

# **Introduction to High Current Card Edge Connectors**

# **Product Facts**

- Contacts on .100 [2.54] Centerlines
- Selective gold plating of contacts for high performance at low cost
- **■** Flow solder applications
- Glass-filled polyester housing is 94V-0 rated
- Available in vertical, right-angle or straddle PCB-mount
- Soldertails for wave solder applications
- Compliant press-fit PCB tails for solder-less applications
- 50% to 100% greater current carrying capacity than traditional card edge connectors
- Accepts double sided PC boards, .054-.070 [1.27-1.78] thick
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189



#### Introduction

The High Current Edge family of connectors provides high reliability and economy in packages compatible with industry standards. While many new card edge connectors for signal applications have moved toward higher density configurations (0.050" and 1 mm centerlines), Tyco Electronics has redesigned the 0.100" standard edge product family to carry more current, for low power distribution.

This product family includes the following:

- CROWN EDGE Products
- Standard Edge Connector
   2nd generation
- SEC-II Power Products

The connectors serve low durability cycle applications which do not have the available room for a traditional 2-piece power distribution connector. In other applications, a lowprofile connector is needed to allow for better airflow / less airflow restriction. This grouping of power card edge connectors is focused on providing high current density with the favored multi-point contact design which reduces contact interface resistance.

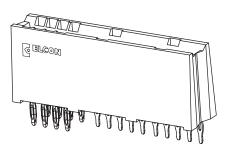
The connectors were used originally in the ISA Standard for computer expansion cards. Today these connectors are being used in applications such

as; DC-to-DC converters, low-wattage power supplies, industrial grade card extenders and general low cost I/O applications requiring durable/rugged card edge contacts. The improvements made still allows use in the original applications and they provide a lower resistance connection due to the high conductivity contacts plated with a minimum 30 micro inches gold.

The options include vertical or right-angle PCB mounting as well as straddle-mount configurations for co-planar PCB applications.

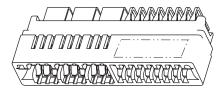


# Introduction to High Current Card Edge Connectors (Continued)



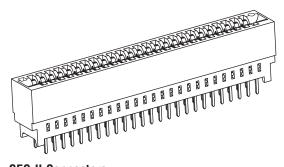
#### **CROWN EDGE Connector**

- Design based on CROWN BAND technology
- 35A per power contact
- True hot-plug power modules
- Flexible modular design
- Mates with .062 [1.6] thick card edge or bus bar tab



# **SEC-II Power Connector**

- High current density than high current SEC II
- Uses new MULTI-BEAM style power contact
- Vertical, straddle or right-angle PCB mounting
- 22A (straddle) or 28A (vertical) power contact +3A signal contact



# **SEC-II Connectors**

- Provides high reliability in packages compatible with industry standards for double-sided printed circuit boards
- Uses signal style contact
- High IACS copper alloy contacts available to improve current carrying capability
- Accepts double-sided boards .054 [1.27]-.070 [1.78] thick
- Maximum number of dual positions
  - .100 [2.54] Centerlines 70 positions

  - .125 [3.18] Centerlines 50 positions .150 [3.81] Centerlines 31 positions



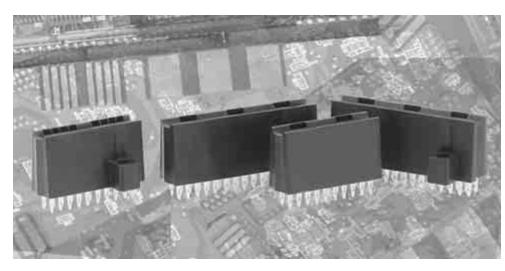
# **CROWN EDGE Card Edge-style High Current Connectors**

#### **Product Facts**

- Low cost power solution
- Power, signal and mixed modules
- 35A per power contact
- Mates with .062 (1.6 mm) thick card edge or bus bar
- Press-fit or solder tail terminations
- True hot-plug power modules
- Meets regulatory safety requirements
- All CROWN EDGE products in this section are RoHS compliant.

#### **Typical Applications**

- Board-to-board power connections
- **DC-DC** converters
- Uninterruptible Power Supply (UPS)
- **■** Power supplies



CROWN EDGE connectors are a board-to-board power interconnect solution that uses ELCON high performance CROWN BAND contact technology configured to mate directly with a printed circuit board edge or — for higher currents — with a solid bus bar. Power and signal can be combined and mounted end-to-end to meet the requirements of the applications.

