AVX 2pc/1pc Connector Solutions







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ONE PIECE BOARD TO BOARD (BTB)

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SINGLE COMPRESSION CONTAG	······································
Nominal Working Height 1.00mm	
Nominal Working Height 1.50mm	



43-49

Series 10-9159





The 9159 series of Board-to-Board interconnect system allows two PCB's to be mated end-to-end creating strips of LED lighting. Designed specifically for the unique Solid State Lighting (SSL) market requiring coplanar (horizontal-to-horizontal) PCB mating with a 5 Amp current rating in the smallest package available. These single sided SMT connectors are perfect for both FR4 and metal boards where you need to butt the boards up together to minimize separation. Availability of both white and black insulation colors make them perfect for lighting as well as industrial applications. With sizes from 2p-6p, these high reliability connectors boast gold plated beryllium copper receptacle contacts for harsh environments.

APPLICATIONS

- Coplanar PCB mating in SSL products
- LED linear lighting strips
- Application Notes: refer to 201-01-123

FEATURES AND BENEFITS

- Single sided SMT: supports FR4 and metal PCB's
- 5 Amp current rating: exceeds general market needs
- 5.5mm mated width: minimizes PCB space to decrease LED pitch
- Gold plated BeCu spring contacts: reliability for harsh environments
- Optional retaining clip: provides positive connector mating during vibration
- Available in white: supports SSL market preferences

ELECTRICAL

- Current Rating: 5 Amps / Contact
- Voltage Rating: 125 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

MECHANICAL

- Insulator Material: Nylon: VL94VO
- Contact Material: BeCu / Phos Bronze
- Plating: Gold / Tin over Nickel
- Durability: 10 Cycles

HOW TO ORDER



Certification: UL File #E90723





PLUG 2 WAY 2 PART PCB STRIP CONNECTOR



2 WAY PCB BOARD LAYOUT







NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46.
- 4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL TIN PLATED ON TAILS.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.
- 8. OPTIONAL RETAINING CLIP, SEE PAGE 8.





Series 10-9159

PLUG 3 WAY 2 PART PCB STRIP CONNECTOR



3 WAY PCB BOARD LAYOUT







NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46.
- 4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL TIN PLATED ON TAILS.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.
- 8. OPTIONAL RETAINING CLIP, SEE PAGE 8.





Series 10-9159

PLUG 4 WAY 2 PART PCB STRIP CONNECTOR



4 WAY PCB BOARD LAYOUT







NOTES:

1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.

- DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46.
- 4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL TIN PLATED ON TAILS.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.
- 8. OPTIONAL RETAINING CLIP, SEE PAGE 8.





Series 10-9159

PLUG 5 WAY 2 PART PCB STRIP CONNECTOR









5 WAY PCB BOARD LAYOUT



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NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46.
- 4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL TIN PLATED ON TAILS.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.
- 8. OPTIONAL RETAINING CLIP, SEE PAGE 8.









PLUG 6 WAY 2 PART PCB STRIP CONNECTOR







6 WAY PCB BOARD LAYOUT







NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46.
- 4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL TIN PLATED ON TAILS.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.
- 8. OPTIONAL RETAINING CLIP, SEE PAGE 8.

PACKING DETAILS

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UNREELED DIRECTION







Series 10-9159

80-9159-4200-00-000 ACCESSORY RETAINING CLIP





PLUG ASSEMBLY – FOR REFERENCE ONLY

CLIP INSERTED INTO 10-9159-00X-101-X06





HAND INSERTION TOOL

06-9159-7025-01-000



MATED ASSEMBLY – FOR REFERENCE ONLY

10-9159-00X-101-X06 MATED WITH 20-9159-00X-X06









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NOTES:

- 1. CLIP TO RETAIN MATED PAIR PLUG AND SOCKET. NOT SUPPLIED WITH CONNECTOR.
- 2. MATERIAL: STAINLESS STEEL.
- 3. PACKING IN BAGS, 1400 PER BAG.
- 4. TAIL INSERTED INTO SLOT OF 9159 2 PART PLUG (10-9159-00X-101-006). LEADING EDGE CLIPS OVER SOCKET.
- 5. ALL DIMENSIONS SHOWN ARE REFERENCE DIMENSIONS.
- 6. RECOMMENDED 1 CLIP IN 2, 3 AND 4 WAY. 2 CLIPS IN 5 AND 6 WAY. POSITIONS AT CUSTOMER DISCRETION.







The 9159 series of Board-to-Board interconnect system allows two PCB's to be mated end-to-end creating strips of LED lighting. Designed specifically for the unique Solid State Lighting (SSL) market requiring coplanar (horizontal-to-horizontal) PCB mating with a 5 Amp current rating in the smallest package available. The cabled plug was developed to bring power and signals onto the PCB's while keeping the same board level interface. This allows the designer to build a single PCB with a receptacle on one end and a plug on the other end to minimize cost and inventory. Regardless of where the PCB is used in the system, the cabled plug connector will then create the connection to the outside world. The optional latch can be inserted into the plug housing to assure positive attachment to the PCB in harsh environments without having to change the PCB connector.

APPLICATIONS

- Provided Wire-to-Board capabilities to standard 9159 2-Piece connector system
- Application Notes: refer to 201-01-123

FEATURES AND BENEFITS

- Mates with standard horizontal socket: no need to change any connectors
- 5 Amp current rating: exceeds general market needs
- Wires are soldered into connector with tie wrap strain relief: simplicity
- Optional latch: provides positive attachment to PCB connector
- Available in white: supports SSL market preferences

ELECTRICAL

- Current Rating: 5 Amps / Contact
- Voltage Rating: 125 VAC
- Operating Temperature: -40°C to +125°C

MECHANICAL

- Insulator Material: Nylon: VL94VO
- Contact Material: BeCu / Phos Bronze
- Plating: Gold / Tin over Nickel
- Durability: 10 Cycles

HOW TO ORDER



NOTES: Connectors are supplied with cable ties (see page 17).

Covers/Latches are sold separately (see pages 15-16 for ordering codes).

Certification: UL File #E90723





PLUG WIRED 2 WAY 2 PART 9159 LIGHTING CONNECTOR



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PLUG WIRED 3 WAY 2 PART 9159 LIGHTING CONNECTOR



PACKING DETAILS CABLE TIES SUPPLIED WITH EACH REEL









PLUG WIRED 4 WAY 2 PART 9159 LIGHTING CONNECTOR





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PLUG WIRED 5 WAY 2 PART 9159 LIGHTING CONNECTOR





NOTES:

- FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
 CABLE TIE SUPPLIED FOR WIRE RETENTION, ATTACHED TO EACH REEL.
- SPARES CAN BE ORDERED, REFER TO PAGE 17. 3. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCED.
- 3. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TÜLERANCEI
- INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 9.
 CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL
- 5. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL TIN PLATED ON TAILS.
- 6. PACKING IN TAPE AND REEL, QUANTITY PER REEL 700.
- 7. FOR ACCESSORY COVERS AND LATCHES REFER TO PAGES 15 AND 16.





PACKING DETAILS CABLE TIES SUPPLIED WITH EACH REEL









PLUG WIRED 6 WAY 2 PART 9159 LIGHTING CONNECTOR





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. CABLE TIE SUPPLIED FOR WIRE RETENTION, ATTACHED TO EACH REEL. SPARES CAN BE ORDERED, REFER TO PAGE 17.
- 3. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCED.
- 4. INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 9.
- 5. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL TIN PLATED ON TAILS.
- 6. PACKING IN TAPE AND REEL, QUANTITY PER REEL 700.
- 7. FOR ACCESSORY COVERS AND LATCHES REFER TO PAGES 15 AND 16.



PACKING DETAILS CABLE TIES SUPPLIED WITH EACH REEL





60 NOTE



PLUG WIRED COVERS ACCESSORY NOT SUPPLIED WITH CONNECTOR ASSEMBLY







PLUG WIRED LATCHES ACCESSORY NOT SUPPLIED WITH CONNECTOR ASSEMBLY

LATCH 60-9159-3402-0X-000 USED ON 2, 4 AND 6 WAY ASSEMBLIES







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LATCH 60-9159-3403-0X-000 USED ON 3 AND 5 WAY ASSEMBLIES









NOTES:

- 1. LATCH AVAILABLE TO RETAIN MATED PLUG.
- 2. OPTIONAL COMPONENT, ORDER SEPARATELY. SEE PAGE 17.
- 3. PACKAGED IN BAGS, 1400 PIECES PER BAG.
- 4. MATERIAL: GLASS FILLED NYLON 46. COLOR REFER TO PAGE 9.
- 5. ALL DIMENSIONS ARE REFERENCED DIMENSIONS.
- 6. TO BE ASSEMBLED BEFORE COVER.





PLUG WIRED ACCESSORY ORDERING CODES

Connector Assembly	Optional Components	
Part Number	Cover (see page 15)	Latch (see page 16)
11-9159-002-101-X16	60-9159-3302-0X-000	60-9159-3402-0X-000
11-9159-003-101-X16	60-9159-3303-0X-000	60-9159-3403-0X-000
11-9159-004-101-X16	60-9159-3304-0X-000	60-9159-3402-0X-000
11-9159-005-101-X16	60-9159-3305-0X-000	60-9159-3403-0X-000
11-9159-006-101-X16	60-9159-3306-0X-000	60-9159-3402-0X-000

"X" For color option refer to table on page 9.

