# AVX 2pc/1pc Connector Solutions



Version 13.12



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#### 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**

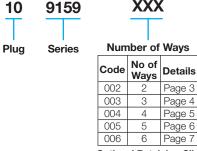
Insulator Material: Nylon: VL94VO

• Contact Material: BeCu / Phos Bronze

• Plating: Gold / Tin over Nickel

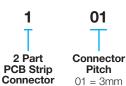
• Durability: 10 Cycles

#### **HOW TO ORDER**



**Optional Retaining Clip** Page 8

XXX





X





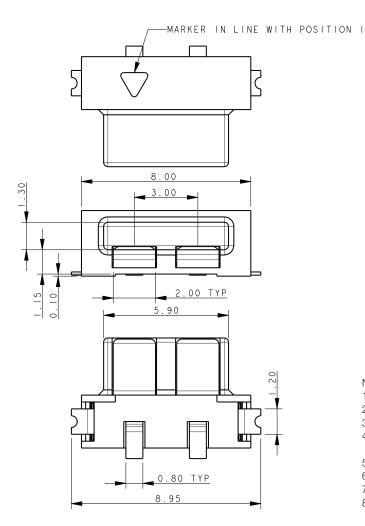
Certification: UL File #E90723

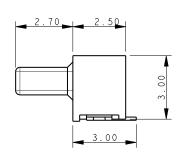


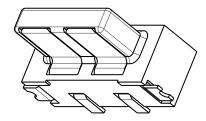
#### **Series 10-9159**



# PLUG 2 WAY 2 PART PCB STRIP CONNECTOR

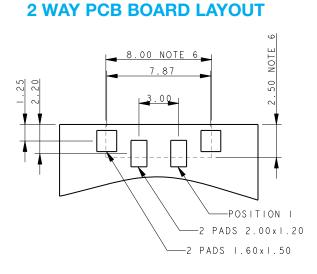


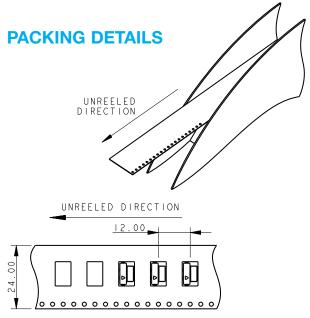




#### NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46.
- 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.



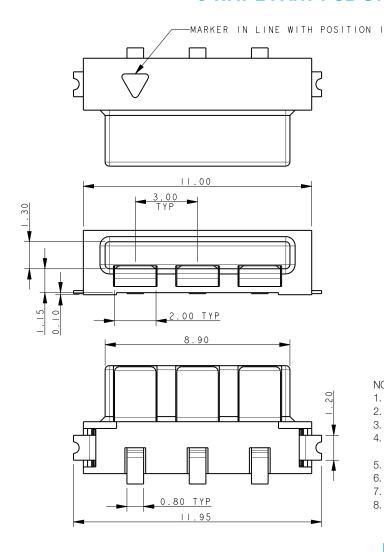


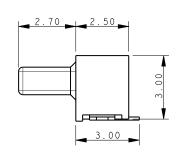


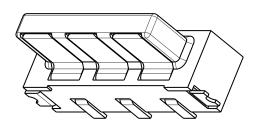
#### **Series 10-9159**



# PLUG 3 WAY 2 PART PCB STRIP CONNECTOR





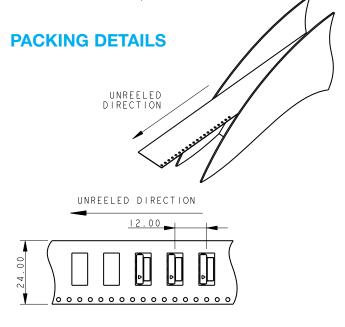


#### NOTES

- 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.

# 11.00 NOTE 6 10.87 2 SPACES (3.00 = 6.00) POSITION I 3 PADS 2.00x1.20 PADS 1.60x1.50

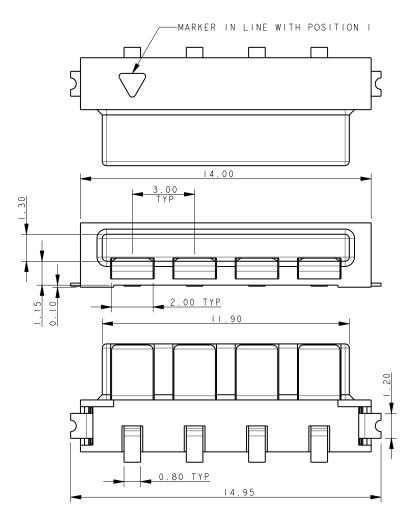
**3 WAY PCB BOARD LAYOUT** 

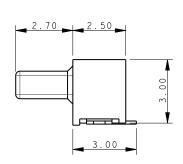


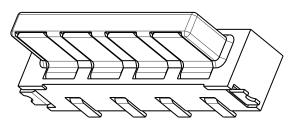
#### **Series 10-9159**



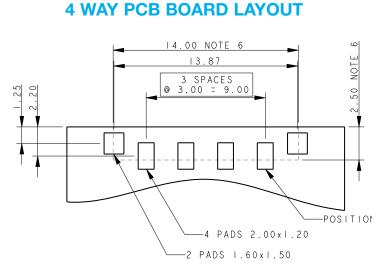
#### **PLUG 4 WAY 2 PART PCB STRIP CONNECTOR**

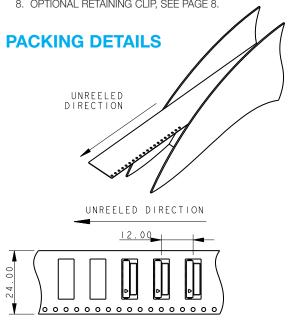






- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46.
- 4. CONTACT MATERIAL: COPPER ALLOY, SELECTIVE GOLD OVER NICKEL TIN PLATED ON TAILS.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.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



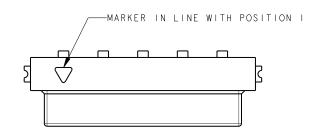


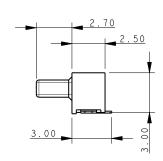


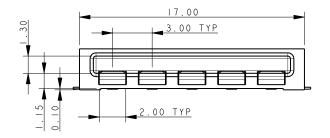
#### **Series 10-9159**

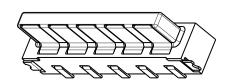


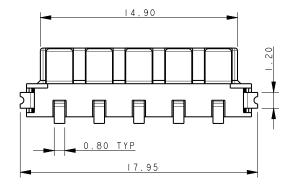
# PLUG 5 WAY 2 PART PCB STRIP CONNECTOR







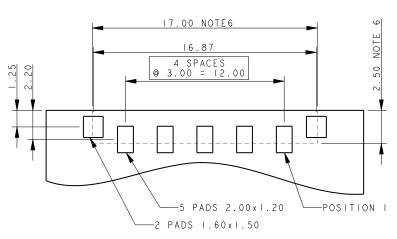


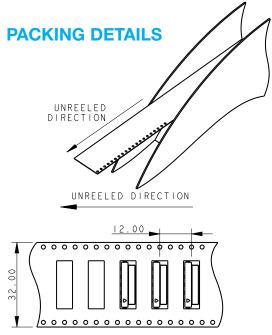


#### NOTES

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46.
- 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.

#### **5 WAY PCB BOARD LAYOUT**



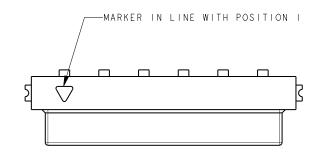


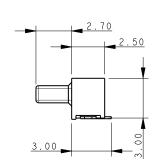


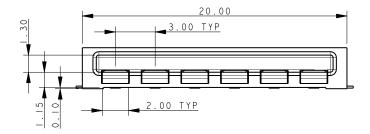
#### **Series 10-9159**

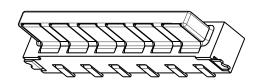


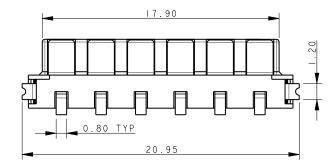
# PLUG 6 WAY 2 PART PCB STRIP CONNECTOR







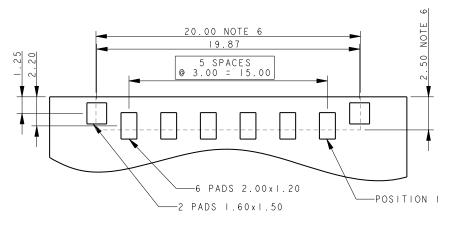


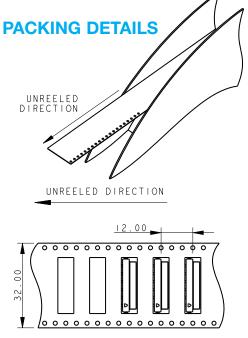


#### NOTES:

- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCES.
- 3. INSULATOR MATERIAL: NYLON 46.
- 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.

#### **6 WAY PCB BOARD LAYOUT**



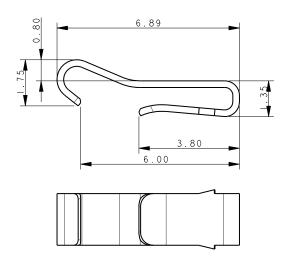


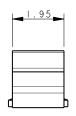


#### **Series 10-9159**



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





#### PLUG ASSEMBLY - FOR REFERENCE ONLY

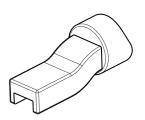
CLIP INSERTED INTO 10-9159-00X-101-X06

# 6.89



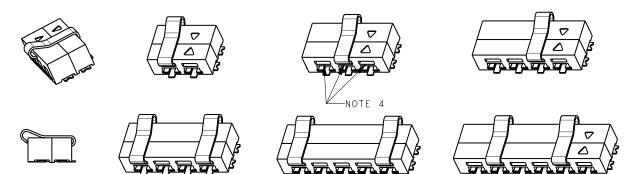
#### HAND INSERTION TOOL

06-9159-7025-01-000



#### **MATED ASSEMBLY - FOR REFERENCE ONLY**

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



#### 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.



## **Cable Plug**

#### Series 11-9159





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 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

#### **ENVIRONMENTAL**

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

#### **MECHANICAL**

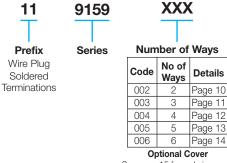
Insulator Material: Nylon: VL94VO

Contact Material: BeCu / Phos Bronze

Plating: Gold / Tin over Nickel

• Durability: 10 Cycles

#### **HOW TO ORDER**



See page 15 for ordering code

Optional Latch

See page 16 for ordering code









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

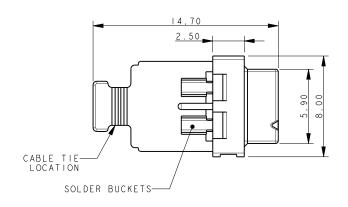
Covers/Latches are sold separately (see pages 15-16 for ordering codes).

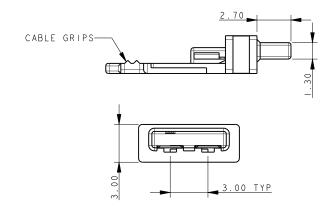
Certification: UL File #E90723





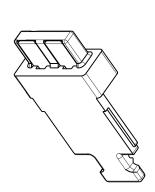
# PLUG WIRED 2 WAY 2 PART 9159 LIGHTING CONNECTOR

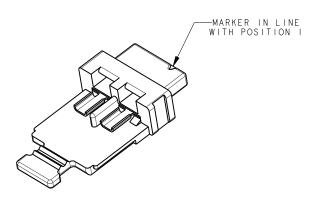


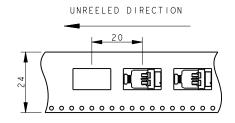


#### NOTES:

- 1. 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.
- 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.