# Product Highlights High-current Card Edge Interface

**CROWN EDGE connectors** use Tyco Electronics proven **ELCON CROWN BAND** contacts that provide multiple points of contact for high current, and low voltage drop and minimal heat generation. The desired current rating for most applications can be achieved by bussing multiple contacts or even modules. For even higher currents. CROWN EDGE connectors can be mounted onto a bus bar, and mate directly with a bus bar tab. Optimum interface to the mounting PC board is achieved through five termination tails.

#### Flexible Modular Design

To make easy work of power distribution design, **CROWN EDGE connectors** are available in modules of 2 and 3 contact segments with power or signal contacts or a combination of both in a single module. Modules can be placed end-to-end for assemblies up to 8" (203.20 mm) long. Custom molded configurations are possible on highvolume projects. Consult Tyco Electronics or your local Tyco Electronics sales representative for details.

#### **Versatile Power Arrangements**

Opposing contacts are isolated, so power connections at different voltage levels can be on one side of the board, with ground or power return on the other side.

# True Hot-Plug Support

CROWN EDGE power modules that support current interruption under load as defined by safety regulatory agencies are also available for mating to a metal blade or bus bar tab. These true hot-plug modules allow current interruption under load by incorporating a contact design that restricts the effects of arcing to areas that do not compromise the integrity of the connection.



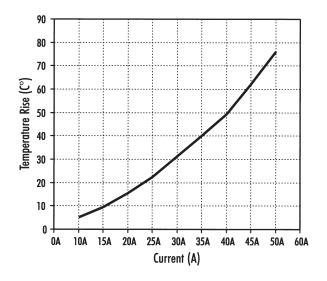
# **Product Specifications**

Materials & Finishes						
Insulators			PPA, UL 94-V-0 flammability rated, color black			
	Non-hot-plug power contact		Copper alloy, selectively plated with gold (30 micro inches minimum) and on terminations, all over nickel			
Contacts	Hot-plug	Contact holder	Phosphor bronze alloy, selectively plated with tin on terminations, over nickel			
Contacts	power contact	CROWN BAND element	Beryllium copper alloy, selectively plated with gold (30 micro inches minimum), over nickel			
_	Signal contacts		Phosphor bronze alloy, selectively plated with gold (30 micro inches minimum) and tin on terminations, all over nickel			
Electrical						
Current	Power contact		35A (see graph below)			
ratings	Signal contact		3A max.			
Insulation resistance			$5,000 M\Omega$ minimum at 500 VDC for 2 minutes, power MIL-STD 1344, Method 3003			
Dielectric strength			1,500VDC for 1 minute, per MIL-STD 1344, Method 3001			
Mechanical						
Mating PCB thickness			.062" 91.6 mm ±.006" (0.15 mm)			
Insertion	2 segment power module		5.0 lbf typical using .062" (1.6 mm) thick mating board with 5 oz. of copper			
Forces	3 segment power module		6.0 lbf typical using .062" (1.6 mm) thick mating board with 5 oz. of copper			
Extraction	2 segment power module		3.0 lbf typical using .062" (1.6 mm) thick mating board with 5 oz. of copper			
Forces	3 segment power module		5.0 lbf typical using .062" (1.6 mm) thick mating board with 5 oz. of copper			
Tooling			Press fixture is recommended for compliant press-fit assemblies Consult Tyco Electronics customer service for details			

### **Current Ratings**

The chart below demonstrates the performance of the CROWN EDGE power contact by showing the temperature rise at different current levels applied to two power contacts connected in series.

Current rating for any given application will depend, among other things, on the module combination, PCB copper trace volume, and internal equipment temperature/air flow. Mounting and mating to a bus bar will increase current ratings.



### **Safety Regulatory Compliance**

CROWN EDGE connectors have been evaluated by Underwriters Laboratories and have been found to comply with the requirements of U.S. standard UL1997 and Canadian standard C22.2 No. 182.3-M1987.



#### **Compliance with Current Interruption Requirements**

Hot-plug CROWN EDGE modules are available for applications that require current interruption as defined by safety regulatory agencies. These power-only modules have been evaluated and recognized by Underwriters Laboratories for current interruption up to 50 cycles as per the UL1977 standard. See hot-plug requirements on page 180.



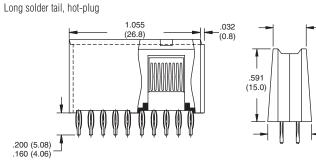
# 4-Position Power Module Part Numbers

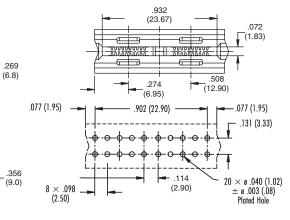
6650380-2

6651170-1 Long solder tail, non-hot-plug\*
6651170-2 Press-fit tail, non-hot-plug\*

\* Also available for .093" (2.4 mm) thick mating board. Contact Tyco Electronics Customer Service for details.