CABLE TIE

Supplied in bags with each reel of connector assemblys. Color White. For additional ties order code 90-2211-7092-00-000. Packed in bags, 700 pieces per bag.



PLUG WIRED 3 ASSEMBLY OPTIONS



Series 13-9159





AVX developed the 9159 Series of SMT connectors for co-planar PCB mating for the challenging Solid State Lighting (SSL) market. These connectors needed to be small, low in height, carry up to 5 Amps/contact and then function up to 125C for extended periods. This application has been very unique to the SSL market where PCB's are stacked end-to-end to create linear strip lighting in everything from office to transportation applications where products are exposed to harsh mechanical and environmental environments.

This vertical plug connector opens up the spectrum to include all commercial, industrial and transportation applications requiring perpendicular PCB mating and latching Wire-to-Board cabled sockets with an already proven connector system. With sizes from 2p-6p, these gold plated contacts mate with high spring force beryllium copper receptacle connectors.

APPLICATIONS

- Allows assembly of PCB's at right angles
- Accepts 24-9159 IDC wired/cabled socket
- Reference application notes 201-01-123
- Reference Product Specification 201-01-119

FEATURES AND BENEFITS

- Single sided SMT RoHS solder attachment
- Centrally located pick & place cap for easy placement
- Gold plated BeCu contact system for high reliability in harsh environments
- Available in white: supports SSL market preferences

ELECTRICAL

- Current Rating: 5 Amps / Contact
- Voltage Rating: 125 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

MECHANICAL

- Insulator Material: Nylon: UL94VO
- Contact Material: BeCu / Phos Bronze
- Plating: Gold / Tin over Nickel
- Durability: 10 Cycles

HOW TO ORDER

13	9159		XXX	(1 T	01		2	K
Prefix	Series	Nun	nber of	Ways	2 Part	Connector		Color/A	pproval
Plug -		Codo	No of	Detaile	PCB Strip	Pitch	Code	Color	Approval
Vertical		Code	Ways	Details	Connector	01 = 311111	1	White	Standard
Mount		002	2	Page 19			9	White	UL Approved
		003	3	Page 20					
		004	4	Page 21					
		005	5	Page 22					
		006	6	Page 23					

 I6

 Plating Option

 Code
 Contact

 Gold in Contact Area

 16
 Tin on Solder Tail

 Bracket

 Tin All Over



Certification: UL File #E90723



Series 13-9159



PLUG – VERTICAL MOUNT 2 WAY 2 PART PCB STRIP CONNECTOR

MARKER IN LINE WITH POSITION I



NOTES:

- 1. FOR FULL PRODUCT SPECIFICATION STANDARD CONNECTORS REFER TO
 - ELCO SPEC 201-01-119, UL COMPONENTS REFER TO ELCO SPEC 201-01-119UL. FOR APPLICATION NOTES REFER TO 201-01-123.
- 2. GENERAL TOLERANCE ±0.20 UNLESS TOLERANCED.
- 3. INSULATOR MATERIAL: NYLON 46, UL94 V-0, COLOR REFER TO PAGE 18.
- 4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL, TIN PLATE ON TAILS.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING IN TAPE AND REEL, QUANTITY PER REEL 700.
- 8. PICK AND PLACE CAP TO BE REMOVED AFTER USE.

20

9. OPTIONAL SLOT: ONLY REQUIRED WHEN SOCKET HAS A LATCH, RADIUS ON ENDS OPTIONAL.



2 WAY PCB BOARD LAYOUT







PACKING DETAILS



Series 13-9159



PLUG – VERTICAL MOUNT 3 WAY 2 PART PCB STRIP CONNECTOR



NOTES:

- 1. FOR FULL PRODUCT SPECIFICATION STANDARD CONNECTORS REFER TO
- ELCO SPEC 201-01-119, UL COMPONENTS REFER TO ELCO SPEC 201-01-119UL. FOR APPLICATION NOTES REFER TO 201-01-123.
- 2. GENERAL TOLERANCE ±0.20 UNLESS TOLERANCED.
- 3. INSULATOR MATERIAL: NYLON 46, UL94 V-0, COLOR REFER TO PAGE 18.
- 4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL, TIN PLATE ON TAILS.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING IN TAPE AND REEL, QUANTITY PER REEL 700.
- 8. PICK AND PLACE CAP TO BE REMOVED AFTER USE.
- 9. OPTIONAL SLOT: ONLY REQUIRED WHEN SOCKET HAS A LATCH, RADIUS ON ENDS OPTIONAL.



3 WAY PCB BOARD LAYOUT







PACKING DETAILS



UNREELED DIRECTION



Series 13-9159



PLUG – VERTICAL MOUNT 4 WAY 2 PART PCB STRIP CONNECTOR



Series 13-9159



PLUG – VERTICAL MOUNT 5 WAY 2 PART PCB STRIP CONNECTOR



NOTES:

- 1. FOR FULL PRODUCT SPECIFICATION STANDARD CONNECTORS REFER TO ELCO SPEC 201-01-119, UL COMPONENTS REFER TO ELCO SPEC 201-01-119UL.
- FOR APPLICATION NOTES REFER TO 201-01-123.
- 2. GENERAL TOLERANCE ±0.20 UNLESS TOLERANCED.
- 3. INSULATOR MATERIAL: NYLON 46, UL94 V-0, COLOR REFER TO PAGE 18.
- 4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL, TIN PLATE ON TAILS.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING IN TAPE AND REEL, QUANTITY PER REEL 700.
- 8. PICK AND PLACE CAP TO BE REMOVED AFTER USE.
- 9. OPTIONAL SLOT: ONLY REQUIRED WHEN SOCKET HAS A LATCH, RADIUS ON ENDS OPTIONAL.





2.70

2.50

0.10



5 WAY PCB BOARD LAYOUT





PACKING DETAILS





Series 13-9159



PLUG – VERTICAL MOUNT 6 WAY 2 PART PCB STRIP CONNECTOR



23



Series 14-9159



AVX developed the 9159 Series of SMT connectors for co-planar PCB mating for the challenging Solid State Lighting (SSL) market. These connectors needed to be small, low in height, carry up to 5 Amps/contact and then function up to 125C for extended periods. This application has been very unique to the SSL market where PCB's are stacked end-to-end to create linear strip lighting in everything from office to transportation applications where products are exposed to harsh mechanical and environmental environments.

The IDC cable plug connector allows for 22-24AWG discrete or cabled wires to be easily and reliability terminated into a 9159 standard interface socket connector. This will allow power and signals to be connectors onto a PCB socket connector while providing positive latching. The wire assembly support block allows for 2 through 6 wires to be terminated all in one step with any standard bench top press. IDC covers provide both through (daisy chain applications) and wire stop termination options.

APPLICATIONS

- Provides Wire-to-Board capabilities to standard 9159 2-Piece connector system
- In conjunction with the IDC socket WTB connector (24-9159), these connectors provide maximum flexibility to bring power and signal wires onto or off of any board level 9159 connector
- Reference application notes 201-01-123
- Reference Product Specification 201-01-119

FEATURES AND BENEFITS

- Mates with standard 9159 horizontal socket, keeping same BTB connector system
- Economical and reliable IDC wire terminationGold plated BeCu contact system for high
- reliability in harsh environments
- Integrally molded latch offers positive latching after mating

ELECTRICAL

- Current Rating: 5 Amps / Contact
- Voltage Rating: 125 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

MECHANICAL

- Insulator Material: Nylon: UL94VO
- Contact Material: Phosphor Bronze
- Plating: Gold / Tin over Nickel
- Durability: 10 Cycles

HOW TO ORDER



Certification: UL File #E90723





Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

Series 14-9159







NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.

MATING

REFERÈNCE PLANE

 ∇

4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.

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- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 24.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. ASSEMBLY AIDS, REFER TO PAGE 35.





Code

(Page 24)

122

132

Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

Dimension A

0.47

0.37

PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)







Series 14-9159



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 24.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. ASSEMBLY AIDS, REFER TO PAGE 35.





PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





Wire Gauge	Code (Page 24)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60



Series 14-9159





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 24.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. ASSEMBLY AIDS, REFER TO PAGE 35.





PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





Wire Gauge	Code (Page 24)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60



Series 14-9159



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 24.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. ASSEMBLY AIDS, REFER TO PAGE 35.





PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





330mm DIA REEL

Code Wire Insulation Wire Gauge **Dimension A** (Page 24) Diameter 22AWG 1.10 to 1.60 122 0.47 (Stranded Wire) 24AWG 132 0.37 1.10 to 1.60 (Standed Wire)



Series 14-9159





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46. GLASS FILLED, UL94 V-0, COLOR REFER TO PAGE 24.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. ASSEMBLY AIDS, REFER TO PAGE 35.



PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





Wire Gauge	Code (Page 24)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60



Series 14-9159

PLUG-WIRED - 2 WAY WIRE STOP CAP







NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 24.
- CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT, TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.
- 10. ASSEMBLY AIDS, REFER TO PAGE 35.





PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)

-NOTE 9





Wire Gauge	Code (Page 24)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60



Series 14-9159









- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. NSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 24.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT, TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.
- 10. ASSEMBLY AIDS, REFER TO PAGE 35.





PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





Wire Gauge	Code (Page 24)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60



Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

Series 14-9159



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL, WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE. PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 24.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT.
- TIN ON IDC.
- PACKING IN TAPE AND REEL, QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP. 7. 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.
- 10. ASSEMBLY AIDS, REFER TO PAGE 35.





Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





Code

(Page 24)

122

132

Dimension A

0.47

0.37



Series 14-9159



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 24.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT, TIN ON IDC.
- PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR
- UNDERSIDE WIRE ENTRY. 10. ASSEMBLY AIDS, REFER TO PAGE 35.



PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





Wire Gauge	Code (Page 24)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60



Series 14-9159



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 24.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC. 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.
- 10. ASSEMBLY AIDS, REFER TO PAGE 35.





PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





Wire Gauge	Code (Page 24)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60
IDC Plug: WTB Through Wire Cap/Wire Stop Cap



Series 14-9159



- PART NUMBER 06-9159-7026-02-000, MATERIAL NYLON 46.
- 3. CAN BE USED WITH EITHER THE PLUG OR SOCKET CONNECTORS, USE THE CORRECT SLOT AS IDENTIFIED.
- 4. FOR FULL WIRE ASSEMBLY DETAILS REFER TO APPLICATION NOTES 201-01-123.
- 5. ONLY A SIMPLE FLAT BOTTOMED TOOL REQUIRED TO PUSH THE CAP DOWN (NOT SUPPLIED.)
- 6. ALL DIMENSIONS ±0.20 UNLESS TOLERANCED.
- 7. 06-9159-7026-02-000 HAS RIBS TO HELP LOCATE CONTACTVINSULATOR SUB-ASSEMBLY.

PLUG-WIRED – WIRE INSERTION TOOL





UNIVERSAL HANDLE 06-7000-7730-01-000







WIRE INSERTION TOOL 06-9159-7027-01-000

- 1. TOOL 06-9159-7027-01-000 TO INSERT WIRES INTO CAP.
- 2. FOR USE WITH UNIVERSAL HANDLE 06-7000-7720-01-000.
- 3. CAN BE USED WITH BOTH THROUGH WIRE AND WIRE STOP CAPS.
- 4. REFER TO APPLICATION NOTES 201-01-123 FOR FURTHER DETAILS.



IDC Plug: WTB Through Wire Cap/Wire Stop Cap



Series 14-9159

PLUG-WIRED – ASSEMBLY



Series 20-9159





The 9159 series of Board-to-Board interconnect system allows two PCB's to be mated end-to-end creating strips of LED lighting. Designed specifically for the unique Solid State Lighting (SSL) market requiring coplanar (horizontal-to-horizontal) PCB mating with a 5 Amp current rating in the smallest package available. These single sided SMT connectors are perfect for both FR4 and metal boards where you need to butt the boards up together to minimize separation. Availably of both white and black insulation colors make them perfect for lighting as well as industrial applications. With sizes from 2p-6p, these high reliability connectors boast gold plated beryllium copper receptacle contacts for harsh environments.

APPLICATIONS

- Coplanar PCB mating in SSL products
- LED linear lighting strips
- Application Notes: refer to 201-01-123

FEATURES AND BENEFITS

- Single sided SMT: supports FR4 and metal PCB's
- 5 Amp current rating: exceeds general market needs
- 5.5mm mated width: minimizes PCB space to decrease LED pitch
- Gold plated BeCu spring contacts: reliability for harsh environments
- Optional retaining clip: provides positive connector mating during vibration
- Available in white: supports SSL market preferences

ELECTRICAL

- Current Rating: 5 Amps / Contact
- Voltage Rating: 125 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

MECHANICAL

Insulator Material: Nylon: VL94VO

16

- Contact Material: BeCu / Phos Bronze
- Plating: Gold / Tin over Nickel
- Durability: 10 Cycles

HOW TO ORDER



01 1 2 Part

Connector

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T			Γ			T		
Connector	Color/Approval			Plating Option				
Pitch	Code	Color	Approval		Code	Contact	Bracket	
01 = 3000	1	White	Standard		16	Gold in Contact Area	Tin	
	9	White	UL Approved			Gold on Solder Tail	all over	



Certification: UL File #E90723

Series 20-9159



SOCKET 2 WAY 2 PART PCB STRIP CONNECTOR





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 37.
- 4. CONTACT MATERIAL: COPPER ALLOY, GOLD OVER NICKEL.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.

2 WAY PCB BOARD LAYOUT









Series 20-9159

SOCKET 3 WAY 2 PART PCB STRIP CONNECTOR







NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 37.
- 4. CONTACT MATERIAL: COPPER ALLOY, GOLD OVER NICKEL.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.

3 WAY PCB BOARD LAYOUT





Series 20-9159



SOCKET 4 WAY 2 PART PCB STRIP CONNECTOR





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 37.
- 4. CONTACT MATERIAL: COPPER ALLOY, GOLD OVER NICKEL.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.

4 WAY PCB BOARD LAYOUT







Series 20-9159



SOCKET 5 WAY 2 PART PCB STRIP CONNECTOR





5 WAY PCB BOARD LAYOUT







- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 37.
- 4. CONTACT MATERIAL: COPPER ALLOY, GOLD OVER NICKEL.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.



Series 20-9159



SOCKET 6 WAY 2 PART PCB STRIP CONNECTOR







6 WAY PCB BOARD LAYOUT







- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 37.
- 4. CONTACT MATERIAL: COPPER ALLOY, GOLD OVER NICKEL.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.





Top Load Socket

Series 22-9159





The 9159 series of Board-to-Board interconnect system allows two PCB's to be mated end-to-end creating strips of LED lighting. Designed specifically for the unique Solid State Lighting (SSL) market requiring coplanar (horizontal-to-horizontal) PCB mating with a 5 Amp current rating in the smallest package available. The top loading socket allows complete PCB's to be replaced in the field without having to dissemble the entire strip of boards. The connector has a two part insulator whereby the top of the connector will slide open allowing the plug connector to be pulled out either vertically or at a slight angle. Once the PCB is replaced, the cover is slid back like a Zero Insertion Force (ZIF) connector to the closed position. The PCB layout is identical to the standard horizontal socket to maintain family commonality at the PCB level.

APPLICATIONS

- Coplanar PCB mating in SSL products
- LED linear lighting strips
- Application Notes: refer to 201-01-123

FEATURES AND BENEFITS

- Slide open top: allows field reparability at the light fixture level
- Mates with standard horizontal or cabled plug: no need to change any connectors
- 5 Amp current rating: exceeds general market needs
- Gold plated BeCu spring contacts: reliability for harsh environments
- Available in white: supports SSL market preferences

ELECTRICAL

- Current Rating: 5 Amps / Contact
- Voltage Rating: 125 VAC
- Operating Temperature: -40°C to +125°C

MECHANICAL

- Insulator Material: Nylon: VL94VO
- Contact Material: BeCu / Phos Bronze
- Plating: Gold / Tin over Nickel
- Durability: 10 Cycles

HOW TO ORDER



Certification: UL File #E90723



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X T						
(Color/A	pproval			Plating Option	
Code	Color	Approval		Code	Contact	Bracket
1	White	Standard		16	Gold in Contact Area	Tin
9	White	UL Approved			Tin on Solder Tail	all over
		1				





SOCKET TOP LOADING 2 WAY 2 PART PCB STRIP CONNECTOR



2 WAY PCB BOARD LAYOUT





- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 43.
- 4. CONTACT MATERIAL: COPPER ALLOY, GOLD OVER NICKEL.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. RESTRICTED COMPONENT HEIGHT UNDER CATCH, 2.20MM MAXIMUM.
- 8. RESTRICTED COMPONENT HEIGHT UNDER CATCH, 0.40MM MAXIMUM.
- 9. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.







SOCKET TOP LOADING 3 WAY 2 PART PCB STRIP CONNECTOR



3 WAY PCB BOARD LAYOUT





- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 43.
- 4. CONTACT MATERIAL: COPPER ALLOY, GOLD OVER NICKEL.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. RESTRICTED COMPONENT HEIGHT UNDER CATCH, 2.20MM MAXIMUM.
- 8. RESTRICTED COMPONENT HEIGHT UNDER CATCH, 0.40MM MAXIMUM.
- 9. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.







SOCKET TOP LOADING 4 WAY 2 PART PCB STRIP CONNECTOR



4 WAY PCB BOARD LAYOUT





- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 43.
- 4. CONTACT MATERIAL: COPPER ALLOY, GOLD OVER NICKEL.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. RESTRICTED COMPONENT HEIGHT UNDER CATCH, 2.20MM MAXIMUM.
- RESTRICTED COMPONENT HEIGHT UNDER CATCH, 0.40MM MAXIMUM.
- 9. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.