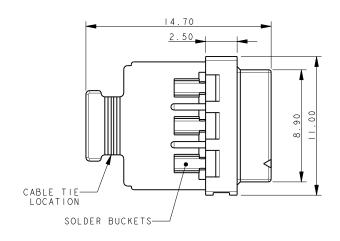


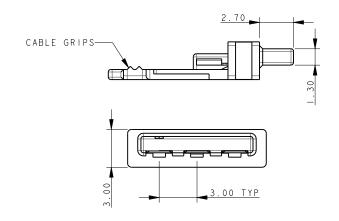






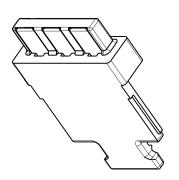
# PLUG WIRED 3 WAY 2 PART 9159 LIGHTING CONNECTOR

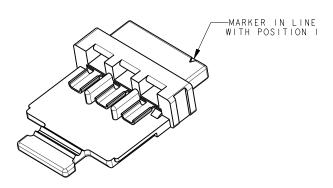


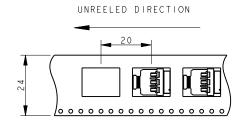


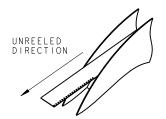
#### **NOTES**

- 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.





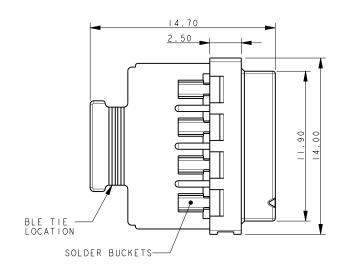


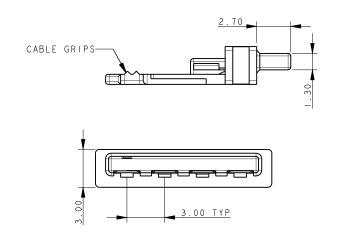






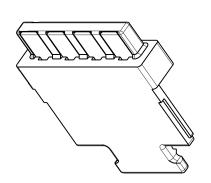
# PLUG WIRED 4 WAY 2 PART 9159 LIGHTING CONNECTOR

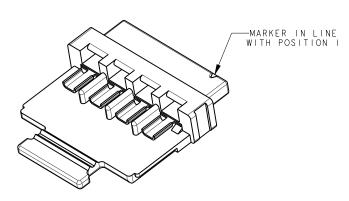


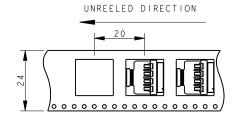


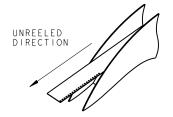
#### NOTES:

- 1. 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.
- 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.





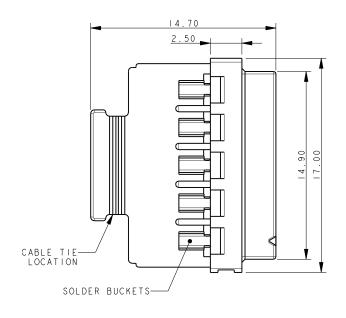


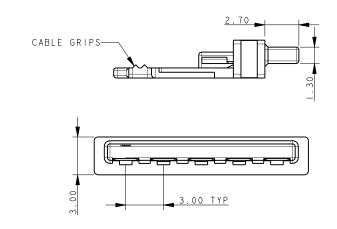






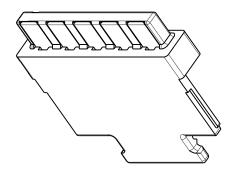
# PLUG WIRED 5 WAY 2 PART 9159 LIGHTING CONNECTOR

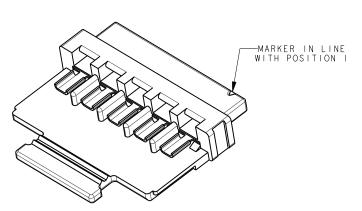


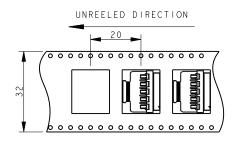


#### NOTES:

- 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.





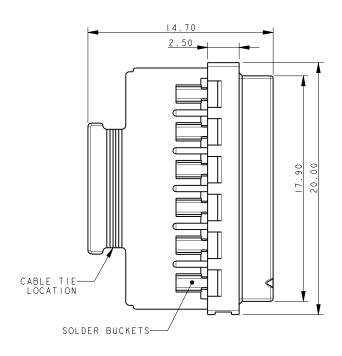


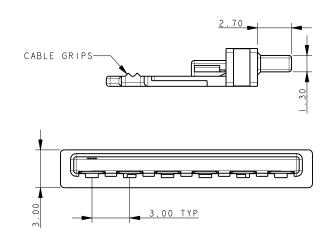






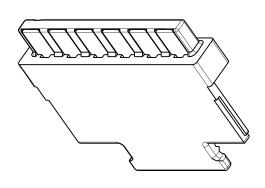
# PLUG WIRED 6 WAY 2 PART 9159 LIGHTING CONNECTOR

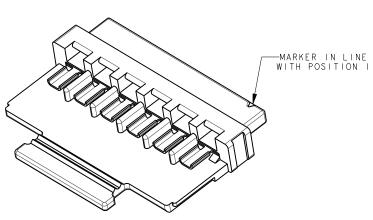


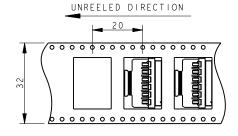


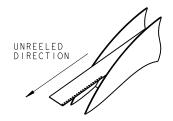
#### NOTES:

- 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.





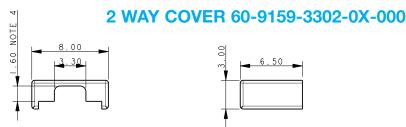


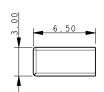




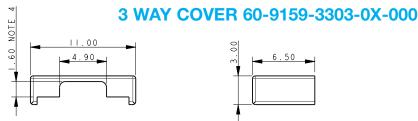


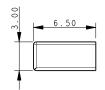
#### **PLUG WIRED COVERS** ACCESSORY NOT SUPPLIED WITH CONNECTOR ASSEMBLY

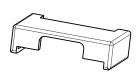




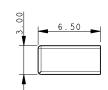




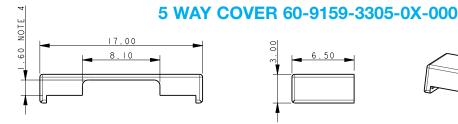


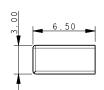


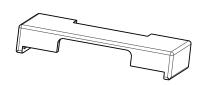




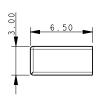


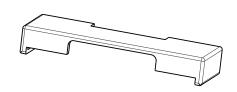












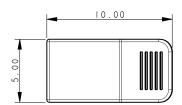
- 1. COVER (SLIDE ON) AVAILABLE TO PROTECT CABLE ENTRY.
- 2. OPTION COMPONENT. ORDER SEPARATELY.
- 3. PACKED IN BAGS, 1400 PIECES PER BAG.
- 4. MAXIMUM OUTER WIRE SIZE, 1.6MM DIAMETER INSULATION.
- 5. MATERIAL: GLASS FILLED NYLON 46. COLOR REFER TO PAGE 9.
- 6. COLOR OPTIONS SEE PAGE 9.
- 7. ALL DIMENSIONS ARE REFERENCED DIMENSIONS.
- 8. TO BE ASSEMBLED BEFORE CABLE TIE.



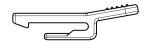


# PLUG WIRED LATCHES ACCESSORY NOT SUPPLIED WITH CONNECTOR ASSEMBLY

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

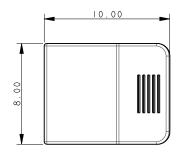






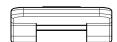


#### LATCH 60-9159-3403-0X-000 USED ON 3 AND 5 WAY ASSEMBLIES









#### 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.





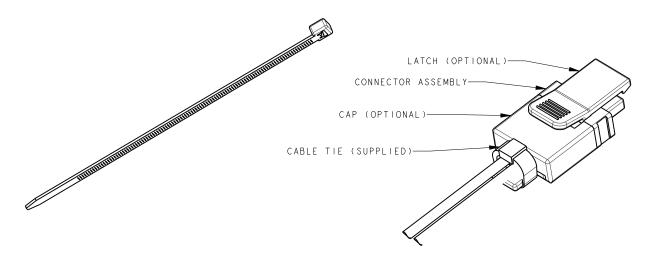
#### PLUG WIRED ACCESSORY ORDERING CODES

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

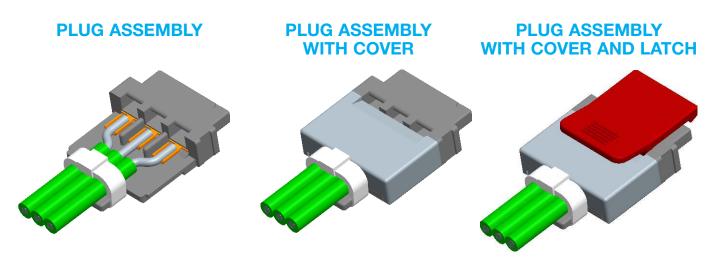
<sup>&</sup>quot;X" For color option refer to table on page 9.

#### **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

XXX

#### **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

01

#### **MECHANICAL**

• Insulator Material: Nylon: UL94VO

• Contact Material: BeCu / Phos Bronze

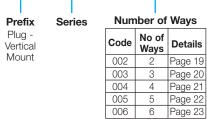
• Plating: Gold / Tin over Nickel

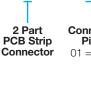
• Durability: 10 Cycles

#### **HOW TO ORDER**

9159

13







X



Certification: UL File #E90723

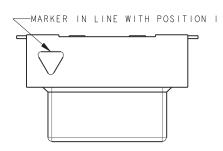




#### **Series 13-9159**

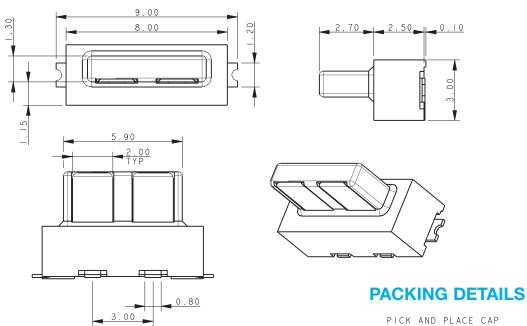


# PLUG – VERTICAL MOUNT 2 WAY 2 PART PCB STRIP CONNECTOR

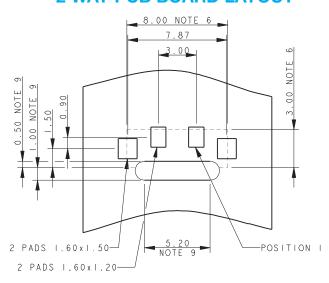


#### NOTES:

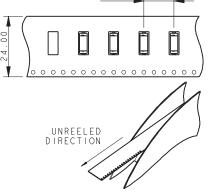
- 1. FOR FULL PRODUCT SPECIFICATION STANDARD CONNECTORS REFER TO ELCO SPEC 201-01-119, UL COMPONENTS REFER TO ELCO SPEC 201-01-119UL. FOR APPLICATION NOTES REFER TO 201-01-123.
- 2. GENERAL TOLERANCE ±0.20 UNLESS TOLERANCED.
- 3. INSULATOR MATERIAL: NYLON 46, UL94 V-0, COLOR REFER TO PAGE 18.
- 4. CONTACT 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 WAY PCB BOARD LAYOUT**



# UNREELED DIRECTION

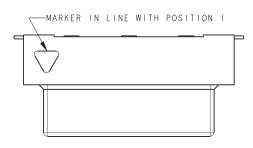




#### **Series 13-9159**

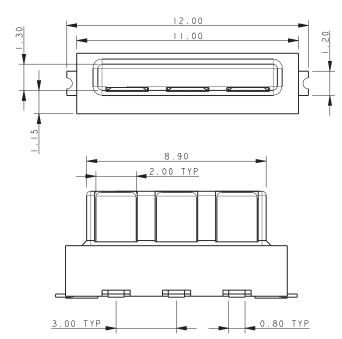


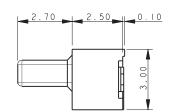
# PLUG – VERTICAL MOUNT 3 WAY 2 PART PCB STRIP CONNECTOR

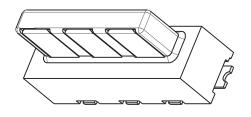


#### NOTES:

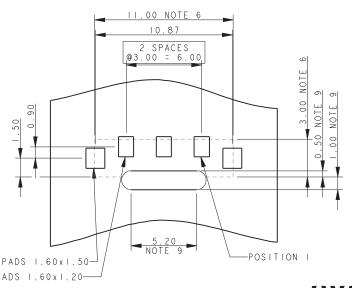
- 1. FOR FULL PRODUCT SPECIFICATION STANDARD CONNECTORS REFER TO ELCO SPEC 201-01-119, UL COMPONENTS REFER TO ELCO SPEC 201-01-119UL. FOR APPLICATION NOTES REFER TO 201-01-123.
- 2. GENERAL TOLERANCE ±0.20 UNLESS TOLERANCED.
- 3. INSULATOR MATERIAL: NYLON 46, UL94 V-0, COLOR REFER TO PAGE 18.
- 4. CONTACT 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.