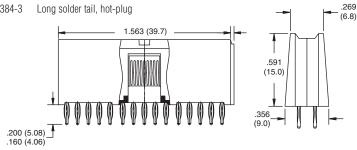
6651170-3 Short solder tail, non-hot-plug\*
6651331-1 Press-fit tail, hot-plug
6650380-1 Short solder tail, hot-plug

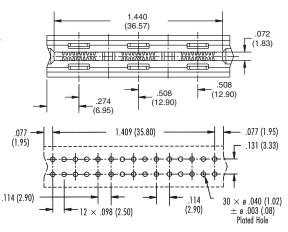




#### 6-Position Power Module Part Numbers

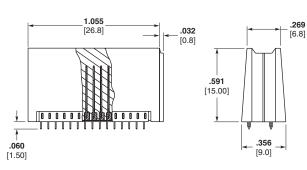
6650383-1 Press-fit tail, non-hot-plug 6650383-2 Long solder tail, non-hot-plug 6650383-3 Short solder tail, non-hot-plug 6650384-1 Short solder tail, hot-plug 6650384-2 Press-fit tail, hot-plug 6650384-3 Long solder tail, hot-plug

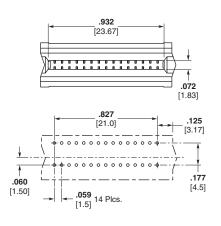




# 30-Position Signal Module Part Number

1926088-1 Press-fit tail, non-hot-plug



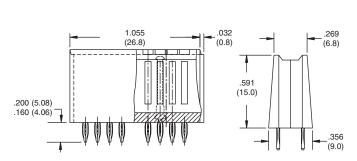


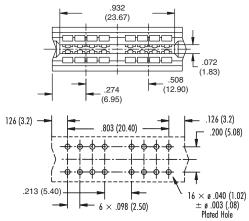
Note: All part numbers are RoHS compliant.



# 16-Position Signal Module Part Numbers

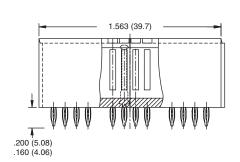
6650534-1 Press-fit tail

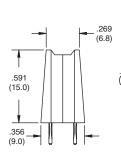


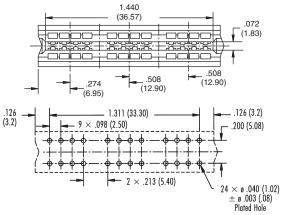


# 24-Position Signal Module Part Numbers

6650494-1 Press-fit tail 6651193-1 Long solder tail 6651214-1 Short solder tail





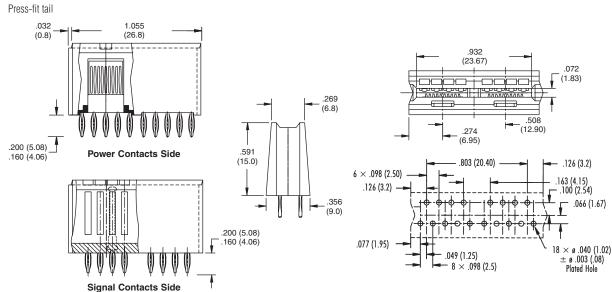


Note: All part numbers are RoHS compliant.



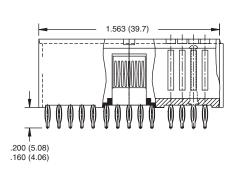
### 2 Power + 8 Signal Modules Part Numbers

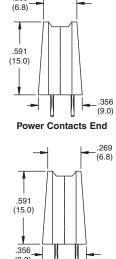
6643460-1 Short solder tail 6643460-2 Long solder tail 6643460-3 Press-fit tail



#### 4 Power + 8 Signal Modules Part Numbers

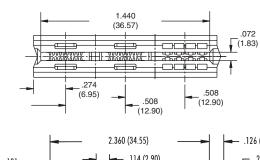
6651290-1 Press-fit tail 6651290-2 Long solder tail 6651290-3 Short solder tail

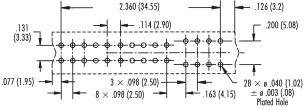




Signal Contacts End

.269







# **Design Notes**

# **Mating PCB Requirements**

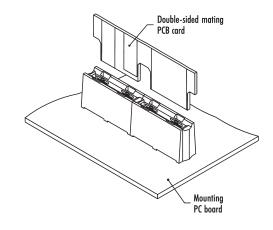
Mating PCB edge fingers should be gold plated, have .050" (1.3 mm) side margins, and be of suitable copper weight for power applications. Mating board thickness is .062 [1.60].