SOCKET TOP LOADING 5 WAY 2 PART PCB STRIP CONNECTOR



5 WAY PCB BOARD LAYOUT



PACKING DETAILS





SOCKET TOP LOADING 6 WAY 2 PART PCB STRIP CONNECTOR





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46. COLOR REFER TO PAGE 43.
- 4. CONTACT MATERIAL: COPPER ALLOY, GOLD OVER NICKEL.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 7. RESTRICTED COMPONENT HEIGHT UNDER CATCH, 2.20MM MAXIMUM.
- 8. RESTRICTED COMPONENT HEIGHT UNDER CATCH, 0.40MM MAXIMUM.

9. PACKING TAPE AND REEL, QUANTITY 1400 PER REEL.







Top Load Socket



Series 22-9159

CONNECTOR ASSEMBLY





Series 24-9159



AVX developed the 9159 Series of SMT connectors for co-planar PCB mating for the challenging Solid State Lighting (SSL) market. These connectors needed to be small, low in height, carry up to 5 Amps/contact and then function up to 125C for extended periods. This application has been very unique to the SSL market where PCB's are stacked end-to-end to create linear strip lighting in everything from office to transportation applications where products are exposed to harsh mechanical and environmental environments.

The IDC cable socket connector allows for 22-24AWG discrete or cabled wires to be easily and reliability terminated into a 9159 standard interface plug connector. This will allow power and signals to be connectors onto a PCB socket connector while providing positive latching. The wire assembly support block allows for 2 through 6 wires to be terminated all in one step with any standard bench top press. IDC covers provide both through (daisy chain applications) and wire stop termination options.

APPLICATIONS

- Provides Wire-to-Board capabilities to standard 9159 2-Piece connector system
- In conjunction with the IDC plug WTB connector (14-9159), these connectors provide maximum flexibility to bring power and signal wires onto or off of any board level 9159 connector
- Reference application notes 201-01-123
- Reference Product Specification 201-01-119

FEATURES AND BENEFITS

- Mates with standard 9159 horizontal plug, keeping same BTB connector system
- Economical and reliable IDC wire termination
- Gold plated BeCu contact system for high reliability in harsh environments
- Integrally molded latch offers positive latching after mating

ELECTRICAL

- Current Rating: 5 Amps / Contact
- Voltage Rating: 125 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

MECHANICAL

- Insulator Material: Nylon: UL94VO
- Contact Material: Phosphor Bronze
- Plating: Gold / Tin over Nickel
- Durability: 10 Cycles

HOW TO ORDER



Certification: UL File #E90723



Series 24-9159





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 50.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. ASSEMBLY AIDS, REFER TO PAGE 61.







PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





330mm DIA REEL

Code Wire Insulation Dimension A Wire Gauge Diameter (Page 50) 22AWG 122 0.47 1.10 to 1.60 (Stranded Wire) 24AWG 132 0.37 1.10 to 1.60 (Standed Wire)



Series 24-9159



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 50.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. ASSEMBLY AIDS, REFER TO PAGE 61.







PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)







Series 24-9159

SOCKET WIRED – 4 WAY THROUGH WIRE CAP



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 50.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. ASSEMBLY AIDS, REFER TO PAGE 61.





PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





330mm DIA REEL

Wire Gauge	Code (Page 50)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60



Series 24-9159





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 50.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT, TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. ASSEMBLY AIDS, REFER TO PAGE 61.

Wire Gauge	Code (Page 50)	Dimension A	Wire Insulation Diameter	
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60	
24AWG (Standed Wire)	132	0.37	1.10 to 1.60	

XIVA MARKER IN LINE WITH POSITION I



PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





330mm DIA REEL



Series 24-9159

SOCKET WIRED – 6 WAY THROUGH WIRE CAP





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 50.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.

MARKER IN LINE WITH POSITION I

9. ASSEMBLY AIDS, REFER TO PAGE 61.

Wire Gauge	Code (Page 50)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60



PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





330mm DIA REEL

INTEGRAL LATCH



Series 24-9159





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL, WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE. PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 50.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT.
- TIN ON IDC. PACKING IN TAPE AND REEL, QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP. 7.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.
- 10. ASSEMBLY AIDS, REFER TO PAGE 61.

MARKER IN LINE WITH POSITION I



Code

(Page 50)

122

132

Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

-INTEGRAL LATCH LOCKS TO PLUG

Dimension A

0.47

0.37

Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)

-NOTE 9





330mm DIA REEL



Series 24-9159



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 50.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC. 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.
- 10. ASSEMBLY AIDS, REFER TO PAGE 61.

XVA MARKER IN LINE WITH POSITION I

Wire Gauge	Code (Page 50)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60



-INTEGRAL LATCH LOCKS TO PLUG

PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)

-NOTE 9





330mm DIA REEL



Series 24-9159



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL, WIRE PREFIT TO CAP. NARROW SLOT TO GRIP WIRE. PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 50.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT, TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.
- 10. ASSEMBLY AIDS, REFER TO PAGE 61.

MARKER IN LINE WITH POSITION I

XVA



Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

-INTEGRAL LATCH LOCKS TO PLUG

Dimension A

0.47

0.37

Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

Code

(Page 50)

122

132





Series 24-9159



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 50.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.

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QUANTITY PER REEL 700

10. ASSEMBLY AIDS, REFER TO PAGE 61.

MARKER IN LINE WITH POSITION I NOTE 9	
PACKING DETAIL	LS FOGETHER (2 PARTS)
	UNREELED

Wire Gauge	Code (Page 50)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60

-INTEGRAL LATCH LOCKS TO PLUG



Series 24-9159



NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 50.
- 6. CONTACT MATERIAL: COPPER ALLOY, PLATING NICKEL BASE ALL OVER, GOLD ON CONTACT,
- TIN ON IDC.
- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.
- 9. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.
- 10. ASSEMBLY AIDS, REFER TO PAGE 61.

XVA MARKER IN LINE WITH POSITION I -NOTE 9



PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





330mm DIA REEL

Code Wire Insulation Wire Gauge Dimension A Diameter (Page 50) 22AWG 122 0.47 1.10 to 1.60 (Stranded Wire) 24AWG 132 0.37 1.10 to 1.60 (Standed Wire)



Series 24-9159



- 3. CAN BE USED WITH EITHER THE PLUG OR SOCKET CONNECTORS, USE THE CORRECT SLOT AS IDENTIFIED.
- 4. FOR FULL WIRE ASSEMBLY DETAILS REFER TO APPLICATION NOTES 201-01-123.
- 5. ONLY A SIMPLE FLAT BOTTOMED TOOL REQUIRED TO PUSH THE CAP DOWN (NOT SUPPLIED.)
- 6. ALL DIMENSIONS ±0.20 UNLESS TOLERANCED.
- 7. 06-9159-7026-02-000 HAS RIBS TO HELP LOCATE CONTACT/INSULATOR SUB-ASSEMBLY.

SOCKET-WIRED – WIRE INSERTION TOOL





UNIVERSAL HANDLE 06-7000-7730-01-000







WIRE INSERTION TOOL 06-9159-7027-01-000

- 1. TOOL 06-9159-7027-01-000 TO INSERT WIRES INTO CAP.
- 2. FOR USE WITH UNIVERSAL HANDLE 06-7000-7720-01-000.
- 3. CAN BE USED WITH BOTH THROUGH WIRE AND WIRE STOP CAPS.
- 4. REFER TO APPLICATION NOTES 201-01-123 FOR FURTHER DETAILS.





Series 24-9159

SOCKET-WIRED – ASSEMBLY



THROUGH WIRE

WIRED STOP WIRE ENTRY UNDERSIDE





WIRED STOP WIRE ENTRY TOP



SSL – Shorting Socket

Series 58-9159





The 9159 series of Board-to-Board interconnect system allows two PCB's to be mated end-to-end creating strips of LED lighting. Designed specifically for the unique Solid State Lighting (SSL) market requiring coplanar (horizontal-to-horizontal) PCB mating with a 5 Amp current rating in the smallest package available. The 2 position shorting socket was designed to plug onto the last PCB in the lighting strip to short the two contacts together, closing the electrical loop. Just as the cabled plug brings power and signals onto the light strip, the shorting socket completes the circuit while maintaining a single board design.

APPLICATIONS

- Coplanar PCB mating in SSL products
- LED linear lighting strips
- Application Notes: refer to 201-01-123

ELECTRICAL

- Current Rating: 5 Amps / Contact
- Voltage Rating: 125 VAC

FEATURES AND BENEFITS

- Mates to the standard plug connector: does not require a new connector
- Integral latching mechanism: Provides positive attachment to the plug
- Gold plated BeCu spring contacts: reliability for harsh environments
- Available in white: supports SSL market preferences

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

MECHANICAL

- Insulator Material: Nylon: VL94VO
- Contact Material: BeCu / Phos Bronze
- Plating: Gold / Tin over Nickel
- Durability: 10 Cycles



HOW TO ORDER

58 9159 002 000 006

Certification: UL File #E90723

SSL – Shorting Socket



Series 58-9159







24.00



Series 70-9159



Dissecting linear LED lighting from a connector standpoint looks very simple from far away, but up close there is no magical solution. Even though there have been new connectors developed in recent years specifically for this application, the specific requirements in challenging new designs continue to push for something better, different and more cost competitive. AVX has been one of the companies developing new connector systems for this specific application. The 2-Piece 9159 series offers the smallest profile while still supporting full 5 Amp capability. The 1-Piece version offers the best cost advantage for a connectorized solution, yet has limitations in LED pitch densities.

