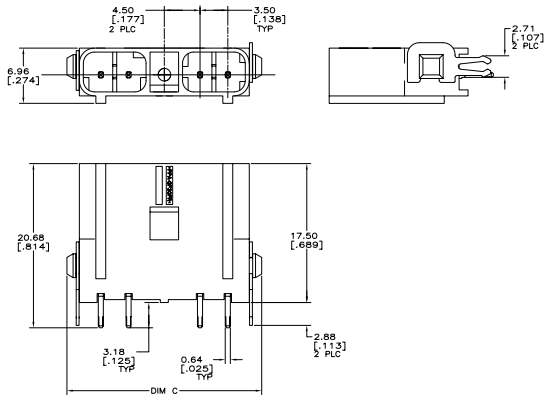
### Recommended PCB Layout



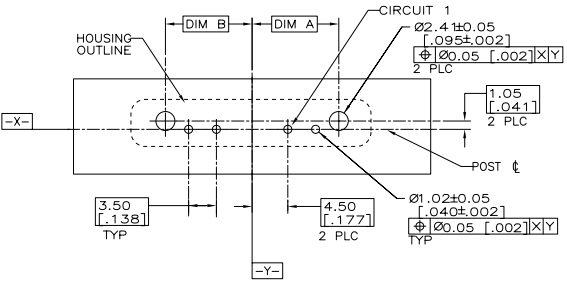
| PART NUMBER | POSITION SIZE | DESCRIPTION            | DIM "A"       | DIM "B"       | DIM "C"       | DIM "D"       |
|-------------|---------------|------------------------|---------------|---------------|---------------|---------------|
| 2106056-2   | 2             | SMT Right Angle Header | 8.96 [0.353]  | 8.96 [0.353]  | 20.61 [0.811] | 14.40 [0.567] |
| 2106056-5   | 3             | SMT Right Angle Header | 12.46 [0.491] | 8.96 [0.353]  | 24.11 [0.949] | 17.90 [0.705] |
| 2106056-8   | 4             | SMT Right Angle Header | 12.46 [0.491] | 12.46 [0.491] | 27.61 [1.087] | 21.40 [0.843] |

## PRODUCT DIMENSIONS cont.

### Vertical Thru Hole Header

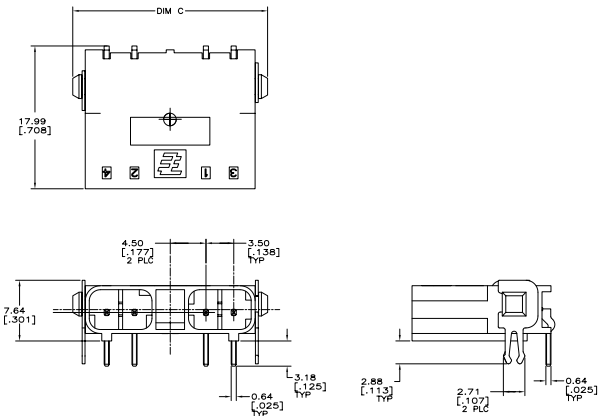


### Recommended PCB Layout

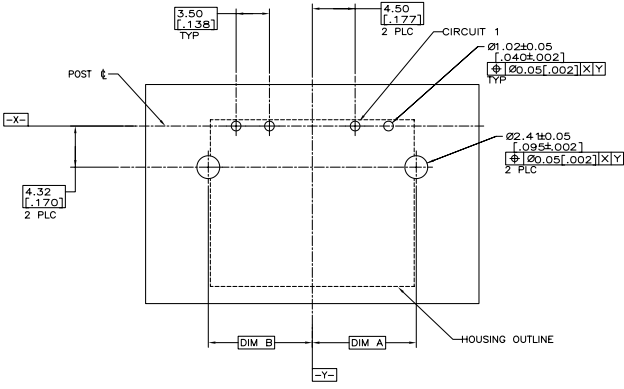


| PART NUMBER | POSITION SIZE | DESCRIPTION        | DIM "A"       | DIM "B"       | DIM "C"       |
|-------------|---------------|--------------------|---------------|---------------|---------------|
| 2106112-2   | 2             | TH Vertical Header | 7.42 [0.292]  | 7.42 [0.292]  | 17.54 [0.691] |
| 2106112-4   | 3             | TH Vertical Header | 10.92 [0.430] | 7.42 [0.292]  | 21.04 [0.828] |
| 2106112-6   | 4             | TH Vertical Header | 10.92 [0.430] | 10.92 [0.430] | 24.54 [0.966] |