### **Sequenced Mating**

Sequenced mating can be achieved by designing one or more setback traces on the mating card edge, or by notching the edge of the card.

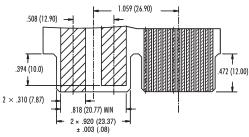
#### **End-to-end Mounting**

CROWN EDGE modules can be placed end-to-end for connector assemblies up to 8" (203.20 mm) long.

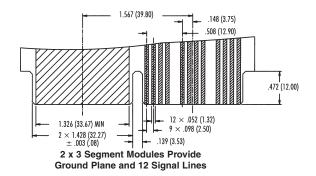


### **Mating PC Card Edge Samples**

The drawings below show two PC card edge samples with signal and power lines designed to mate with 2 and 3-segment CROWN EDGE modules.

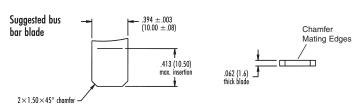


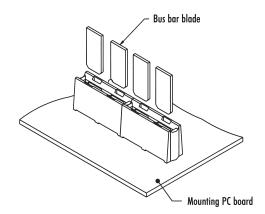
2 x 2 Segment Modules Provide Two Sequenced Power Traces and 30 Signal Traces



# **Hot-Plug Requirements**

Hot-plug application of this product requires the use of the CROWN EDGE true hot-plug modules (see part numbers on pages 177-179) mated with a customer-supplied metal blade or bus bar. Dimensions of a sample mating blade for use with CROWN EDGE hot-plug modules is shown below.



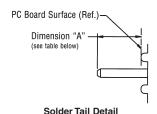




# **Connector Mounting**

# **Solder Tails**

Solder termination is available in two lengths. See table below for board thicknesses and recommended tail lengths.

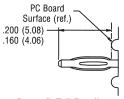


#### Tail Length vs. Board Thickness

Board Thickness	Dimension "A"
.062"	.100"140" (2.55 - 3.57 mm)
(1.6 mm)	[.115" (2.92 mm) nominal]
.092"/.125"	.160"200" (4.06 - 5.08 mm)
(2.3/3.0 mm)	[1.77" (4.5 mm) nominal]

#### **Press-fit Tails**

CROWN EDGE connectors use truly compliant eye of the needle press-fit tails designed for boards 0.093" thick and above.



Press-fit Tail Detail

#### Tooling for Compliant Press-fit Assemblies

Pressing fixtures are recommended for compliant press-fit assemblies. Contact Tyco Electronics for a detailed tool drawing.

### Suggested Printed Circuit Hole for Power and 2.5 mm Signal

Finished Hole: Ø .040 ± .003 [Ø 1.02 ± .08]

Drilled Hole: Ø .0453 ± .005 [Ø 1.151 ± .013]

Copper Plate: .0010 [.025] min. (per surface)

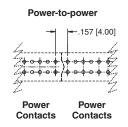
Tin Plate: .0003 [.008] min. (per surface)

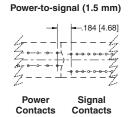
#### Suggested Printed Circuit Hole for 1.5 mm Signal

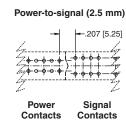
Finished Hole: Ø .022  $\pm$  .002 [Ø 0.56  $\pm$  0.05] Drilled Hole: Ø .026  $\pm$  .002 [Ø 0.65  $\pm$  0.02] Copper Plate: .0010 [.025] min. (per surface) Tin Plate: .0003 [.008] min (per surface)

#### Spacing Between Modules in End-to-end Mounting

This spacing between plated thru-holes for end-to-end mounting varies depending on the chosen module combination. Spacing for the three possible combinations is shown below.







# **Custom Solutions**

#### **Non-standard Modules**

In case the standard CROWN EDGE modules do not meet your design requirements, Tyco Electronics has the capability to mold any combination of power and signal contact layouts in 2 and 3 segment modules.



#### **Application-specific Custom Designs**

Tyco Electronics has a long history of designing and building application specific custom connectors, and CROWN EDGE connectors are no exception. A one-piece CROWN EDGE insulator, instead of a combination of several modules, provides a more robust interconnection design, as well as cost savings in high volume projects. Consult Tyco Electronics Customer Service for details.