AVX's latest approach is to not even have a connector! LED's run down the center of the board looking to minimize pitch densities to maximize light output. Connectors interrupt this requirement at each Board-to-Board interface. By design and construction, providing a single contact connector is not economical. However, removing the cost of the connector without removing the functionality provides both a technical and cost effective solution. By removing the insulator and allowing contacts to be placed individually, the PCB can be designed with the LED's in the center of the PCB and the contacts on the outer edges. This optimizes the design for functionality and assembly at the best cost possible. More specifically, the contacts are packaged in T&R for automatic placement, absorb significant x and y assembly tolerances and provide a reliable gold-to-gold active contact interface. Application notes are available to outline all of the contact configurations to support both BTB and WTB applications.

APPLICATIONS

- Linear LED strip lighting
- Commercial/Industrial co-planar or extended card applications
- Reference Product Specification 201-01-149

FEATURES AND BENEFITS

- Gold plated horizontal contact system maximizes lateral PCB alignment and mating tolerances with a proven 2-pc connector solution
- Contact height has been minimized to 1.2mm above the PCB to prevent any shadowing effect
- Contacts can be individually spaced to support any voltage rating with a full 5 Amp current rating
- Individual contacts can support BTB and WTB applications

ELECTRICAL

- Current Rating; 5.0 Amps
- Voltage Rating: Based on placement distance

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

MECHANICAL

- Contact Material: Copper Alloy
- Plug Plating: Gold in mating area, tin on tails
- Socket Contact; Gold all over
- Durability 5 Cycles



70	9159	001				
Prefix	Series	Number of Ways 001 = 1				





Packaging Options 006 = Gold in Contact Area Full details in notes pages 66 and 67





Series 70-9159

70-9159-001-401-006



4. FOR FURTHER INFORMATION REFER TO SPECIFICATION 201-01-148 AND APPLICATION NOTES 201-01-149.

- 5. COPPER ALLOY, NICKEL UNDERCOAT, GOLD IN CONTACT AREA. TIN ON SOLDER TAIL.
- 6. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 7. PACKAGING IN TAPE AND REEL, QUANTITY PER REEL 4500.





Series 70-9159

70-9159-001-402-006











NOTES:

- 1. 9159 SINGLE CONTACT, SMT MOUNT, SOCKET CONTACT.
- 2. TO MATE WITH 70-9159-001-401-006 PLUG CONTACT, REFER TO PAGE 66.
- 3. TYPICAL APPLICATIONS SEE PAGES 68 AND 69.
- 4. FOR FURTHER INFORMATION REFER TO SPECIFICATION 201-01-148 AND APPLICATION NOTES 201-01-149.
- 5. COPPER ALLOY, NICKEL UNDERCOAT, GOLD PLATED.
- 6. GENERAL TOLERANCE ± 0.20 UNLESS SPECIFIED.
- 7. PACKAGING IN TAPE AND REEL, QUANTITY PER REEL 4500.



PACKING DETAILS



UNREELED DIRECTION







Series 70-9159





NOTES:

- 1. SIMPLE BOARD TO BOARD ASSEMBLY
- 2. CONTACTS WILL COPE WITH A GAP BETWEEN BOARDS UP TO 1.00MM.
- 3. ALL MATING COMBINATIONS PERMISSIBLE, FOR EXAMBLE BY USING 1 PLUG AND 1 SOCKET ON BOARD E3ND THE BOARDS ARE REVERSABLE.
- 4. TO AID ALIGNMENT BOARDS MAY BE KEYED TOGETHER.



I.OO MAXIMUM NOTE 2



Series 70-9159



NOTES:

1. SIMPLE BUILT UP ASSEMBLY

2. CONTACTS CAN BE USED WITH A SUITABLE PCB DESIGN FOR CUSTOMER BUILT SMALL CABLE ASSEMBLIES.

3. TWO WAY PLUG CONNECTIONS SHOWN BUT ANY COMBINATION POSSIBLE.



One Piece Card Edge



Series 00-9159



The 9159 series of Board-to-Board interconnect system allows two PCB's to be mated end-to-end creating strips of LED lighting. Designed specifically for the unique Solid State Lighting (SSL) market requiring coplanar (horizontal-to-horizontal) PCB mating. The 1-Piece Card Edge connector was developed to provide a reliable, low cost and simple means of connecting multiple PCB's together. The single stamped contact has dual contact beams to guarantee a high contact force on standard 1.6mm PCB's. These connectors are available in 2 through 5 positions and are on 2.0mm pitch centers to provide a 3 amp continuous rating.

APPLICATIONS

- Coplanar PCB mating in SSL products
- LED linear lighting strips

FEATURES AND BENEFITS

- Dual contacts provide positive contact force for enhanced reliability
- Mates with standard 1.6 \pm 0.15mm PCB on 2.0mm pad pitch
- 3 amp current rating for high current applications
- Available in white: supports SSL market preferences

ELECTRICAL

- Current Rating: 3 Amps / Contact
- Voltage Rating: 250 VAC

ENVIRONMENTAL

• Operating Temperature: -55°C to +125°C

MECHANICAL

- Insulator Material: Nylon 46: UL94HB
- Contact Material: Phosphor Bronze
- Plating: Tin over Nickel
- Durability: 5 Cycles

HOW TO ORDER

00	9159		XXX	K	0 T	01	9 	1 ⊤	6 T	
Prefix	l Series	Number of Ways		Single	PCB Thickness	Color Options	Packaging	Plating	RoHS	
		Code	No of Ways	Details	ills Part PCB Strip	$01 = 1.60 \pm 0.15$	9 = UL 1 = White	Options 1 = bag 0 = Tape & Reel	Option 06 = Pure Tin all over	COMPLIANT
		002	2	Page 71	Connector					
		003	3	Page 72						
		004	4	Page 73						
		005	5	Page 74						

Certification: UL File #E90723


Series 00-9159

50

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4.00 NOTE 6

1

I.00 NOTE 6

2 WAY SINGLE PART PCB STRIP CONNECTOR





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-118.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCED.
- 3. ARROW TO INDICATE CONTACT POSITION 1.
- 4. INSULATOR MATERIAL: NYLON 46, UL94 HB, COLOR SEE PAGE 70.
- 5. CONTACT MATERIAL: COPPER ALLOY, TIN PLATED ALL OVER.
- 6. PCB PAD, TIN PLATED.





MIN 0.30×45° BOTH SIDES



Series 00-9159

3 WAY SINGLE PART PCB STRIP CONNECTOR



3 WAY PCB BOARD LAYOUT THICKNESS 1.60 ± 0.15





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-118.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCED.
- 3. ARROW TO INDICATE CONTACT POSITION 1.
- 4. INSULATOR MATERIAL: NYLON 46, UL94 HB, COLOR SEE PAGE 70.
- 5. CONTACT MATERIAL: COPPER ALLOY, TIN PLATED ALL OVER.
- 6. PCB PAD, TIN PLATED.









4 WAY SINGLE PART PCB STRIP CONNECTOR





NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-118.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCED.
- 3. ARROW TO INDICATE CONTACT POSITION 1.
- 4. INSULATOR MATERIAL: NYLON 46, UL94 HB, COLOR SEE PAGE 70.
- 5. CONTACT MATERIAL: COPPER ALLOY, TIN PLATED ALL OVER.
- 6. PCB PAD, TIN PLATED.



PACKING DETAILS





Series 00-9159

5 WAY SINGLE PART PCB STRIP CONNECTOR





Series 00-9159



AVX has developed the 1-Piece bottom entry card edge connector to allow a perpendicular PCB to be mated to a top mounted main FR4 or metal core PCB from the bottom side. The most popular application on the market is in the LED bulb market where the FR4 driver card needs to mate to the top pads on a metal core LED board. A unique design feature of the AVX connector is that it allows for both a 1.6mm and 0.8mm mating PCB thickness, giving designers flexibility in their PCB layout and selection. The additional "Anti-Touch" cap can be ordered pre-assembled onto the connector or separately. This component protects an individual for electrical contact if the lens comes off or the bulb is broken. This is a UL mandated safety requirement.

The connectors offer a range of 2 positions to 6 positions in order to add additional functionality in the application design such as color control or specific control lines. The connector is UL rated with halogen free material and capable of operating temperatures up to 120°C.