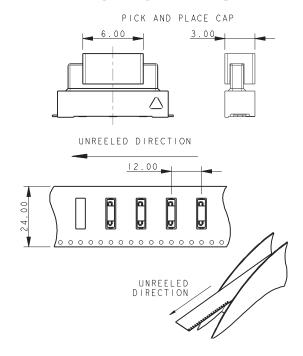




#### 3 WAY PCB BOARD LAYOUT



#### **PACKING DETAILS**

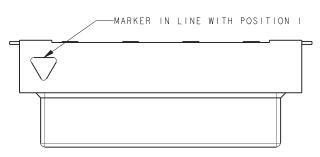




#### **Series 13-9159**

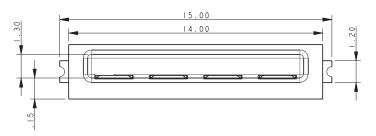


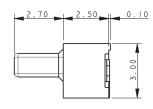
# PLUG – VERTICAL MOUNT 4 WAY 2 PART PCB STRIP CONNECTOR

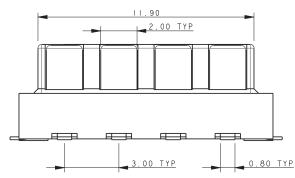


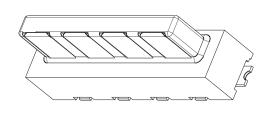
#### NOTES:

- 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.

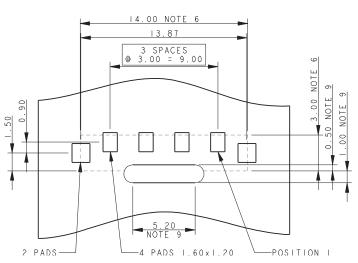




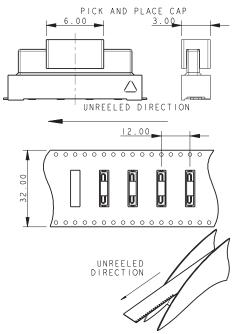




**PACKING DETAILS** 



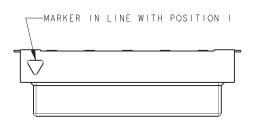
**4 WAY PCB BOARD LAYOUT** 



#### **Series 13-9159**

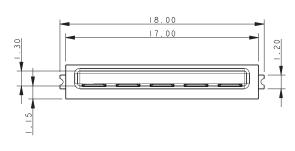


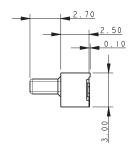
# PLUG – VERTICAL MOUNT 5 WAY 2 PART PCB STRIP CONNECTOR

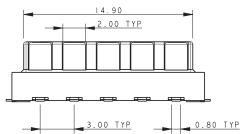


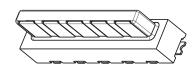
#### NOTES:

- 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.

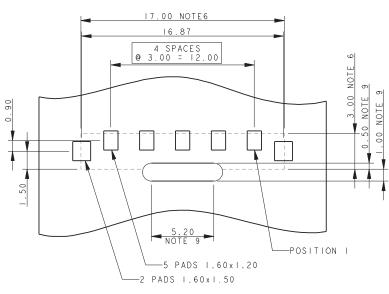








#### **5 WAY PCB BOARD LAYOUT**



# UNREELED DIRECTION 12.00 UNREELED DIRECTION DIRECTION

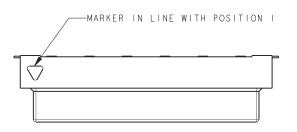
**PACKING DETAILS** 



#### **Series 13-9159**

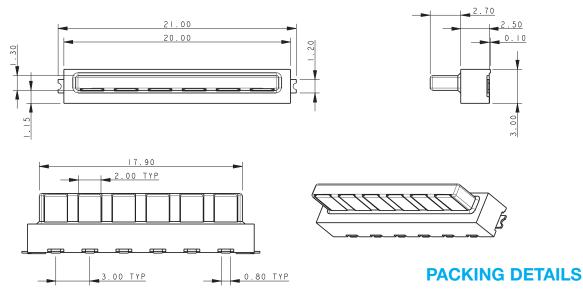


# PLUG – VERTICAL MOUNT 6 WAY 2 PART PCB STRIP CONNECTOR

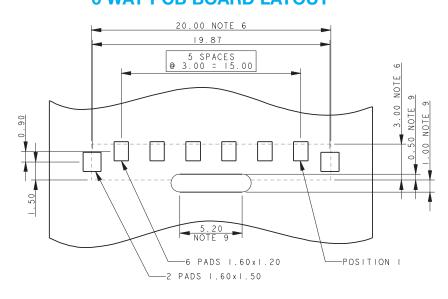


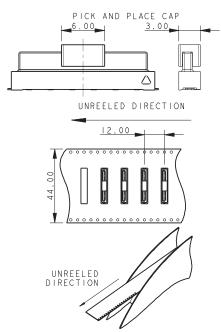
#### NOTES:

- 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.



#### **6 WAY PCB BOARD LAYOUT**









**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

Page 34

- 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 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

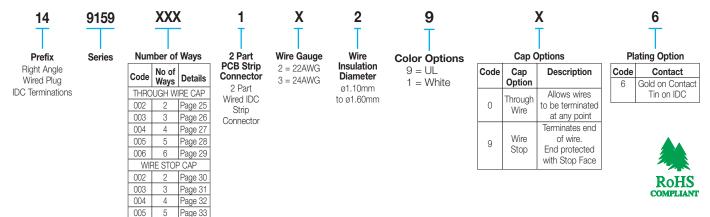
#### **ENVIRONMENTAL**

 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





Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

Dimension A

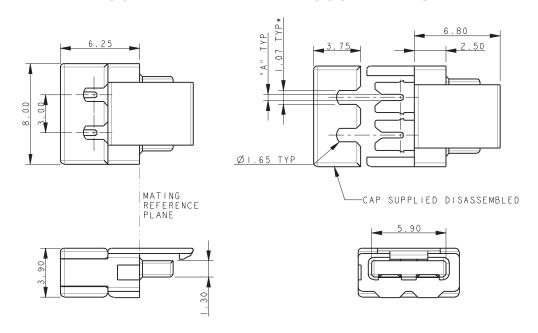
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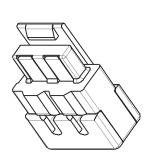
**Series 14-9159** 

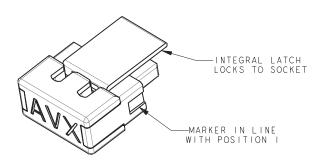
#### PLUG-WIRED - 2 WAY THROUGH WIRE CAP



#### 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 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.





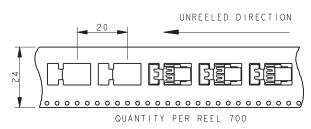
Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)









Wire Insulation

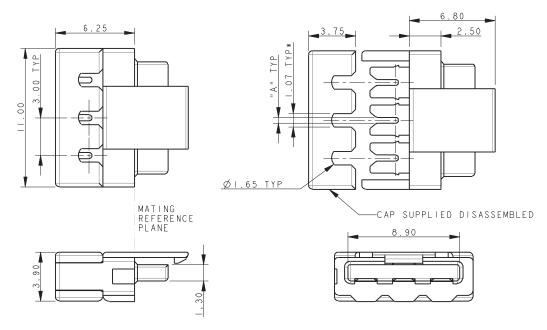
Diameter

1.10 to 1.60

1.10 to 1.60

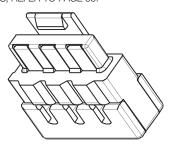
**Series 14-9159** 

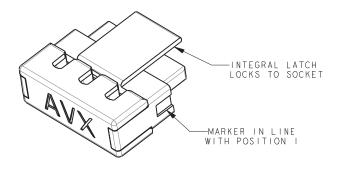
#### PLUG-WIRED - 3 WAY THROUGH WIRE CAP



#### NOTES:

- 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.





Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

Code

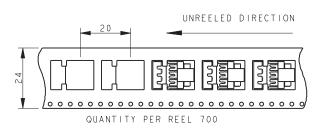
122

(Page 24)

Dimension A

0.47

0.37









Wire Insulation

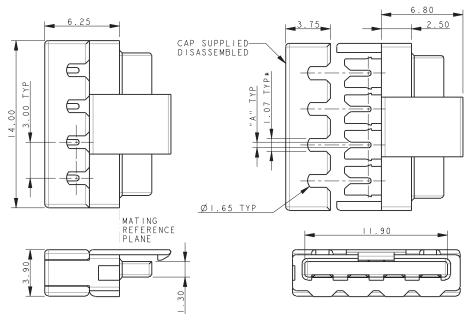
Diameter

1.10 to 1.60

1.10 to 1.60

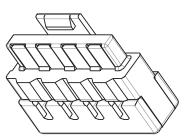
**Series 14-9159** 

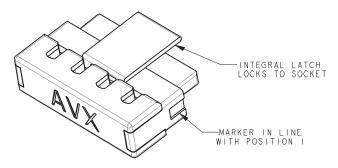
#### PLUG-WIRED - 4 WAY THROUGH WIRE CAP



#### 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 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.





Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

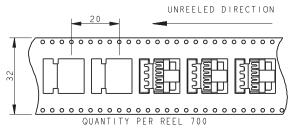
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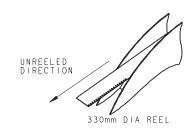
122

(Page 24)

Dimension A

0.47









Wire Insulation

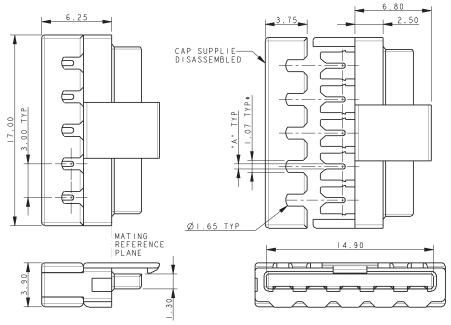
Diameter

1.10 to 1.60

1.10 to 1.60

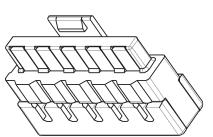
**Series 14-9159** 

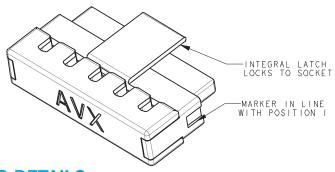
#### PLUG-WIRED - 5 WAY THROUGH WIRE CAP



#### NOTES:

- 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.