# **SEC-II Power Products**

#### **Product Facts**

- Combines industry standard 0.100" pitch card edge format in a high power density design
- Industry-proven multi-beam power contact design
- High conductivity contact materials
- High temperature housing materials
- **UL 94V-0**
- Selective gold plating for high performance with low cost
- .000030 [0.00076] gold in contact area. Tin/lead on posts with entire contact nickel underplated
- Power Contact Current Ratings:
  - 38 amps Single Contact
  - 22 amps on each of 4 adjacent pairs (8 power contacts)
- Signal Contact Ratings:
  - 6 amps Single Contact
  - 4 amps on each of 6 adjacent contacts



The trends in electronic power supplies require high current density and lower cost. In addition, smaller sized connectors are needed to provide less airflow restriction for cooling the power supplies. The SEC-II power connectors offer an ideal combination of low-current and high-current connections in a single, durable design.

SEC-II power connectors are built on an expandable tooling platform which allows for a variety of combinations of power and signal contacts, all combined in a single molded housing. The vertical press-fit versions are ideal for high density stacking of cards into a backplane or for low air restriction of blade-style power supply designs. The straddle mount style offers a true co-planar interconnection with a total height of less than 4 mm from the top surface of the PCB.

SEC-II power connectors are currently in use in high-end computer and data storage equipment. Extensive testing in exposure to high vibration and

shock has proven these connectors equally suited for industrial applications as well, where low contact resistance and high current density is required.

**Product Specification** 108-2202

**Qualification Test Report** 501-608



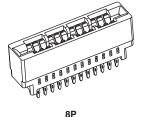
Vertical



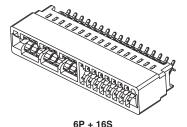
Co-Planar



Right-Angle



Power Only



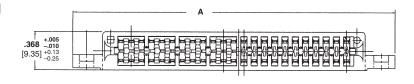
Power and Signal

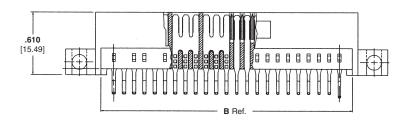
Note: See page 183 for part numbers and details.



# SEC-II Power Products (Continued)

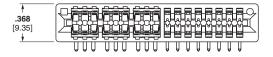
Co-Planar Application Straddle-Mount to .062 [1.6] PCB



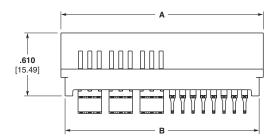




No. of Power	No. of Signal	Dime	ensions	With or Without	Part Number	
Contacts	Contacts	"A" Length	"B" Card Slot	Mounting Ears	rait ivullibel	
4	16	<b>1.66</b> 42.16	<b>1.500</b> 38.10	Without	2007088-2	
6	16	<b>1.960</b> 49.78	<b>1.800</b> 45.72	Without	2007088-1	
6	20	<b>2.745</b> 69.72	<b>2.000</b> 50.80	With	1761500-1	
8	16	<b>2.260</b> 57.40	<b>2.100</b> 53.40	Without	2007088-3	
8	22	<b>3.145</b> 79.88	<b>2.400</b> 60.96	With	1761879-1	







No. of Power	No. of Signal	Dime	Part Number	
Contacts	Contacts	"A" Length	"B" Card Slot	Part Number
6	16	<b>1.960</b> 49.78	<b>1.880</b> 47.75	2057372-1



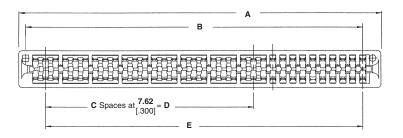


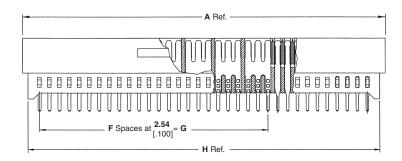
# SEC-II Power Products (Continued)