APPLICATIONS

- Provides perpendicular, bottom entry PCB mating to a top mounted card edge contact based connector
- Reference application notes 201-01-137
- Reference Product Specification 201-01-132UL

FEATURES AND BENEFITS

- Available 2p-6p for added design functionality and color control in bulb applications
- Low profile top mounted design does not interfere with LED's
- Gold plated BeCu contact system for high reliability in harsh environments
- Accepts both 0.8mm and 1.6mm PCB's for added design options

ELECTRICAL

- Current Rating: 2 Amps / Contact
- Voltage Rating: 250 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +120°C

MECHANICAL

- Insulator Material: Halogen Free Nylon UL94VO
- Contact Material: Beryllium Copper
- Plating: Gold / Tin over Nickel
- Durability 10 Cycles

HOW TO ORDER



001
T
Single Part PCB Strip Connector
501 = Through The Board Edge Card, No Cap
502 = Through The Board,

501

Edge Card, Cap Fitted

Insulator Color			
Code Color Application		Application	
9	White	UL Approved Standard	

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06



Certification: UL File #E90723



Series 00-9159







SECTION A-A





(TOP SIDE)

NOTES:

- 1. THROUGH THE BOARD 2 WAY EDGE CARD CONNECTOR, FOR FURTHER DETAILS REFER TO PRODUCT SPECIFICATION 201-01-136.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK. REFER TO PAGE 81 FOR MATING PCB DETAILS.
- 3. CONNECTOR TOP MOUNTING ON PCB.
- 4. UP TO 0.5MM RAD TO MATCH CONNECTOR PROFILE.
- 5. ALL DIMENSIONS ±0.20 UNLESS TOLERANCE SPECIFIED.
- 6. INSULATOR: PAR4T, GLASS FILLED, HALOGEN FREE, UL94 V-0, COLOR SEE PAGE 75.
- 7. CONTACT: COPPER ALLOW, NICKEL PLATED WITH GOLD FLASH ON NOSE AND TIN ON TAILS.
- 8. BRACKET: COPPER ALLOY, PLATING TIN OVER NICKEL.
- 9. PACKING IN TAPE AND REEL, 1000 PIECES PER REEL.
- 10. CONTACT TAILS COPLINARITY WITHIN 0.10.
- 11. REFER TO PAGE 84 FOR MATCHING PROTECTING CAP.
- 12. UL REFERENCE E90723.



PACKING DETAILS









Series 00-9159

3 WAY THROUGH THE BOARD MATING EDGE CARD CONNECTOR



MOUNTING PCB (TOP SIDE)

NOTES:

- 1. THROUGH THE BOARD 3 WAY EDGE CARD CONNECTOR, FOR FURTHER DETAILS REFER TO PRODUCT SPECIFICATION 201-01-136.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK.
- REFER TO PAGE 81 FOR MATING PCB DETAILS.
- 3. CONNECTOR TOP MOUNTING ON PCB.
- 4. UP TO 0.5MM RAD TO MATCH CONNECTOR PROFILE.
- 5. ALL DIMENSIONS ±0.20 UNLESS TOLERANCE SPECIFIED.
- 6. INSULATOR: PAR4T, GLASS FILLED, HALOGEN FREE, UL94 V-0, COLOR SEE PAGE 75.
- 7. CONTACT: COPPER ALLOW, NICKEL PLATED WITH GOLD FLASH ON NOSE AND TIN ON TAILS.
- 8. BRACKET: COPPER ALLOY, PLATING TIN OVER NICKEL.
- 9. PACKING IN TAPE AND REEL, 1000 PIECES PER REEL.
- 10. CONTACT TAILS COPLINARITY WITHIN 0.10.
- 11. REFER TO PAGE 84 FOR MATCHING PROTECTING CAP.
- 12. UL REFERENCE E90723.



SECTION A-A



PACKING DETAILS











Series 00-9159

4 WAY THROUGH THE BOARD MATING EDGE CARD CONNECTOR





- 1. THROUGH THE BOARD 4 WAY EDGE CARD CONNECTOR, FOR FURTHER DETAILS REFER TO PRODUCT SPECIFICATION 201-01-136.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK.
- REFER TO PAGE 81 FOR MATING PCB DETAILS.
- 3. CONNECTOR TOP MOUNTING ON PCB.
- 4. UP TO 0.5MM RAD TO MATCH CONNECTOR PROFILE.
- 5. ALL DIMENSIONS ±0.20 UNLESS TOLERANCE SPECIFIED.
- 6. INSULATOR: PAR4T, GLASS FILLED, HALOGEN FREE, UL94 V-0, COLOR SEE PAGE 75.
- 7. CONTACT: COPPER ALLOW, NICKEL PLATED WITH GOLD FLASH ON NOSE AND TIN ON TAILS.
- 8. BRACKET: COPPER ALLOY, PLATING TIN OVER NICKEL.
- 9. PACKING IN TAPE AND REEL, 1000 PIECES PER REEL.
- 10. CONTACT TAILS COPLINARITY WITHIN 0.10.
- 11. REFER TO PAGE 84 FOR MATCHING PROTECTING CAP.
- 12. UL REFERENCE E90723.



SECTION A-A



PACKING DETAILS



UNREELED DIRECTION



QUANTITY PER REEL 1000





Series 00-9159

5 WAY THROUGH THE BOARD MATING EDGE CARD CONNECTOR





SECTION A-A





UNREELED DIRECTION 330mm DIA REEL

UNREELED DIRECTION



- 1. THROUGH THE BOARD 5 WAY EDGE CARD CONNECTOR. FOR FURTHER DETAILS REFER TO PRODUCT SPECIFICATION 201-01-136.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK.
- REFER TO PAGE 81 FOR MATING PCB DETAILS.
- 3. CONNECTOR TOP MOUNTING ON PCB.
- 4. UP TO 0.5MM RAD TO MATCH CONNECTOR PROFILE.
- 5. ALL DIMENSIONS ± 0.20 UNLESS TOLERANCE SPECIFIED.
- 6. INSULATOR: PAR4T, GLASS FILLED, HALOGEN FREE, UL94 V-0, COLOR SEE PAGE 75.
- 7. CONTACT: COPPER ALLOW, NICKEL PLATED WITH GOLD FLASH ON NOSE AND TIN ON TAILS.
- 8. BRACKET: COPPER ALLOY, PLATING TIN OVER NICKEL.
- 9. PACKING IN TAPE AND REEL, 1000 PIECES PER REEL.
- 10. CONTACT TAILS COPLINARITY WITHIN 0.10.
- 11. REFER TO PAGE 81 FOR MATCHING PROTECTING CAP.
- 12. UL REFERENCE E90723.





Series 00-9159

6 WAY THROUGH THE BOARD MATING EDGE CARD CONNECTOR





SECTION A-A







UNREELED DIRECTION



- 1. THROUGH THE BOARD 6 WAY EDGE CARD CONNECTOR. FOR FURTHER DETAILS REFER TO PRODUCT SPECIFICATION 201-01-136.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK.
- REFER TO PAGE 81 FOR MATING PCB DETAILS.
- 3. CONNECTOR TOP MOUNTING ON PCB.
- 4. UP TO 0.5MM RAD TO MATCH CONNECTOR PROFILE.
- 5. ALL DIMENSIONS ± 0.20 UNLESS TOLERANCE SPECIFIED.
- 6. INSULATOR: PAR4T, GLASS FILLED, HALOGEN FREE, UL94 V-0, COLOR SEE PAGE 75.
- 7. CONTACT: COPPER ALLOW, NICKEL PLATED WITH GOLD FLASH ON NOSE AND TIN ON TAILS.
- 8. BRACKET: COPPER ALLOY, PLATING TIN OVER NICKEL.
- 9. PACKING IN TAPE AND REEL, 1000 PIECES PER REEL.
- 10. CONTACT TAILS COPLINARITY WITHIN 0.10.
- 11. REFER TO PAGE 84 FOR MATCHING PROTECTING CAP.
- 12. UL REFERENCE E90723.





Series 00-9159

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THROUGH THE BOARD MATING EDGE CARD CONNECTOR - WITH CAP 00-9159-00X-502-X06 1.00 6.00 4.45 旧山日 70 AVX 00-9159-002-502-906











AVX

00-9159-003-502-906

00-9159-004-502-906

00-9159-005-502-906



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00-9159-006-502-906

- 1. 00-9159-00X-501-X06 WITH CAP SUPPLIED FITTED.
- 2. DRAWINGS SHOW OUTLINE DIMENSIONS OF THE 00-9159-00X-502-X06 ASSEMBLIES. ALL OTHER DETAILS ARE AS 00-9159-00X-501-X06 ON PAGES 76-80.
- 3. GENERAL TOLERANCE ±0.20.
- 4. PACKING ORIENTATION.
- 5. UL REFERENCE E90723.







Series 00-9159





NOTES:

1. CORRECT DIMENSIONS FOR EITHER 0.80MM OR F1.60MM PCB THICKENSS MUST BE USED.

- 2. THICKNESS OF PCB INCLUDES ALL LAYERS INCLUDING COPPER AND PLATING.
- 3. PADS TO BE PLATED GOLD OVER NICKEL UNDERCOAT.

4. GENERAL TOLERANCE ±0.10 UNLESS STATED.





Series 00-9159





- 1. THROUGH THE BOARD EDGE CARD CONNECTOR.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK. REFER TO PAGE 81 FOR MATING PCB DETAILS.
- 3. CONNECTOR TOP MOUNTING ON PCB.
- 4. PAD DETAILS ON THE MATING PCB ALLOW CONTACT TO BE MADE IN ANY POSITION FROM THE STOP FACE UP TO 1MM FROM THE STOP FACE.
- 5. GENERAL TOLERANCE ±0.20 UNLESS STATED.