Code

122

(Page 24)

Dimension A

0.47

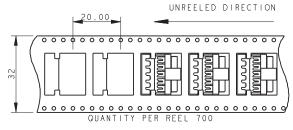
Wire Gauge

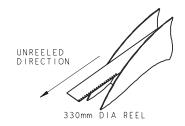
22AWG

(Stranded Wire)

24AWG

(Standed Wire)









Wire Insulation

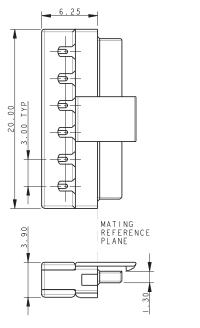
Diameter

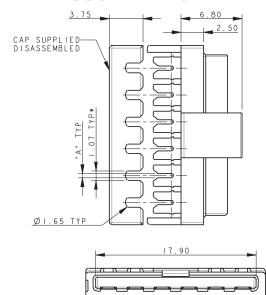
1.10 to 1.60

1.10 to 1.60

**Series 14-9159** 

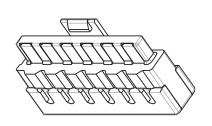
#### PLUG-WIRED - 6 WAY THROUGH WIRE CAP

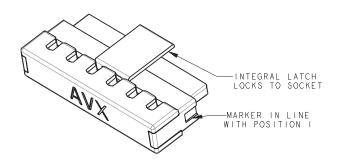




#### NOTES:

- 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 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

122

(Page 24)

Dimension A

0.47

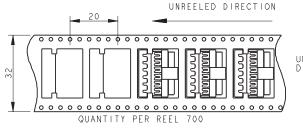
Wire Gauge

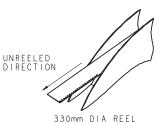
22AWG

(Stranded Wire)

24AWG

(Standed Wire)









Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

Dimension A

(Page 24)

Wire Gauge

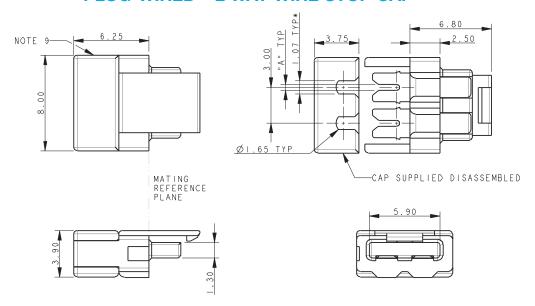
22AWG

(Stranded Wire) 24AWG

(Standed Wire)

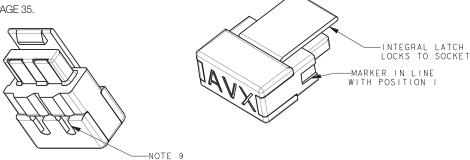
**Series 14-9159** 

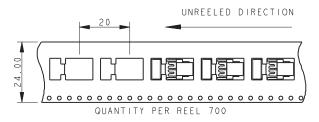
#### PLUG-WIRED - 2 WAY WIRE STOP CAP



#### NOTES:

- 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 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.











Wire Insulation

Diameter

1.10 to 1.60

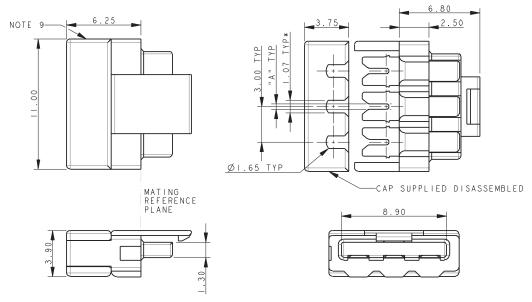
1.10 to 1.60

Dimension A

(Page 24)

**Series 14-9159** 

#### PLUG-WIRED - 3 WAY WIRE STOP CAP



Wire Gauge

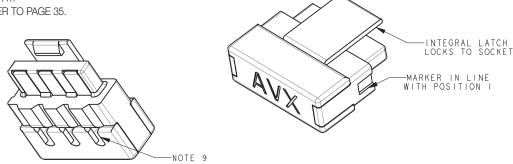
22AWG

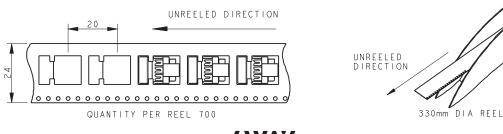
(Stranded Wire) 24AWG

(Standed Wire)

#### NOTES:

- 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. NSULATOR 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.
- 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 Insulation

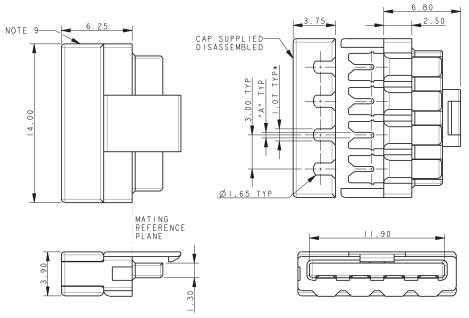
Diameter

1.10 to 1.60

1.10 to 1.60

**Series 14-9159** 

#### PLUG-WIRED - 4 WAY WIRE STOP CAP

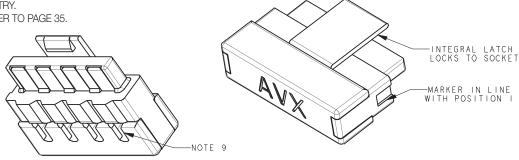


#### NOTES:

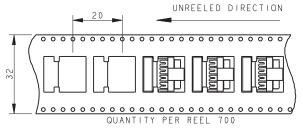
- FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
   FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 5. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0. COLOR REFER TO PAGE 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.

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)





Code

(Page 24)

132

**Dimension A** 

0.37

Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)





Wire Insulation

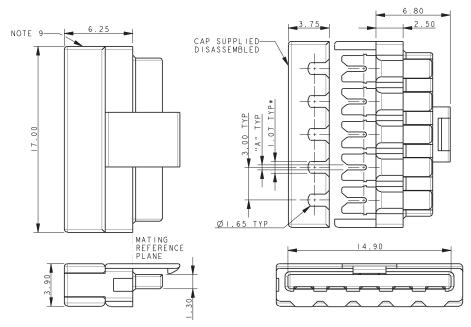
Diameter

1.10 to 1.60

1.10 to 1.60

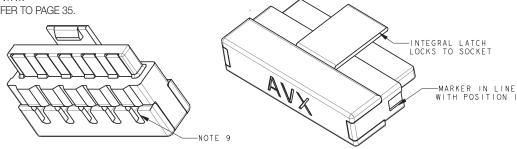
**Series 14-9159** 

#### PLUG-WIRED - 5 WAY WIRE STOP CAP

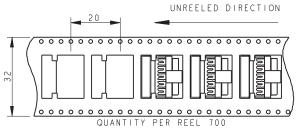


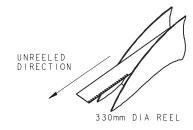
#### NOTES:

- 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.
- 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 35.



# PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





Code

(Page 24)

122

132

**Dimension A** 

0.47

0.37

Wire Gauge

22AWG

(Stranded Wire)

24AWG

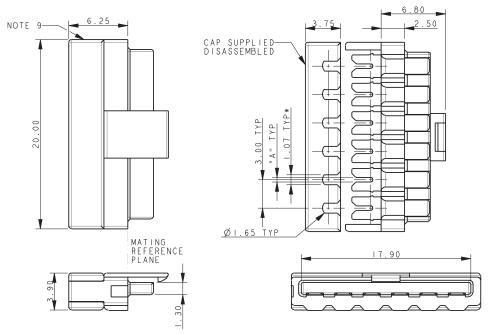
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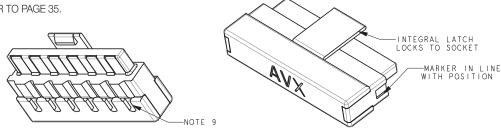
**Series 14-9159** 

#### PLUG-WIRED - 6 WAY WIRE STOP CAP

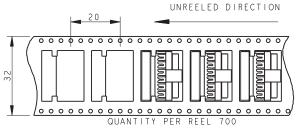


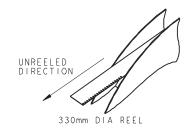
#### NOTES:

- 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.
- 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.
- 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)





Code

(Page 24)

122

**Dimension A** 

0.47

0.37

Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

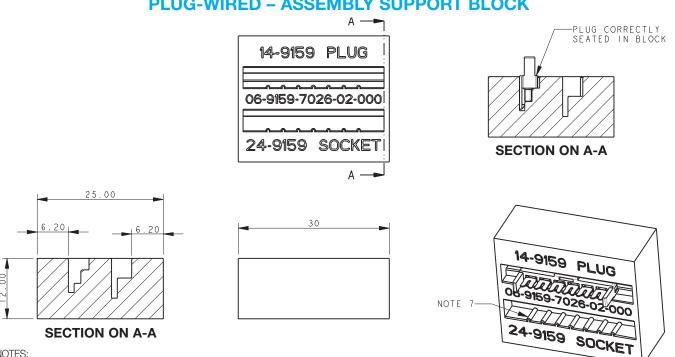


## **IDC Plug: WTB** Through Wire Cap/Wire Stop Cap



**Series 14-9159** 

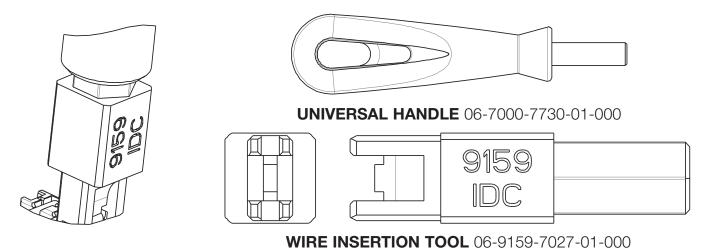
### PLUG-WIRED - ASSEMBLY SUPPORT BLOCK



#### NOTES:

- 1. BLOCK TO SUPPORT 9159 IDC WIRED CONNECTORS DURING ASSEMBLY OF CAP/WIRE.
- 2. PART NUMBER 06-9159-7026-01-000, MATERIAL ALUMINUM. 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 CONTACT/INSULATOR SUB-ASSEMBLY.

### PLUG-WIRED - WIRE INSERTION TOOL



- 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.

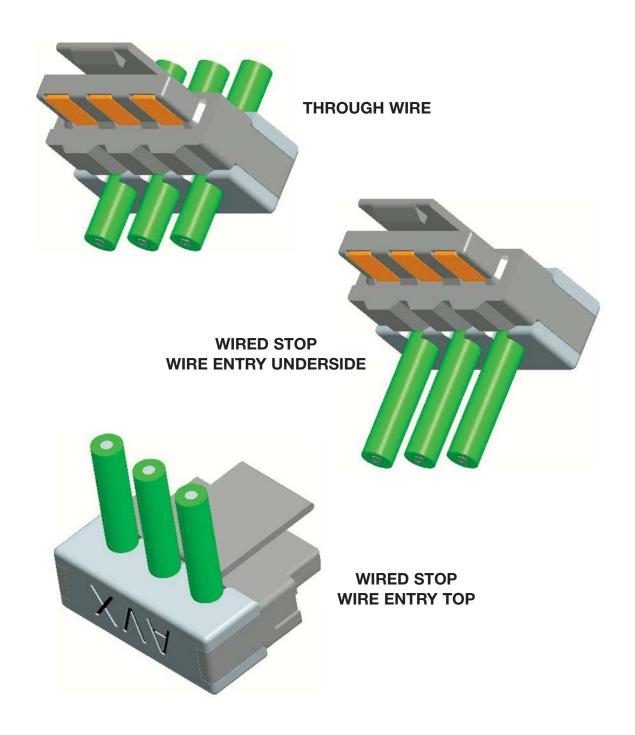


# IDC Plug: WTB Through Wire Cap/Wire Stop Cap



**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**

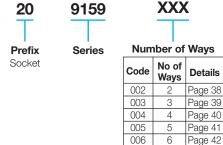
• Insulator Material: Nylon: VL94VO

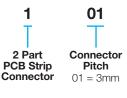
• Contact Material: BeCu / Phos Bronze

• Plating: Gold / Tin over Nickel

• Durability: 10 Cycles

### **HOW TO ORDER**







X





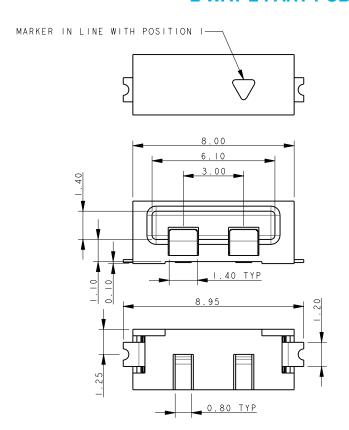
Certification: UL File #E90723

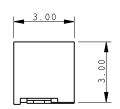


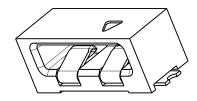
### **Series 20-9159**



# SOCKET 2 WAY 2 PART PCB STRIP CONNECTOR

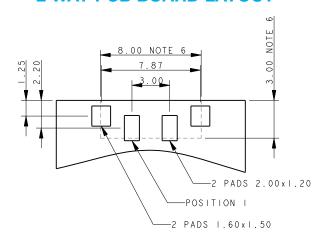


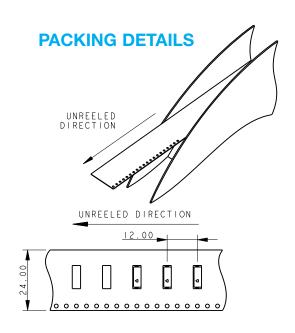




#### NOTES:

- 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.