# **Vertical PCB-Mount**

# Seating tool required

\*See customer drawing for details







	Dimensions						No. of Power	No. of Signal	Omitted	Molded Key	Part	
Α	В	С	D	E	F	G	Н	Contacts	Contacts	PIN	Location	Number
Power and	d Signal, Sc	older Ta	iil									
<b>92.93</b> [3.660]	<b>88.90</b> [3.500]	7	<b>53.34</b> [2.100]	<b>81.28</b> [3.200]	23	<b>58.42</b> [2.300]	<b>90.18</b> [3.550]	16	20	None	None	1761426-1
<b>70.1</b> [2.760]	<b>66.07</b> [2.600]	4	<b>30.48</b> [1.200]	<b>58.42</b> [2.300]	14	<b>35.56</b> [1.400]	<b>67.31</b> [2.650]	10	20	None	None	1761426-2
<b>54.86</b> [2.160]	<b>50.80</b> [2.000]	2	<b>15.24</b> [0.600]	<b>43.18</b> [1.700]	8	<b>20.32</b> [0.800]	<b>52.07</b> [2.050]	6	20	None	None	1761426-3
Power and	d Signal, Pr	ess-Fit										
<b>54.61</b> [2.150]	<b>50.80</b> [2.000]	3	<b>22.86</b> [0.900]	<b>40.64</b> [1.600]	17	<b>43.16</b> [1.700]	<b>49.53</b> [1.950]	8	12	None	None	1761786-1
Power on	ly, Press-Fit	t										
<b>24.13</b> [0.950]	<b>20.32</b> [0.800]	1	<b>3.81</b> [0.150]	<b>12.70</b> [0.500]	5	N/A	<b>18.79</b> [0.740]	4	0	None	None	1888946-1
<b>31.75</b> [1.250]	<b>27.94</b> [1.100]	2	<b>7.62</b> [0.300]	<b>20.32</b> [0.800]	8	N/A	<b>26.42</b> [1.040]	6	0	None	None	1888946-2
<b>39.37</b> [1.550]	<b>35.56</b> [1.400]	3	<b>11.43</b> [0.450]	<b>27.94</b> [1.100]	11	N/A	<b>34.03</b> [1.340]	8	0	None	None	1888946-3

Note: All part numbers are RoHS compliant.



# **Standard Edge II Card Edge Connectors**

# **Product Facts**

- Maximum number
   of dual positions
   .100 [2.54] Centerlines-70,
   .125 [3.18] Centerlines-50,
   .150 [3.81] Centerlines-31
- Selective gold plating of contacts for high performance at low cost
- .025 [0.64] square solid posts meet standard wraptype specifications
- For flow solder applications
- Glass-filled polyester housing is 94V-0 rated
- Accepts double sided PC boards, .054-.070 [1.27-1.78] thick
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards
   Association, File No. LR 7189



**Contact Rating\*** — 3 Amps continuous (UL and CSA)

**Contact Resistance** — 10 milliohms max

Operating Temperature —  $-55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ 

Voltage Rating (Sea Level) -

.100 [2.54] centerline — 1000 VAC (test) .125 [3.18] centerline — 1500 VAC (test) .150 [3.81] centerline — 1500 VAC (test)

Insulation Resistance -

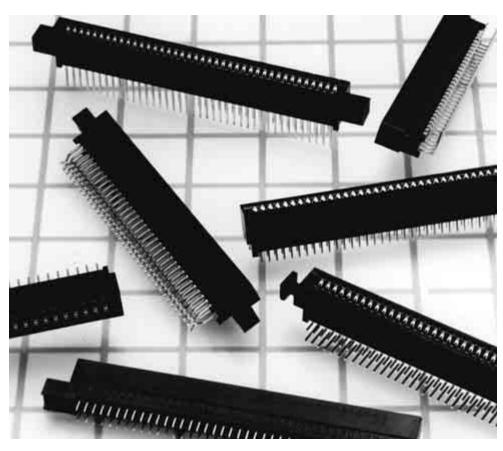
5000 megohms min., after exposure to humidity

Vibration Tolerance — 10 to 500 Hz

Contact Engagement Force — 12 oz [3.3 N] average per pair with .062 [1.57] PC board

Contact Separation Force — 2 oz [0.6 N] average per pair with .062 [1.57] PC board

**Humidity Tolerance** — 90%-95% for 96 hours



Tyco Electronics Standard Edge II Connectors provide high reliability and economy in packages compatible with industry standards for double sided printed circuit boards.

Tyco Electronics offers Standard Edge II Connectors with or without mounting ears, for rack mounting and soldering. Contacts are arranged on .100 [2.54] centers, .125 [3.18] centers, .150 [3.81] centers, .200 [5.08] row-to-row; and .250 [6.35] row-to-row. Right-angle connectors are also available with contacts arranged on .100 [2.54] centers, .150 [3.81] row-to-row or .200 [5.08] row-to-row.

Card extenders with contacts on .100 [2.54] and .125 [3.18] centers also are available.

Precision formed phosphor bronze contacts are selectively gold plated. Phosphor bronze has excellent strength characteristics which help the connector absorb load deflection movement of a PC board while maintaining sufficient contact force for good electrical connection. Bifurcated cantilever beam contacts provide redundant contact.

\*Consult Tyco Electronics engineering when paralleling contacts for power applications.