Series 00-9159

ACCESSORY – PROTECTING CAP



NOTES:

- 1. PROTECTING CAP, ACCESSORY, NOT SUPPLIED WITH CONNECTOR.
- 2. CLIPS TO TOP OF CONNECTOR TO COVE ALL METAL COMPONENTS.
- 3. MATERIAL: PA4T, GLASS FILLED, HALOGEN FREE, UL94 V-0.
- COLOR CODE REFER TO PAGE 70, "X" IN PART NUMBER.
- 4. SUPPLIED IN BAGS OF 100 PIECES.
- 5. GENERAL TOLERANCE ±0.20.









ASSEMBLED CAP

Series 00-9159





AVX continues to develop unique connectors to fill the gap in the industrial market, specifically as it relates to low pin count requirements. The newest addition to AVX's broadening line of one piece card edge connectors is the 2p-6p top entry version which complements the bottom entry version released last year. This new configuration will allow small perpendicular daughter cards to be plugged in from the top side of the main board. The single connector option offers an alternative to the more traditional and costly two piece solution.

This small connector is packed with several key features that provide significant functionality in a broad range of robust industrial applications. The contact system is gold plated for enhanced reliability, signal integrity and full 2A/contact current rating. The PCB board opening is dual slotted to accept either a 0.8mm or 1.6mm thick daughter card within the same connector body.

APPLICATIONS

- Provides a one piece connector solution for low pin count perpendicular PCB mating in industrial applications
- Facilitates easy plug ability for small module/ programming cards

FEATURES AND BENEFITS

- 2 Amp per contact current rating meets robust industrial application requirements
- Removable pick and place cap supports robotic placement and SMT termination
- Gold plated BeCu contact system for high reliability in harsh environments
- Accepts both 0.8mm and 1.6mm PCB's for added design options

ELECTRICAL

- Current Rating: 2 Amps / Contact
- Voltage Rating: 250 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +120°C

MECHANICAL

- Insulator Material: Nylon UL94VO
- Contact Material: Beryllium Copper
- Plating: Gold / Tin over Nickel
- Durability 10 Cycles

HOW TO ORDER



551 Single Part PCB Strip Connector 551 = Top Mounting on Board

Edge Card

	-	Г	
Insulator Color			
Code	Color	Application	
9	White	UL Approved Standard	

Х





Certification: UL File #E90723





Series 00-9159



4.00



PACKING DETAILS





24 1 0

QUANTITY PER REEL 900

- 5159-500 SERIES TOP MOUNTING EDGE CARD CONNECTOR, 2 WAY. FOR FURTHER DETAILS 1. REFER TO PRODUCT SPECIFICATION 201-01-136 AND APPLICATION NOTES 201-01-137.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK PCB. (DETAILS SAME AS 9159-500), REFER TO PAGE 91.
- 3. CONNECTOR OUTLINE.
- 4. ALL DIMENSIONS ±0.20 UNLESS TOLERANCE SPECIFIED.
- 5. INSULATOR: PA4T, GLASS FILLED, HALOGEN FREE, UL94 V-0, COLOR REFER TO PAGE 85.
- 6. CONTACT: COPPER ALLOY, NICKEL PLATED WITH GOLD FLASH ON NOSE AND TIN ON TAILS.
- 7. BRACKET: COPPER ALLOY, PLATING, TIN OVER NICKEL.
- 8. PACKING IN TAPE AND REEL, 900 PIECES PER REEL.
- 9. CONTACT TAILS COPLINARITY WITHIN 0.10.
- 10. UL PRODUCT REFERENCE E90723 (US AND CANADA).





Series 00-9159





- 1. 5159-500 SERIES TOP MOUNTING EDGE CARD CONNECTOR, 3 WAY. FOR FURTHER DETAILS REFER TO PRODUCT SPECIFICATION 201-01-136 AND APPLICATION NOTES 201-01-137.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK PCB. (DETAILS SAME AS 9159-500), REFER TO PAGE 91.
- 3. CONNECTOR OUTLINE.
- 4. ALL DIMENSIONS ±0.20 UNLESS TOLERANCE SPECIFIED.
- 5. INSULATOR: PA4T, GLASS FILLED, HALOGEN FREE, UL94 V-0, COLOR REFER TO PAGE 85.
- 6. CONTACT: COPPER ALLOY, NICKEL PLATED WITH GOLD FLASH ON NOSE AND TIN ON TAILS.
- 7. BRACKET: COPPER ALLOY, PLATING, TIN OVER NICKEL.
- 8. PACKING IN TAPE AND REEL, 900 PIECES PER REEL.
- 9. CONTACT TAILS COPLINARITY WITHIN 0.10.
- 10. UL PRODUCT REFERENCE E90723 (US AND CANADA).





0.90

4.0

PACKING DETAILS



UNREELED DIRECTION





Series 00-9159



- 4. ALL DIMENSIONS ±0.20 UNLESS TOLERANCE SPECIFIED.
- 5. INSULATOR: PA4T, GLASS FILLED, HALOGEN FREE, UL94 V-0, COLOR REFER TO PAGE 85.
- 6. CONTACT: COPPER ALLOY, NICKEL PLATED WITH GOLD FLASH ON NOSE AND TIN ON TAILS.
- 7. BRACKET: COPPER ALLOY, PLATING, TIN OVER NICKEL.
- 8. PACKING IN TAPE AND REEL, 900 PIECES PER REEL.
- 9. CONTACT TAILS COPLINARITY WITHIN 0.10.
- 10. UL PRODUCT REFERENCE E90723 (US AND CANADA).



PACKING DETAILS







Series 00-9159

2.40

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QUANTITY PER REEL 900

- REFER TO PRODUCT SPECIFICATION 201-01-136 AND APPLICATION NOTES 201-01-137.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK PCB. (DETAILS SAME AS 9159-500), REFER TO PAGE 91.
- 3. CONNECTOR OUTLINE.
- 4. ALL DIMENSIONS ±0.20 UNLESS TOLERANCE SPECIFIED.
- 5. INSULATOR: PA4T, GLASS FILLED, HALOGEN FREE, UL94 V-0, COLOR REFER TO PAGE 85.
- 6. CONTACT: COPPER ALLOY, NICKEL PLATED WITH GOLD FLASH ON NOSE AND TIN ON TAILS.
- 7. BRACKET: COPPER ALLOY, PLATING, TIN OVER NICKEL.
- 8. PACKING IN TAPE AND REEL, 900 PIECES PER REEL.
- 9. CONTACT TAILS COPLINARITY WITHIN 0.10.
- 10. UL PRODUCT REFERENCE E90723 (US AND CANADA).



Series 00-9159





Series 00-9159



NOTES:

1. CORRECT DIMENSION FOR EITHER 0.80MM OR 1.60MM PCB THICKNESS MUST BE USED.

2. THICKNESS OF PCB INCLUDES ALL LAYERS INCLUDING COPPER AND PLATING.

3. PADS TO BE PLATED GOLD OVER NICKEL UNDERCOAT.

4. GENERAL TOLERANCE ±0.10 UNLESS STATED.





Series 00-9159



- 1. 9159-500 SERIES TOP MOUNTING EDGE CARD CONNECTOR.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK. REFER TO PAGE 6 FOR MATING PCB DETAILS.
- 3. CONNECTOR SURFACE MOUNTING ON PCB.
- 4. PAD DETAILS ON THE MATING PCB ALLOW CONTACT TO BE MADE IN ANY POSITION FORM THE STOP FACE UP TO 1MM FROM THE STOP FACE.
- 5. GENERAL TOLERANCE ±0.20 UNLESS STATED.





Series 00-9159



AVX was challenged with increasing the pin count density as well as minimizing the size of the existing coplanar BTB card edge connector for linear strip lighting. The current product is a 2.0mm with single contacts that straddle the PCB to make electrical connection on both the top and bottom side of the board. By simply changing the contacts to a double sided configuration (separate contacts for both the top and bottom of the PCB), AVX was able to double the pin count in the same 2.0mm pitch with minimal to no impact on the electrical performance of the connector. Reducing the size of the connector required a complete new design as the target was a 4p connector with a total length of 4.0mm. To achieve this, AVX removed the end walls and then added a center support/keying rib to pre-align the PCB during mating. This rib the then holds the PCB in the proper functional location.

The new family of connectors is available with contact sizes of 4, 6, 8 and 10 positions, doubling the current products range. The current rating will be 3A for the 4p and 6p, and then drop to 2.5A for the 8p and 10p connector. The connector supports the standard 1.6mm PCB thickness.

This new connector provides the highest density to reliably connect two in-line PCB's together in the most cost effective assembled solution. More importantly, the increased pin count allows for more flexibility in mixing and matching power and signal lines.

APPLICATIONS

- Linear LED strip lighting
- Commercial/Industrial co-planar or extended card applications
- Reference Product Specification 201-01-144

FEATURES AND BENEFITS

- Miniaturized size, achieves 1.0mm in length for each number of contacts (4p =4.0mm)
- Double Ended/Double Sided contacts for increased pin count density on standard 1.6mm thick PCB's
- Central polarizing/location rib assures proper mating and PCB location
- High current capabilities: 3A; 4p/6p and 2.5A; 8p/10p
- Economical high force Tin-to-Tin contact interface

ELECTRICAL

- Current Rating: 3.0 amps 4p/6p and 2.5 amps 8p/10p
- Voltage Rating: 300 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

MECHANICAL

- Insulator Material: Nylon 46: UL94VO
- Contact Material: Phosphor Bronze
- Plating: Tin over Nickel
- Durability: 5 Cycles

HOW TO ORDER





Certification: UL File #E90723



Series 00-9159





- 2. CONTACT MATERIAL COPPER ALLOY, TIN PLATED
- 3. PARTS TO BE SUPPLIED IN BAGS, 1000 PIECES PER BAG.
- 4. GENERAL TOLERANCE ±0.20MM UNLESS STATED.
- 5. ARROW ADJACENT TO CONTACT POSITION 1.
- 6. PCB PAD, TIN PLATED,
- 7. FURTHER DETAILS REFER TO ELCO SPECIFICATION 201-01-144.