### Right Angle Thru Hole Header



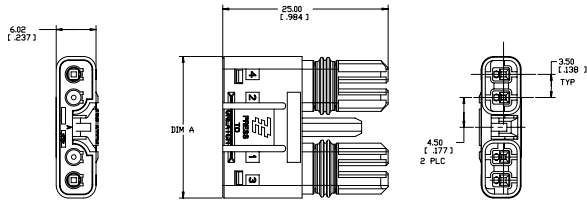
### Recommended PCB Layout



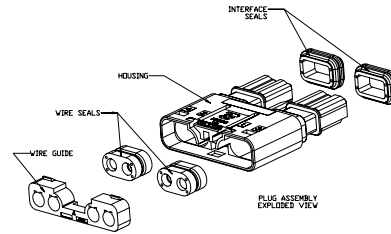
| PART NUMBER | POSITION SIZE | DESCRIPTION           | DIM "A"       | DIM "B"       | DIM "C"       |
|-------------|---------------|-----------------------|---------------|---------------|---------------|
| 2106111-2   | 2             | TH Right Angle Header | 7.42 [0.292]  | 7.42 [0.292]  | 17.54 [0.691] |
| 2106111-4   | 3             | TH Right Angle Header | 10.92 [0.430] | 7.42 [0.292]  | 21.04 [0.828] |
| 2106111-6   | 4             | TH Right Angle Header | 10.92 [0.430] | 10.92 [0.430] | 24.54 [0.966] |

## PRODUCT DIMENSIONS cont.

### Free Hanging Plug Assembly

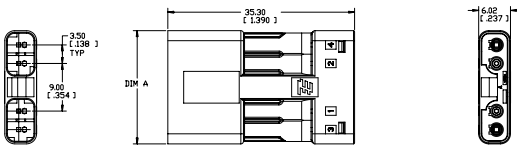


### Exploded View

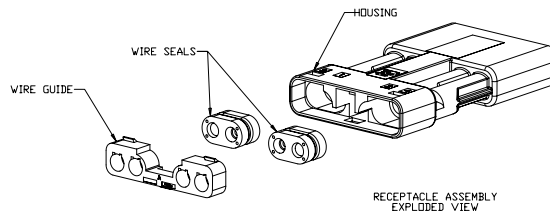


| PART NUMBER | POSITION SIZE | DESCRIPTION   | DIM "A"      |
|-------------|---------------|---------------|--------------|
| 2106135-2   | 2             | Plug Assembly | 14.40 [.567] |
| 2106135-3   | 3             | Plug Assembly | 17.90 [.705] |
| 2106135-4   | 4             | Plug Assembly | 21.40 [.843] |

### Free Hanging Receptacle Assembly

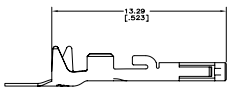


### Exploded View



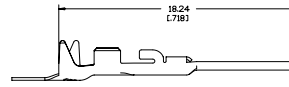
| PART NUMBER | POSITION SIZE | DESCRIPTION         | DIM "A"      |
|-------------|---------------|---------------------|--------------|
| 2106136-2   | 2             | Receptacle Assembly | 14.40 [.567] |
| 2106136-3   | 3             | Receptacle Assembly | 17.90 [.705] |
| 2106136-4   | 4             | Receptacle Assembly | 21.40 [.843] |

### Free Hanging Receptacle Contact



| PART NUMBER | POSITION SIZE                               |
|-------------|---|
| 2106123-1   | 18-20 AWG Receptacle Terminal               |
| 2106123-2   | 18-20 AWG Receptacle Terminal (Loose Piece) |
| 1-2106123-1 | 22-24 AWG Receptacle Terminal               |
| 1-2106123-2 | 22-24 AWG Receptacle Terminal (Loose Piece) |