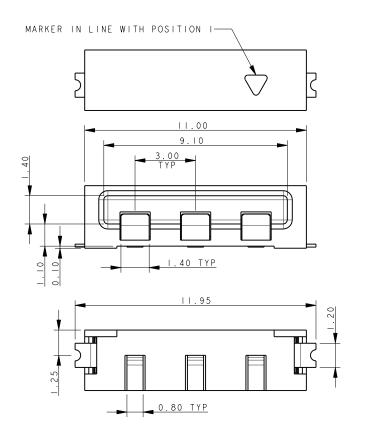


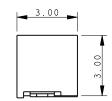


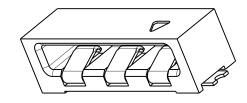
### **Series 20-9159**



# SOCKET 3 WAY 2 PART PCB STRIP CONNECTOR

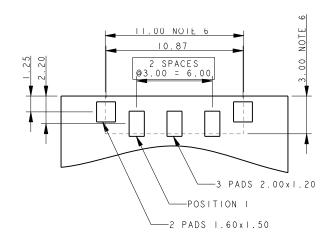


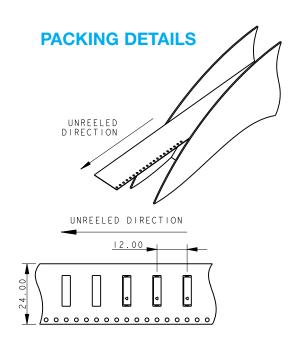




#### NOTES:

- 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.



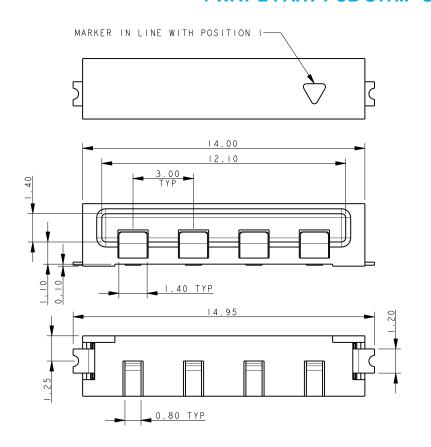


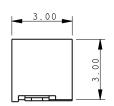


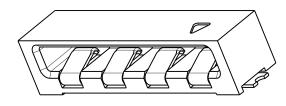
### **Series 20-9159**



# SOCKET 4 WAY 2 PART PCB STRIP CONNECTOR

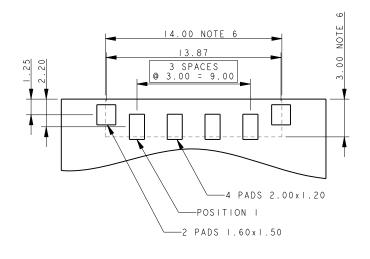


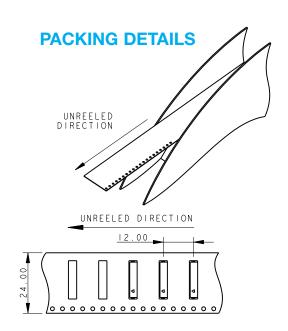




### NOTES:

- 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.



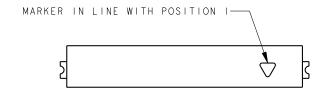


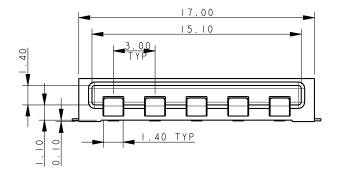


### **Series 20-9159**

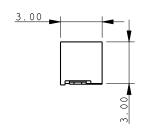


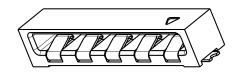
# SOCKET 5 WAY 2 PART PCB STRIP CONNECTOR





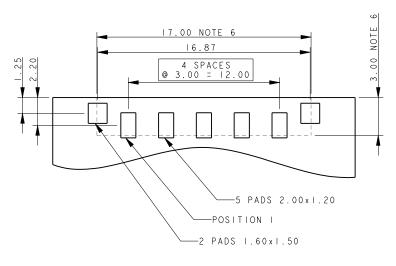


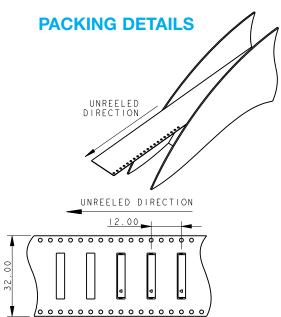




#### NOTES:

- 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.



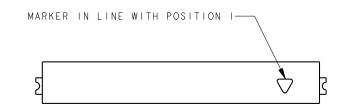


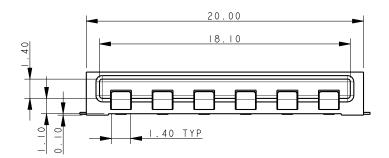


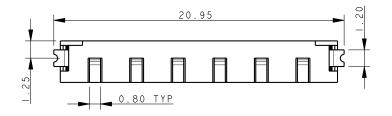
### **Series 20-9159**

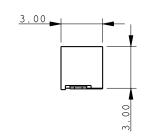


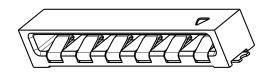
# SOCKET 6 WAY 2 PART PCB STRIP CONNECTOR





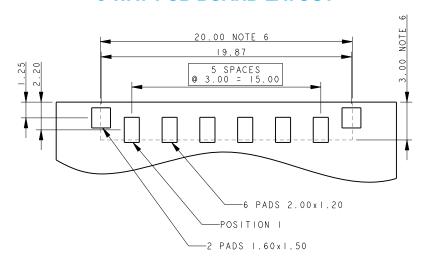


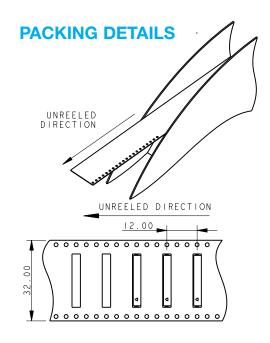




#### NOTES:

- 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 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 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

### **ENVIRONMENTAL**

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

#### **MECHANICAL**

• Insulator Material: Nylon: VL94VO

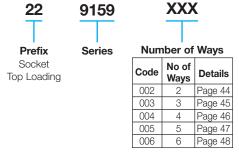
Contact Material: BeCu / Phos Bronze

16

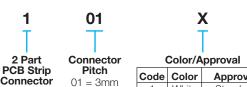
Plating: Gold / Tin over Nickel

• Durability: 10 Cycles

### **HOW TO ORDER**



Certification: UL File #E90723







**Bracket** 

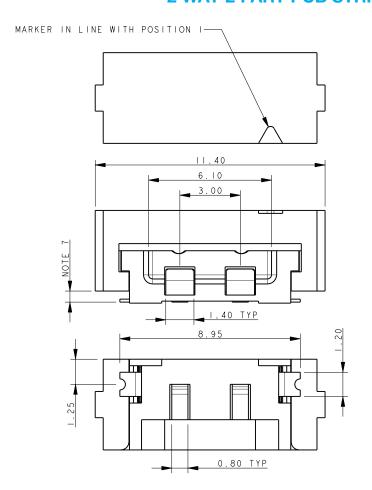
all over

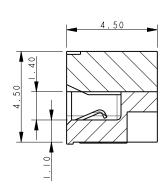


### **Series 22-9159**



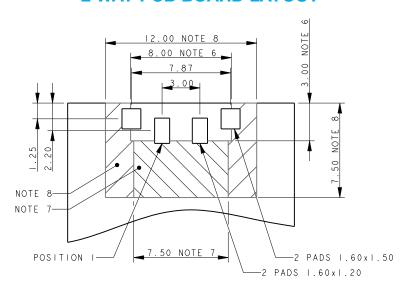
# SOCKET TOP LOADING 2 WAY 2 PART PCB STRIP CONNECTOR

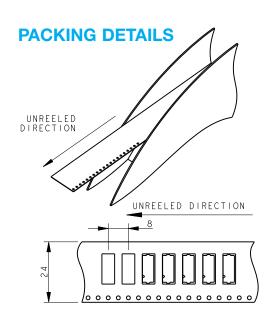




#### NOTES:

- 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 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.



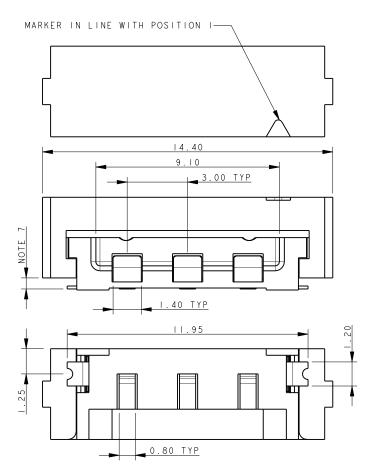


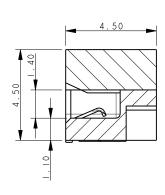


### **Series 22-9159**



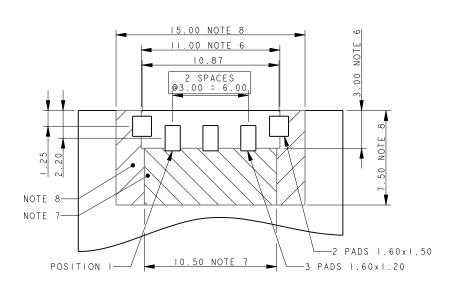
# SOCKET TOP LOADING 3 WAY 2 PART PCB STRIP CONNECTOR

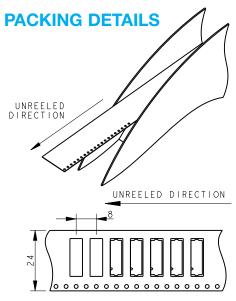




#### NOTES:

- 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 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.



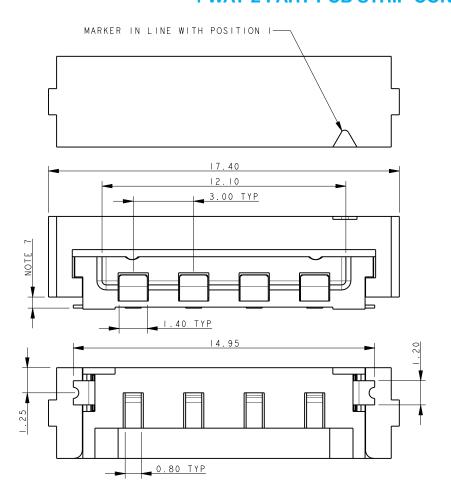


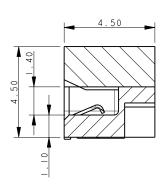


### **Series 22-9159**



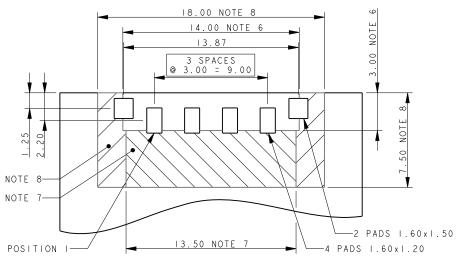
# SOCKET TOP LOADING 4 WAY 2 PART PCB STRIP CONNECTOR

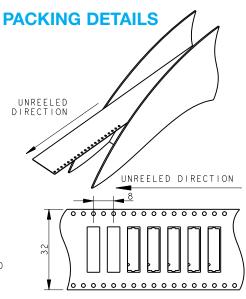




#### NOTES:

- 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 43.
- 4. CONTACT MATERIAL: COPPER ALLOY, GOLD OVER NICKEL.
- 5. BRACKETS: COPPER ALLOY, TIN PLATED.
- 6. OUTLINE OF CONNECTOR.
- 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.