SUGGESTED PCB LAYOUT

PADS THE SAME UPPER AND LOWER FACES PCB THICKNESS 1.60±0.10MM (OVER PADS)





/XV/X



Series 00-9159





- 2. CONTACT MATERIAL COPPER ALLOY, TIN PLATED
- 3. PARTS TO BE SUPPLIED IN BAGS, 1000 PIECES PER BAG.
- 4. GENERAL TOLERANCE ±0.20MM UNLESS STATED.
- 5. ARROW ADJACENT TO CONTACT POSITION 1.
- 6. PCB PAD, TIN PLATED.
- 7. FURTHER DETAILS REFER TO ELCO SPECIFICATION 201-01-144.

SUGGESTED PCB LAYOUT

PADS THE SAME UPPER AND LOWER FACES PCB THICKNESS 1.60±0.10MM (OVER PADS)







Series 00-9159

8 WAY SINGLE PART PCB STRIP CONNECTOR – OPEN ENDED





SECTION VIEW THROUGH CONTACT

POSITION





NOTES:

- 1. INSULATOR MATERIAL NYLON 46, UL94 V-0.
 - COLOR REFER TO PAGE 93.
- 2. CONTACT MATERIAL COPPER ALLOY, TIN PLATED
- 3. PARTS TO BE SUPPLIED IN BAGS, 1000 PIECES PER BAG.
- 4. GENERAL TOLERANCE ± 0.20 MM UNLESS STATED.
- 5. ARROW ADJACENT TO CONTACT POSITION 1.
- 6. PCB PAD, TIN PLATED.
- 7. FURTHER DETAILS REFER TO ELCO SPECIFICATION 201-01-144.

SUGGESTED PCB LAYOUT

PADS THE SAME UPPER AND LOWER FACES PCB THICKNESS 1.60±0.10MM (OVER PADS)









Series 00-9159







Series 9155-100





AVX has been leading the industry with reliable Board-to-Board (BTB) compression connectors for commercial, medical and harsh industrial applications, obtaining the very first contact patent in the early 1990's. The broad range of connectors offers both signal contacts which support 1 Amp/contact up to 40 position as well as low pin count (LPC) power contacts up to 3 Amps/contact.

The newest addition is the Ultra Low Profile (ULP) power connector that supports a 1.3mm compressed height, the lowest on the market. Gold plated Beryllium Copper (BeCu) contacts offers the most reliable and resilient contact performance in this miniature package. The sweeping contact design offers 0.7mm deflection range, long contact wipe and in excess of 40 grams of contact force at minimum operating deflection. All combined, this connector is rated at an unbelievable 5000 mating cycles for mechanical endurance.

APPLICATIONS

- Low profile power, signal, ground or shielding requirements
- Repeatable/Pluggable module or battery pack requirements
- Low profile flex circuit to PCB applications

FEATURES AND BENEFITS

- High Reliability / High Cycle Life BeCu contacts for maximum system performance
- ULP 1.3mm minimum operating height with 0.7mm "Z" axis compression/tolerance range
- Gold plating supports a broad range applications based on reliability and environments
- 3 Amp contact rating over a -40°C to +105°C operating range supports a broad application spectrum

ELECTRICAL

- Current Rating: 3 Amps/Contact
- Voltage Rating: 125VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +105°C

MECHANICAL

- Contact Material: Beryllium Copper
- Plating: Selective Gold over Nickel, Tin on tails
- Durability: 5,000 Cycles

HOW TO ORDER

00	9155	00X	10X	
Prefix	Series	Number of Positions 002 = 2p	Low Profile 100 = No Stop 101 = Stop	Ρ 0.4 μr
		003 = 30		





Series 9155-100













SUGGESTED PCB LAYOUT

NOTES:

- 1. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPECIFICATION 201-01-094.
- 2. MATERIALS: CONTACT COPPER ALLOY, INSULATOR - GLASS FILLED NYLON. COLOR: BLACK.
- 3. TOLERANCE ±0.20 UNLESS SPECIFIED.
- 4. PACKING DETAILS SEE TABLE.
- 5. FOR MATING PAD DETAILS REFER TO PAGE 103.

Series 9155-100







Series 9155-100













SUGGESTED PCB LAYOUT

NOTES:

- 1. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPECIFICATION 201-01-094.
- MATERIALS: CONTACT COPPER ALLOY, INSULATOR - GLASS FILLED NYLON. COLOR: BLACK.
- 3. TOLERANCE ±0.20 UNLESS SPECIFIED.
- 4. PACKING DETAILS SEE TABLE.
- 5. FOR MATING PAD DETAILS REFER TO PAGE 103.

Series 9155-100









Series 9155-100



- 1. SUGGESTED MATING PADS FOR LOW PROFILE BATTERY CONNECTORS.
- 2. OUTLIE OF CONNECTOR.
- 3. PROFERED PLATING ON PADS GOLD OVER NICKEL.
- 4. REFERENCE DIMENSIONS.
- 5. DIMENSION TO EDGE OF BOARD FOR CONNECTORS WITH STOP.



Single Compression Contact: Board-to-Board (BTB)



Series 70-9155



Designers for ruggedized connectors to meet harsh environments continue to look for new products which will reduce size and cost without jeopardizing performance. The new Ultra-Low Profile (ULP) compression contact from AVX surface mounts to a PCB and provides a reliable compression connection to the mating board, even under extreme shock and vibration applications. With over 20 years of 1-Piece compression contact experience, this innovative contact offers full connector performance functionality at the individual contact level. Thus, allowing single contacts to be placed in any location or position on a PCB.

The high force beryllium copper contact is gold plated to maximize reliability and signal integrity. The current offering has two contacts with nominal heights of 1.0mm and 1.5mm. Add in the "Z" axis tolerance range and the compressed height covers 0.75mm up to 1.75mm. The contacts are supplied in tape and reel for easy SMT placement.

APPLICATIONS

- Industrial/Ruggedized handheld or portable devices
- BTB connection for any traditional power or signal application
- Ground connections between PCB's or housings

FEATURES AND BENEFITS

- Reliable gold plated Beryllium Copper contacts for high cycle life and signal integrity up to 1000 cycles
 - Tape and reel packaged for automated SMT placement
- Sweeping beam design for pluggable/module applications
- Three gold plating options to match end product environmental or expected life requirements

ELECTRICAL

ment distance

Current Rating: 3 Amps

Voltage Rating: Based on place-

ENVIRONMENTAL • Operating Temperature:

-40°C to +125°C

MECHANICAL

- Contact Material: Beryllium Copper
- Contact Plating: Gold over Nickel
- Durability: 50, 500 and 1000 cycles

HOW TO ORDER

70	9155	001
Prefix	Series	Number of Wavs

	_
Contact De	scription
Nominal Operating Height	Contact Ope

Code 610

615

6XX

Contact Dese	cription			
Nominal rating Height	Contact Operating Height Range		Code	
1.00mm	0.75mm to 1.25mm	1	004	
1.50mm	1.25mm to 1.75mm		004	

Contact Description

Code	Gold Thickness	Description	Availability
004	0.1µm	Nickel under Plate, Gold on Nose Tin on Remainder	Standard
006	0.4µm	Nickel under Plate, Gold on Nose Tin on Remainder	Special Order
008	0.8µm	Nickel under Plate, Gold on Nose Tin on Remainder	Special Order



Single Compression Contact: Board-to-Board (BTB)

Α

-NOTE 9

6.00 NOTE 6

SUGGESTED SMT

PCB LAYOUT

└─NOTE 7

12.40

-NOTE 8



Series 70-9155

2.70 NOTE

8



- 5. OUTLINE OF CONNECTOR, ORIENTATION END "A".
- 6. AREA TO KEPT FREE OF SOLDER RESIST, FURTHER INFORMATION IN APPLICATION NOTES.
- 7. AREA BETWEEN PADS TO BE KEPT CLEAR OF TRACKS AND COMPONENTS.
- 8. SMT PADS PLATED TIN.
- 9. MATING PAD PLATED GOLD OVER NICKEL.



Single Compression Contact: Board-to-Board (BTB)



Series 70-9155



2.70 NOTE
AMERICAS

AVX Greenville, SC Tel: 864-967-2150

AVX Northwest, WA Tel: 360-699-8746

AVX Midwest, IN Tel: 317-861-9184

AVX Mid/Pacific, CA Tel: 408-988-4900

AVX Northeast, MA Tel: 617-479-0345

AVX Southwest, CA Tel: 949-859-9509

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Kyocera Corporation Japan Tel: +81-75-604-3449

Contact:





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
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- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
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- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
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- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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