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# Standard Edge II Card Edge Connectors (Continued)

# .100 [2.54] Centerline, Vertical Solder Posts, Without Mounting Ears

#### **Material and Finish**

**Housing** — Black glass-filled polyester, 94V-0 rated

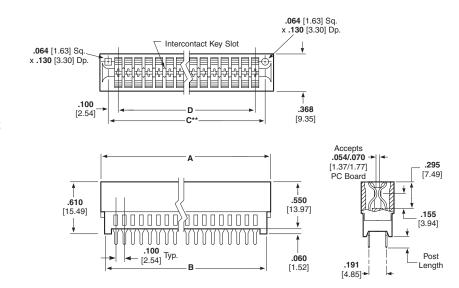
**Contacts** — Phosphor bronze, duplex plated as follows:

**Plating** — .000030 [0.00076] gold in contact area, tin on posts, with entire contact nickel underplated

# **Technical Documents**

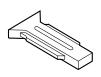
Product Specification

**Qualification Test Report** 501-227



# Intercontact Keying Plug Material

Natural color polyester



Part Number 650025-2 (.100 [2.54] Centerline)

No. of Dual		Dimer	nsions		Post	Part Numbers***
Positions	Α	В	C**	D	Length*	Solder Tail
6	<b>.860</b> 21.84	<b>.750</b> 19.05	<b>.700</b> 17.78	<b>.500</b> 12.70	<b>.125</b> 3.18	7-5530843-5
10	<b>1.260</b> 32.00	<b>1.150</b> 29.21	<b>1.100</b> 27.94	<b>.900</b> 22.86	<b>.125</b> 3.18	5-5530843-0
12	<b>1.460</b> 37.08	<b>1.350</b> 34.29	<b>1.300</b> 33.02	<b>1.100</b> 27.94	<b>.125</b> 3.18	8-5530843-3
15	<b>1.760</b> 44.70	<b>1.650</b> 41.91	<b>1.600</b> 40.64	<b>1.400</b> 35.56	<b>.125</b> 3.18	5530843-2
17	<b>1.960</b> 49.78	<b>1.850</b> 46.99	<b>1.800</b> 45.72	<b>1.600</b> 40.64	<b>.125</b> 3.18	5-5530843-3
18	<b>2.060</b> 52.32	<b>1.950</b> 49.53	<b>1.900</b> 48.26	<b>1.700</b> 43.18	<b>.125</b> 3.18	5530843-3
20	<b>2.260</b> 57.40	<b>2.150</b> 54.61	<b>2.100</b> 53.34	<b>1.900</b> 48.26	<b>.125</b> 3.18	5-5530843-4
22	<b>2.640</b> 62.48	<b>2.350</b> 59.69	<b>2.300</b> 58.42	<b>2.100</b> 53.34	<b>.125</b> 3.18	5530843-4
25	<b>2.760</b> 70.10	<b>2.650</b> 67.31	<b>2.600</b> 66.04	<b>2.400</b> 60.96	<b>.125</b> 3.18	5530843-5
28	<b>3.060</b> 77.72	<b>2.950</b> 74.93	<b>2.900</b> 73.66	<b>2.700</b> 68.58	<b>.125</b> 3.18	5530843-6
30	<b>3.260</b> 82.80	<b>3.150</b> 80.01	<b>3.100</b> 78.74	<b>2.900</b> 73.66	.125 and .187 3.18 and 1.75	5530843-7
31	<b>3.360</b> 85.34	<b>3.250</b> 82.55	<b>3.200</b> 81.28	<b>3.000</b> 76.20	<b>.125</b> 3.18	6-5530843-5
35	<b>3.760</b> 95.50	<b>3.650</b> 92.71	<b>3.600</b> 91.44	<b>3.400</b> 86.36	<b>.125</b> 3.18	2-5530843-3
36	<b>3.860</b> 98.04	<b>3.750</b> 95.25	<b>3.700</b> 93.98	<b>3.500</b> 88.90	<b>.125</b> 3.18	5530843-8
40	<b>4.260</b> 108.20	<b>4.150</b> 105.41	<b>4.100</b> 104.14	<b>3.900</b> 99.06	<b>.187</b> 3.18	2-5530843-0
50	<b>5.260</b> 133.60	<b>5.150</b> 130.81	<b>5.100</b> 129.54	<b>4.900</b> 124.46	<b>.187</b> 3.18	2-5530843-2

<sup>\*</sup>Contact Tyco Electronics for alternate post length.

<sup>\*\*</sup>C dimension is card slot length.

<sup>\*\*\*</sup>Press-fit parts can be made available, consult Tyco Electronics.

Notes: 1. Other connector sizes can be made available, consult Tyco Electronics.