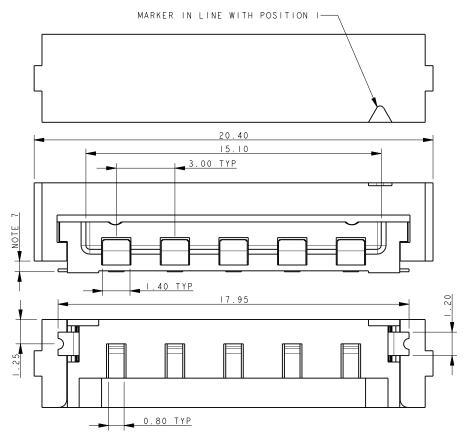


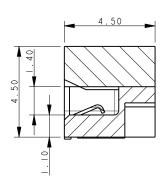


### **Series 22-9159**

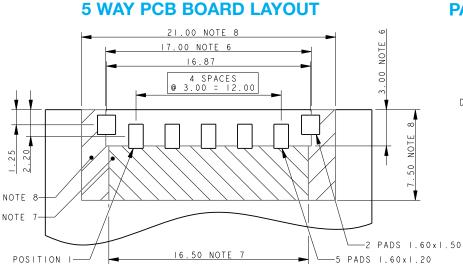


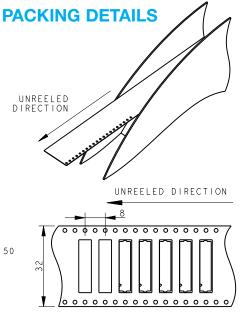
# SOCKET TOP LOADING 5 WAY 2 PART PCB STRIP CONNECTOR





- 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.



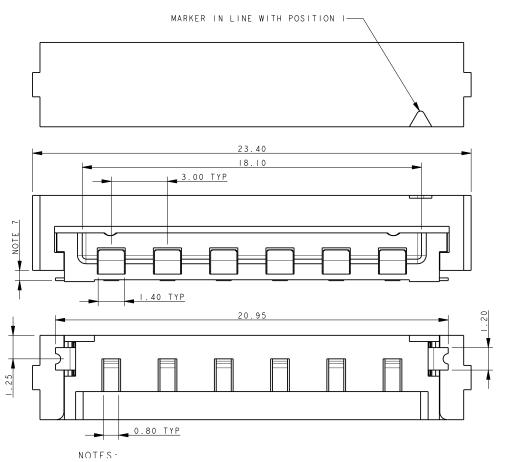


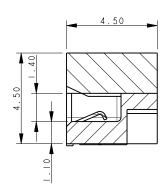


### **Series 22-9159**

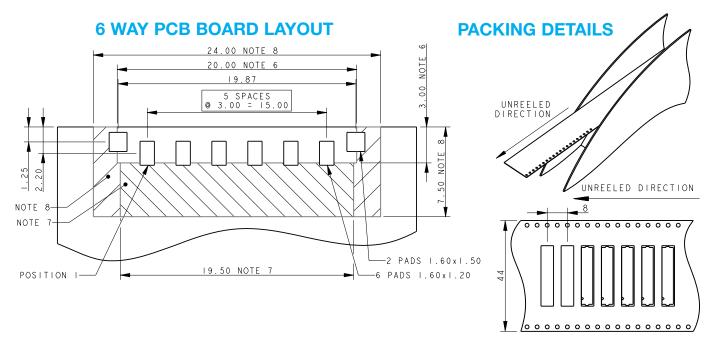


# SOCKET TOP LOADING 6 WAY 2 PART PCB STRIP CONNECTOR





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





### **Series 22-9159**



### **CONNECTOR ASSEMBLY**

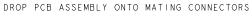






COVER SLID BACK











**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

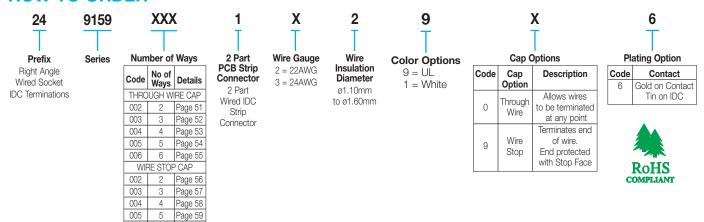
#### **ENVIRONMENTAL**

 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





Wire Insulation

Diameter

1.10 to 1.60

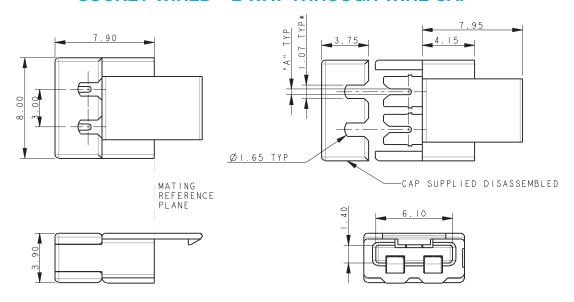
1.10 to 1.60

Dimension A

0.47

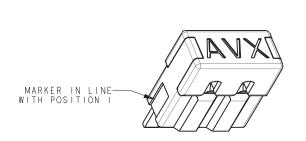
**Series 24-9159** 

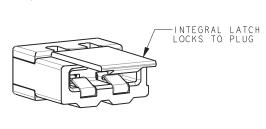
### **SOCKET WIRED - 2 WAY THROUGH WIRE CAP**



#### NOTES:

- 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.





(Page 50)

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Wire Gauge

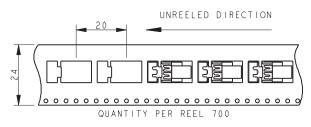
22AWG

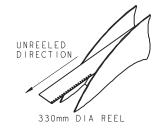
(Stranded Wire)

24AWG

(Standed Wire)

## PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)









Wire Insulation

Diameter

1.10 to 1.60

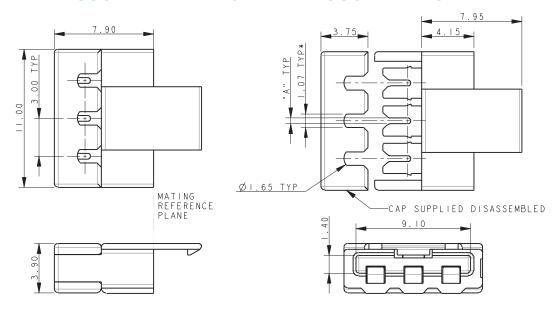
1.10 to 1.60

Dimension A

0.47

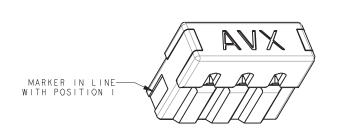
**Series 24-9159** 

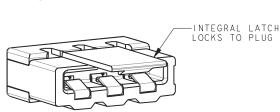
### **SOCKET WIRED - 3 WAY THROUGH WIRE CAP**



#### NOTES:

- 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.





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Wire Gauge

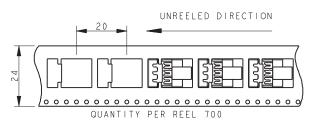
22AWG

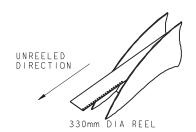
(Stranded Wire)

24AWG

(Standed Wire)

# PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)









Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

Dimension A

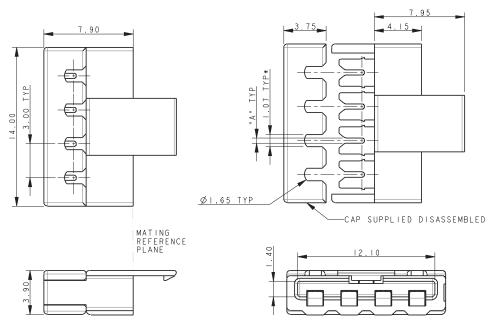
0.47

(Page 50)

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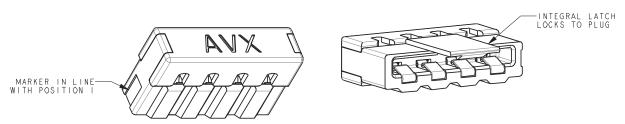
**Series 24-9159** 

### **SOCKET WIRED - 4 WAY THROUGH WIRE CAP**

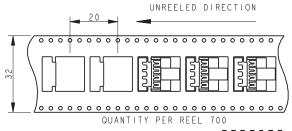


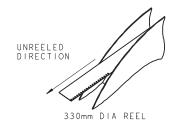
#### NOTES:

- 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)





Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)





Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

Dimension A

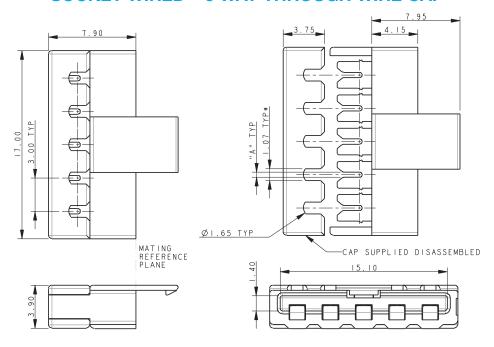
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122

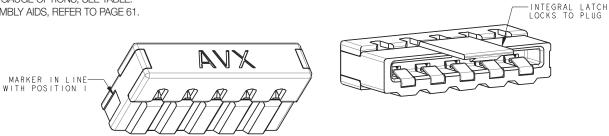
**Series 24-9159** 

### SOCKET WIRED - 5 WAY THROUGH WIRE CAP

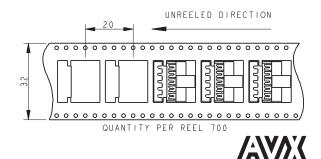


#### NOTES:

- 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)**





Wire Gauge

22AWG

(Stranded Wire)

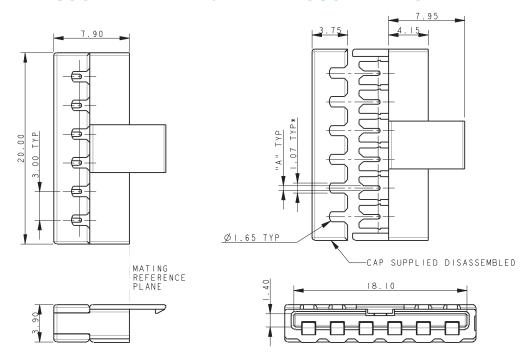
24AWG

(Standed Wire)



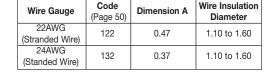
**Series 24-9159** 

### **SOCKET WIRED - 6 WAY THROUGH WIRE CAP**

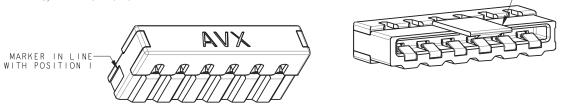


#### NOTES:

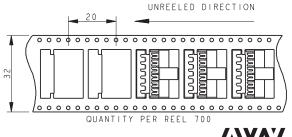
- FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
   FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. THROUGH WIRE CAP, FOR TERMINATION OF WIRE IN ANY POSITION.
- 3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE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

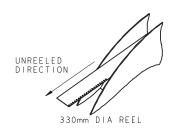


-INTEGRAL LATCH LOCKS TO PLUG



## PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)

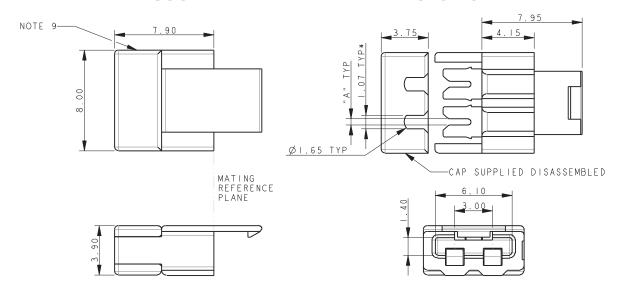






**Series 24-9159** 

### SOCKET-WIRED - 2 WAY WIRE STOP CAP

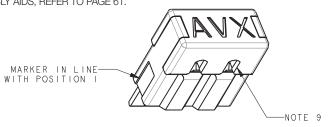


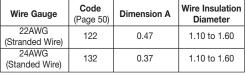
#### NOTES:

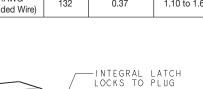
- FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
   FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
- CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
- 4. GENERAL TOLERANCE ±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.

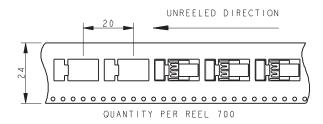
10. ASSEMBLY AIDS, REFER TO PAGE 61.