### Tab Contact



| PART NUMBER | POSITION SIZE                        |
|-------------|--------------------------------------|
| 2106124-2   | 18-20 AWG Tab Terminal               |
| 2106124-9   | 18-20 AWG Tab Terminal (Loose Piece) |
| 2-2106124-2 | 22-24 AWG Tab Terminal               |
| 2-2106124-7 | 22-24 AWG Tab Terminal (Loose Piece) |

### Cable Assemblies

| PART NUMBER | POSITION | DESCRIPTION                        |
|-------------|----------|------------------------------------|
| 2106378-2   | 2        | 101.60 [4.000] Plug Cable Assembly |
| 2106378-3   | 3        | 101.60 [4.000] Plug Cable Assembly |
| 2106378-4   | 4        | 101.60 [4.000] Plug Cable Assembly |

| PART NUMBER | POSITION | DESCRIPTION                              |
|-------------|----------|--|
| 2106391-2   | 2        | 101.60 [4.000] Receptacle Cable Assembly |
| 2106391-3   | 3        | 101.60 [4.000] Receptacle Cable Assembly |
| 2106391-4   | 4        | 101.60 [4.000] Receptacle Cable Assembly |

## Questions to ask at design in

### What wire gauge and insulation type will you be using?

The connectors accept 18 -20 AWG and 22 - 24 AWG stranded wire with a wire varying maximum insulation outside diameters per wire gauge.

### What special retention mechanisms are available to ensure stability on the printed circuit board?

The vertical and right angle SMT headers have surface mount hold downs whereas the vertical and right angle TH headers have board locks to provide stability during mating and un-mating.

### What prevents the connectors from being disconnected unintentionally?

The connectors are snag resistant and have an integral, flush mounted, actuated latch that prevents inadvertent un-mating of the connectors.

### Is your manufacturing process automated?

The SMT headers are manufactured in high temperature material for reflow processing and tape and reel packaged for high speed SMT processing.

### What application tooling options are available?

Hand tools are available for product evaluation and/or low volume production using loose piece terminals. Applicators are available for mid to high volume production terminals on reel using bench top semi-automatic presses or fully automated lead makers.

### What mechanical and electrical testing has the connectors been subjected to?

The TE Product Specification 108-2391 provides a summary of the test groups, sequences and results that the product was subjected to during product qualification testing.

### What version of the header assemblies, vertical or right angle, are more widely accepted?

Right angle surface mount headers are more often chosen because they provide a more robust, low profile connection to the printed circuit board. Vertical headers are chosen if limited space is available to mate the plug connection in the final assembly.

**FOR MORE INFORMATION :** [www.tycoelectronics.com/lighting](http://www.tycoelectronics.com/lighting)

### Technical Support

|                           |  |
|---------------------------|--|
| Internet:                 | <a href="http://www.tycoelectronics.com/help">www.tycoelectronics.com/help</a> |
| USA:                      | +1 (800) 522-6752  |
| Canada:                   | +1 (905) 470-4425  |
| Mexico & Central America: | + 52(0) 55-1106-0814   |
| South America:            | +55 (0) 11-2103-6000   |
| Germany:                  | +49 (0) 6251-133-1999  |
| UK:                       | +44 (0) 800-267666   |
| France:                   | +33 (0) 1-3420-8686  |
| Netherlands:              | +31 (0) 73-6246-999  |
| China:                    | +86 (0) 400-820-6015   |

Part numbers in this brochure are RoHS Compliant\*, unless marked otherwise.

\*as defined [www.tycoelectronics.com/leadfree](http://www.tycoelectronics.com/leadfree)

### Tyco Electronics Corporation

Harrisburg, PA

[tycoelectronics.com](http://tycoelectronics.com)

© 2010 Tyco Electronics Corporation All Rights Reserved.

4-1773455-9 3M FP 04/2010

TE (logo) and Tyco Electronics are trademarks of the Tyco Electronics group of companies and its licensors. Other products, logos, and Company names mentioned herein may be trademarks of their respective owners.

While Tyco Electronics has made every reasonable effort to ensure the accuracy of the information in this catalog, Tyco Electronics does not guarantee that it is error-free, nor does Tyco Electronics make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. Tyco Electronics reserves the right to make any adjustments to the information contained herein at any time without notice. Tyco Electronics expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this catalog are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult Tyco Electronics for the latest dimensions and design specifications.



**Tyco Electronics**  
Our commitment. Your advantage.