2. High temperature IR reflow compatible connectors can be made available, consult Tyco Electronics.



# Standard Edge II Card Edge Connectors (Continued)

# .100 [2.54] Right-Angle Solder Posts, with Low and No Mounting Ears

#### **Material and Finish**

**Housing** — Black glass-filled polyester, 94V-0 rated

**Contacts** — Phosphor bronze, duplex plated as follows:

**Plating A** — .000030 [0.00076] gold in contact area, tin on posts, with entire contact nickel underplated

**Plating B** — .000015 [0.00038] gold in contact area, tin on posts, with entire contact nickel underplated

#### **Related Product Data**

Performance Specifications page 185

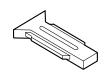
#### **Technical Documents**

**Product Specification** 

108-9039

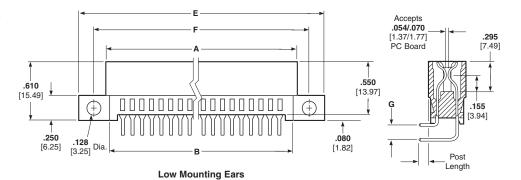
# Intercontact Keying Plug Material

Natural color polyester



Part Number 650025-2 (.100 [2.54] Centerline)

#### Accepts .064 [1.63] Sq. .064 [1.63] Sq. x .130 [3.30] Dp. x .130 [3.30] Dp. Intercontact Key Slot [1.37/1.77] PC Board .295 .155 [3.94] .300 .368 .100 [2.54] [7.62] [9.35] .100 Post Length With Board Locks



### **Low Mounting Ears**

No. of				Post	Part Numbers				
Dual Positions	Α	В	C*	D	E	F	G1	Length <sup>2</sup>	(Plating A)
12	<b>1.460</b> 37.08	<b>1.350</b> 34.29	<b>1.300</b> 33.02	<b>1.100</b> 27.94	<b>2.045</b> 51.94	<b>1.775</b> 45.08	.100x .150	.090	5145089-13
18	<b>2.060</b> 52.32	<b>1.950</b> 49.53	<b>1.900</b> 48.26	<b>1.700</b> 43.18	<b>2.645</b> 67.18	<b>2.375</b> 60.32	.100x .150	.090	5645384-1
20	<b>2.260</b> 57.40	<b>2.150</b> 54.61	<b>2.100</b> 53.34	<b>1.900</b> 48.26	<b>2.845</b> 72.30	<b>2.575</b> 65.40	.100x .150	.090	5645384-3

<sup>\*</sup>C dimension is card slot length.

Note: Other connector sizes can be made available, consult Tyco Electronics.

# **No Mounting Ears**

No. of Dual		Dimensions Post		Dimensions				Post	Part N	umbers
Positions	Α	В	C*	D	G1	Length <sup>2</sup>	Plating A	Plating B		
10	<b>1.260</b> 32.00	<b>1.150</b> 29.21	<b>1.100</b> 27.94	<b>0.900</b> 22.96	.100x .150	.090	5650118-2	_		
15	<b>1.760</b> 44.70	<b>1.650</b> 41.91	<b>1.600</b> 40.64	<b>1.400</b> 35.56	.100x .150	.090	5650118-1	_		
19	<b>2.160</b> 54.86	<b>2.750</b> 69.85	<b>2.700</b> 68.58	<b>1.800</b> 45.72	.100x .150	.090	_	5532600-6		
25	<b>2.760</b> 70.10	<b>2.350</b> 67.61	<b>2.600</b> 66.04	<b>2.400</b> 60.96	.100x .150	.090	_	5532600-2		
31	<b>3.360</b> 85.34	<b>3.250</b> 82.55	<b>3.200</b> 81.28	<b>3.000</b> 76.20	.100x .150	.090	_	5532600-4		
32	<b>3.460</b> 87.88	<b>3.350</b> 85.09	<b>3.300</b> 83.82	<b>3.100</b> 78.74	.100x .150	.090	_	5532600-5		

<sup>\*</sup>C dimension is card slot length.

Other connector sizes can be made available, consult Tyco Electronics.
 High temperature IR reflow compatible connectors can be made available, consult Tyco Electronics.

<sup>&</sup>lt;sup>1</sup> Metric equivalent for .100 x .150 and .100 x .200 are [2.54 x 3.81] and [2.54 x 5.08].

<sup>&</sup>lt;sup>2</sup> Metric equivalent for post length is .090 = [2.27].

<sup>&</sup>lt;sup>3</sup> Connector with Board Locks.

<sup>&</sup>lt;sup>1</sup> Metric equivalent for .100 x .150 and .100 x .200 are [2.54 x 3.81] and [2.54 x 5.08].

<sup>&</sup>lt;sup>2</sup> Metric equivalent for post length is .090 = [2.27].

# **Mouser Electronics**

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<u>TE Connectivity</u>: 5-5530843-0