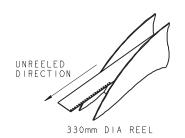






# PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)









Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

Dimension A

0.47

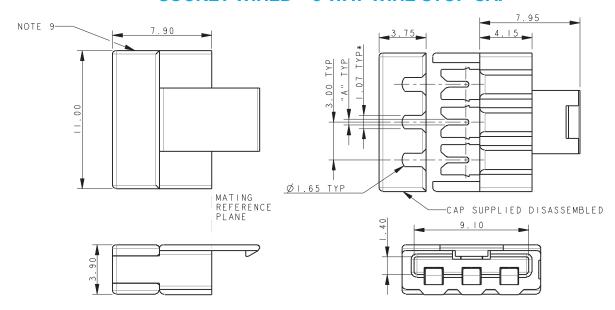
0.37

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122

**Series 24-9159** 

### **SOCKET-WIRED - 3 WAY WIRE STOP CAP**



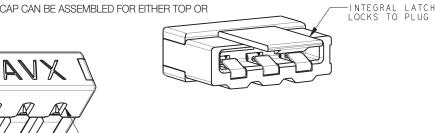
#### NOTES:

- 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.
- 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



Wire Gauge

22AWG

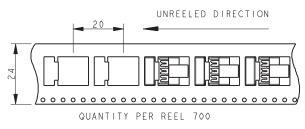
(Stranded Wire)

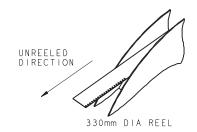
24AWG

(Standed Wire)

## PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)

NOTE 9



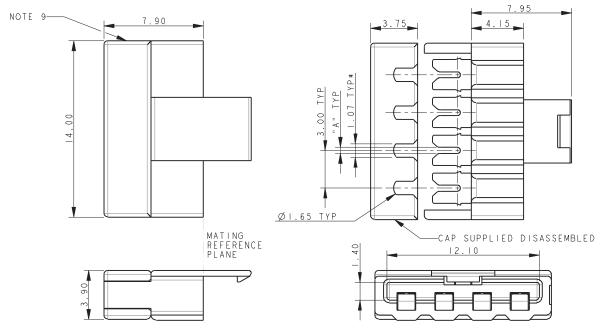






**Series 24-9159** 

### SOCKET-WIRED - 4 WAY WIRE STOP CAP



#### NOTES:

- 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.
- 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.

(Standed Wire) 192 0.37 1.10 to

Code

(Page 50)

122

Dimension A

0.47

Wire Gauge

22AWG

(Stranded Wire)

24AWG

Wire Insulation

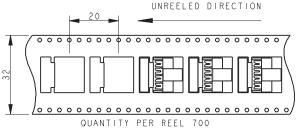
Diameter

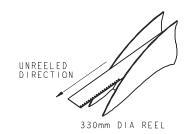
1.10 to 1.60

1.10 to 1.60



# PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)

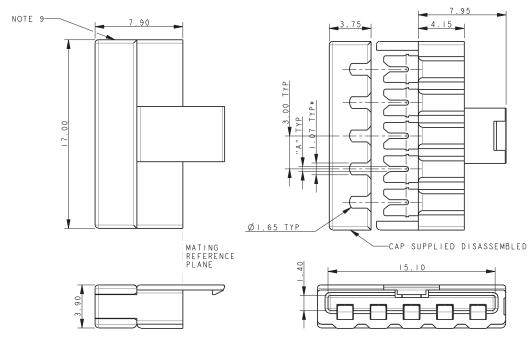






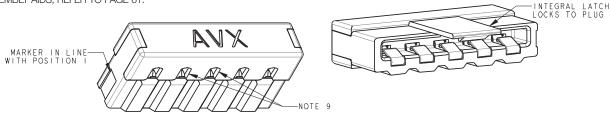
**Series 24-9159** 

### **SOCKET-WIRED - 5 WAY WIRE STOP CAP**

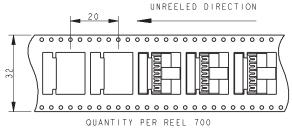


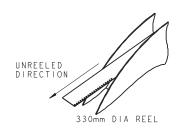
#### NOTES

- 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.
- 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.



# PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





Code

(Page 50)

122

Dimension A

0.47

Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)



Wire Insulation

Diameter

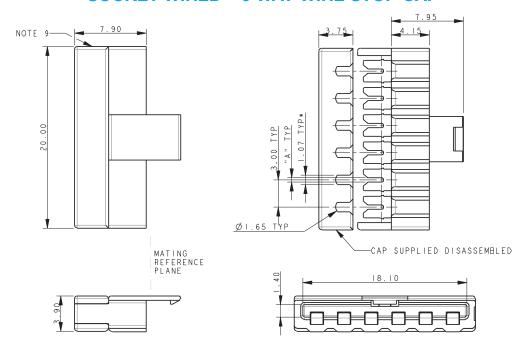
1.10 to 1.60

1.10 to 1.60



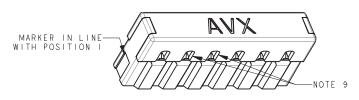
**Series 24-9159** 

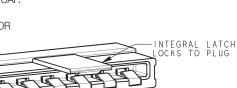
### **SOCKET-WIRED - 6 WAY WIRE STOP CAP**



#### NOTES:

- 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.
- 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.





Code

(Page 50)

122

Dimension A

0.47

Wire Gauge

(Stranded Wire)

24AWG

(Standed Wire)

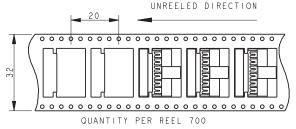
Wire Insulation

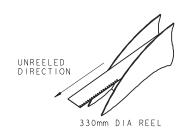
Diameter

1.10 to 1.60

1.10 to 1.60

## PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)



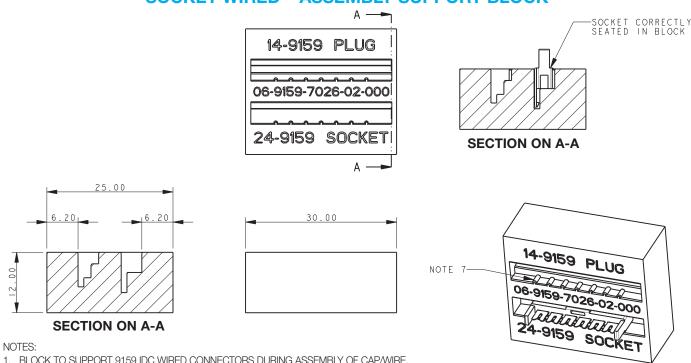






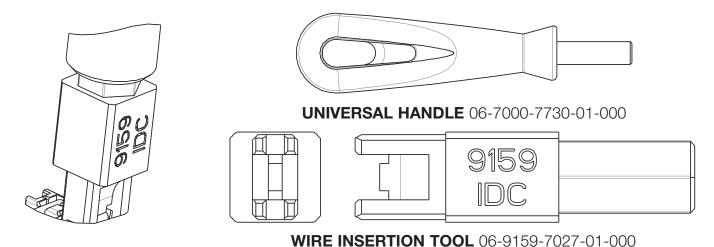
**Series 24-9159** 

### SOCKET-WIRED - ASSEMBLY SUPPORT BLOCK



- 1. BLOCK TO SUPPORT 9159 IDC WIRED CONNECTORS DURING ASSEMBLY OF CAP/WIRE.
- 2. PART NUMBER 06-9159-7026-01-000, MATERIAL ALUMINUM. 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 CONTACT/INSULATOR SUB-ASSEMBLY.

### **SOCKET-WIRED - WIRE INSERTION TOOL**



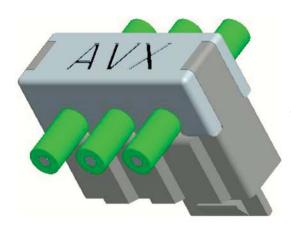
- 1. TOOL 06-9159-7027-01-000 TO INSERT WIRES INTO CAP.
- 2. FOR USE WITH UNIVERSAL HANDLE 06-7000-7720-01-000.
- 3. CAN BE USED WITH BOTH THROUGH WIRE AND WIRE STOP CAPS.
- 4. REFER TO APPLICATION NOTES 201-01-123 FOR FURTHER DETAILS.





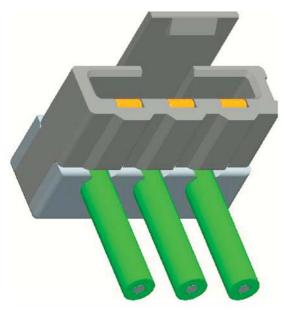
**Series 24-9159** 

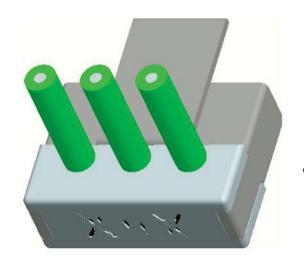
### **SOCKET-WIRED - ASSEMBLY**



THROUGH WIRE







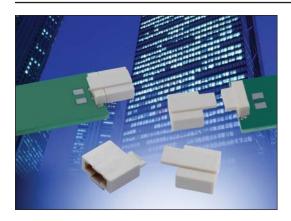
WIRED STOP
WIRE ENTRY TOP



### **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

### **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

### **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**

58 9159 002 000 006

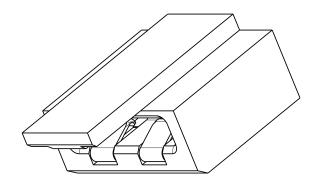
Certification: UL File #E90723

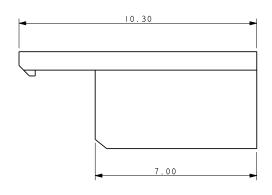


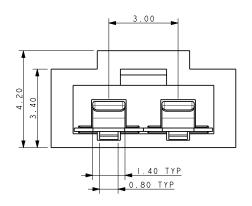
## **SSL – Shorting Socket**

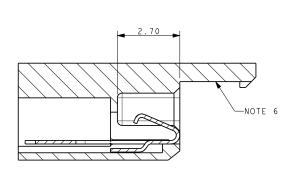
### **Series 58-9159**

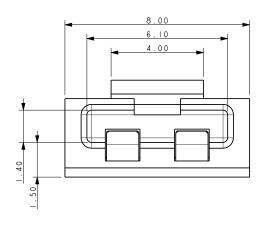




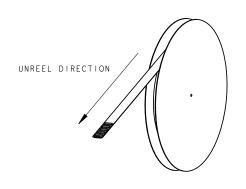


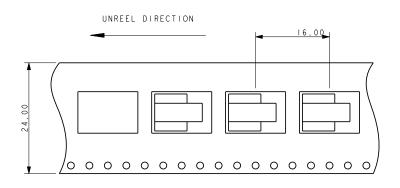






### **PACKING DETAILS**













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

### **HOW TO ORDER**



Contact Description
401 = Plug - SMT
402 = Socket - SMT

Packaging Options
006 = Gold in Contact Area

pages 66 and 67

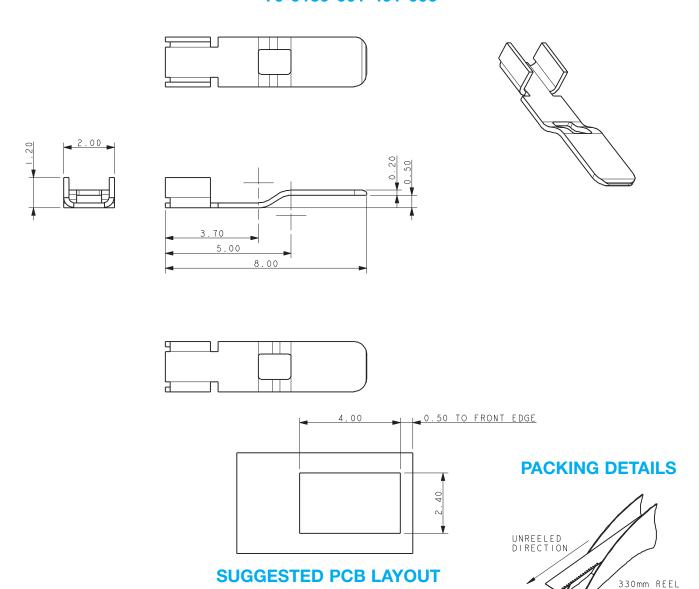




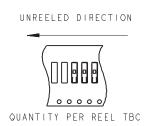




### 70-9159-001-401-006



- 1. 9159 SINGLE CONTACT, SMT MOUNT, PLUG CONTACT.
- 2. TO MATE WITH 70-9159-001-402-006 SOCKET CONTACT, REFER TO PAGE 67.
- 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 IN CONTACT AREA. TIN ON SOLDER TAIL.
- 6. GENERAL TOLERANCE ±0.20 UNLESS SPECIFIED.
- 7. PACKAGING IN TAPE AND REEL, QUANTITY PER REEL 4500.



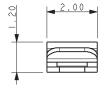


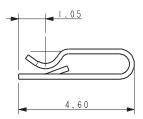




### 70-9159-001-402-006

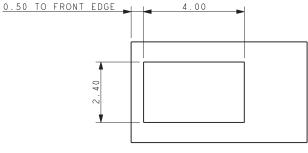






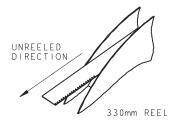




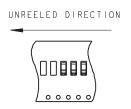


### SUGGESTED PCB LAYOUT

### **PACKING DETAILS**



- 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.

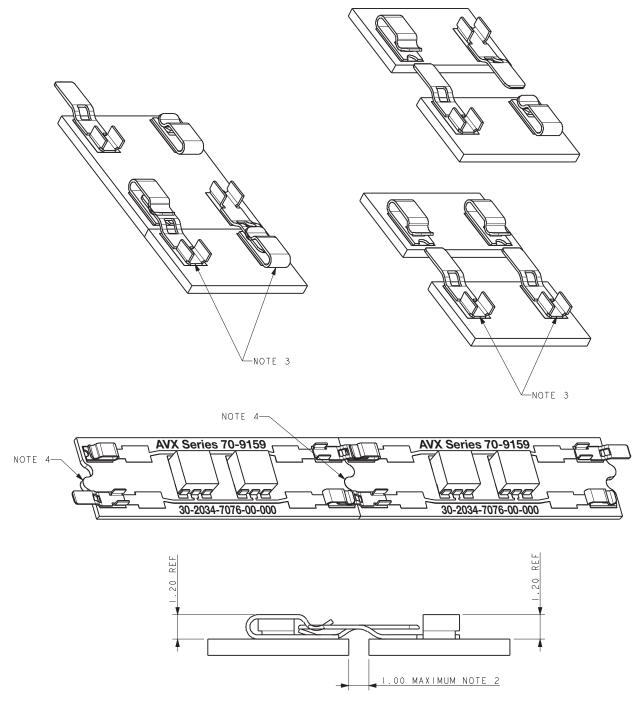








### 70-9159-001-40X-006 BOARD TO BOARD ASSEMBLY



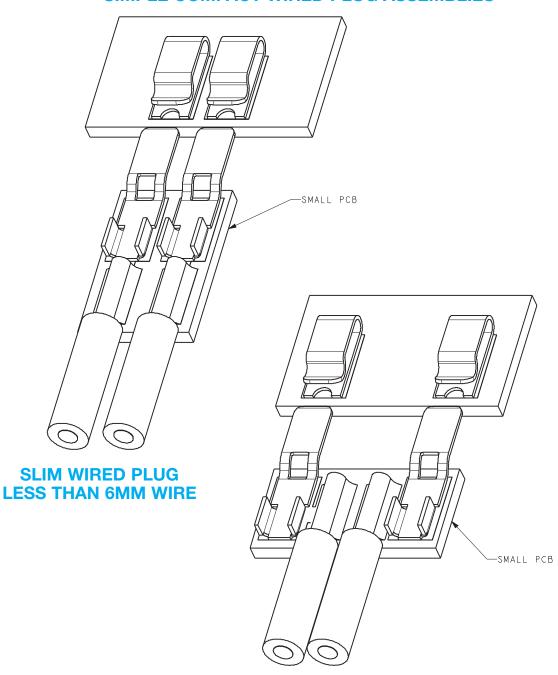
- 1. SIMPLE BOARD TO BOARD ASSEMBLY
- 2. CONTACTS WILL COPE WITH A GAP BETWEEN BOARDS UP TO 1.00MM.
- 3. ALL MATING COMBINATIONS PERMISSIBLE, FOR EXAMBLE BY USING 1 PLUG AND 1 SOCKET ON BOARD E3ND THE BOARDS ARE REVERSABLE.
- 4. TO AID ALIGNMENT BOARDS MAY BE KEYED TOGETHER.







### 70-9159-001-40X-006 SIMPLE COMPACT WIRED PLUG ASSEMBLIES



SHORT WIRED PLUG LESS THAN 5MM DEEP

- 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

### **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

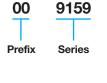
### **ENVIRONMENTAL**

• 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**





004

005

XXX

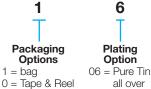














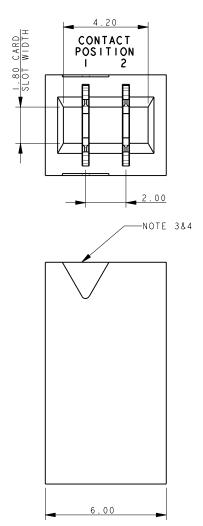
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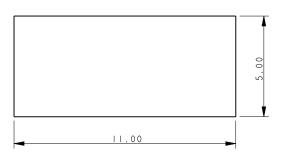


#### **Series 00-9159**



#### 2 WAY SINGLE PART PCB STRIP CONNECTOR



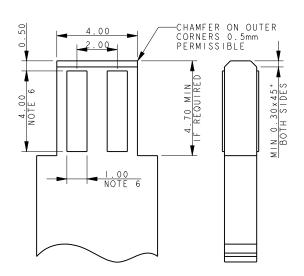


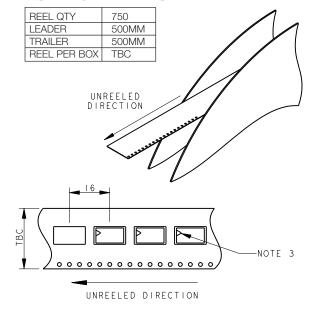
#### NOTES:

- 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.

#### 2 WAY PCB BOARD LAYOUT

THICKNESS  $1.60 \pm 0.15$ 



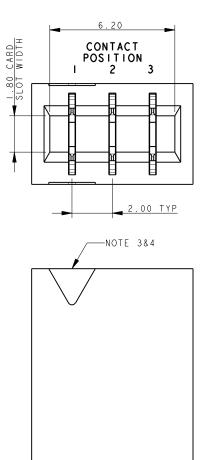


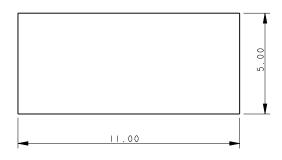


#### **Series 00-9159**



#### 3 WAY SINGLE PART PCB STRIP CONNECTOR





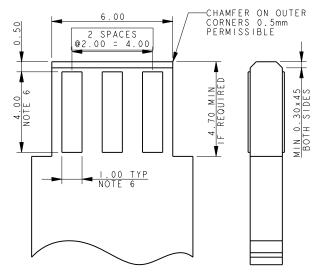
#### NOTES:

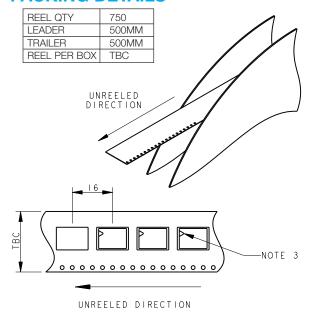
- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-118.
- 2. DIMENSIONS ARE REFERENCE DIMENSIONS UNLESS TOLERANCED.
- 3. ARROW TO INDICATE CONTACT POSITION 1.
- 4. INSULATOR MATERIAL: NYLON 46, UL94 HB, COLOR SEE PAGE 70.
- 5. CONTACT MATERIAL: COPPER ALLOY, TIN PLATED ALL OVER.
- 6. PCB PAD, TIN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

#### **3 WAY PCB BOARD LAYOUT**

THICKNESS 1.60 ± 0.15

8.00



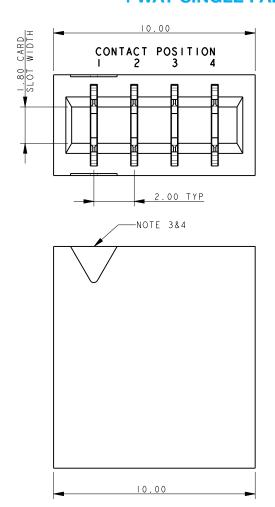


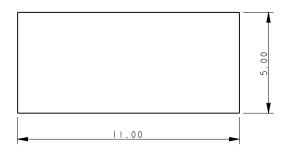


#### **Series 00-9159**



#### **4 WAY SINGLE PART PCB STRIP CONNECTOR**

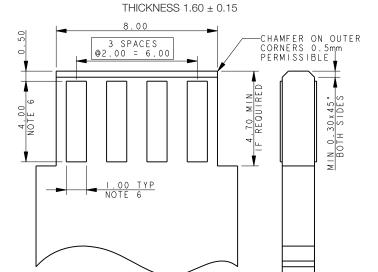


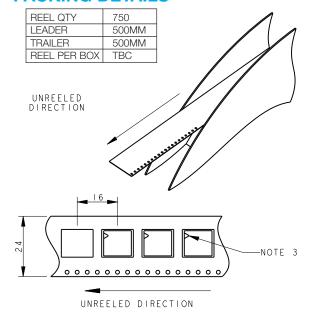


#### NOTES:

- 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.

#### **4 WAY PCB BOARD LAYOUT**



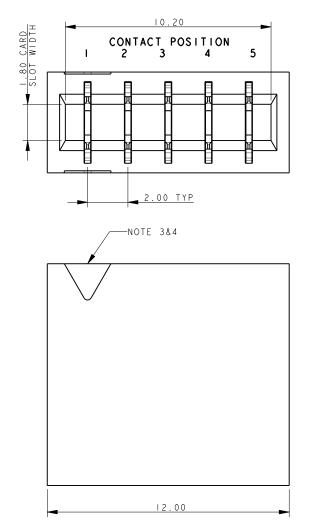


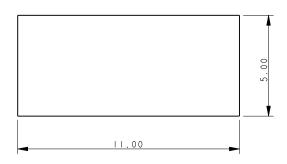


#### **Series 00-9159**



#### **5 WAY SINGLE PART PCB STRIP CONNECTOR**

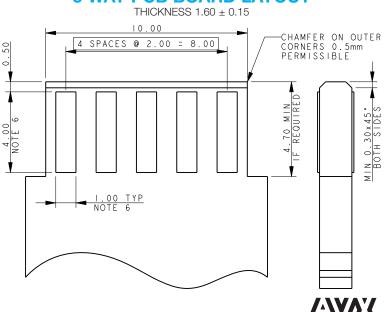


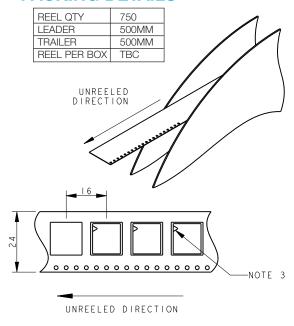


#### NOTES:

- 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.

#### **5 WAY PCB BOARD LAYOUT**











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

**00X** 

- 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

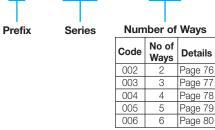
#### **MECHANICAL**

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

#### **HOW TO ORDER**

9159

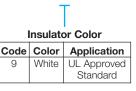
00







501



X



06



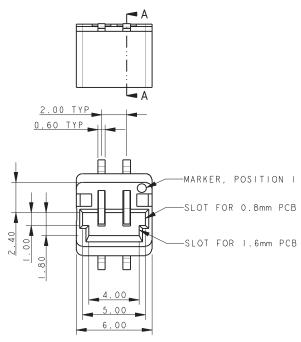
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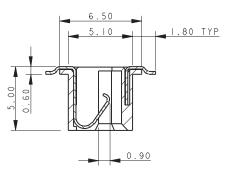




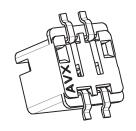


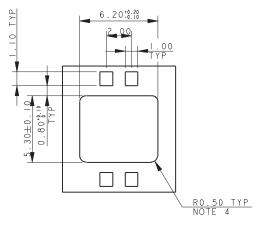
#### 2 WAY THROUGH THE BOARD MATING EDGE CARD CONNECTOR





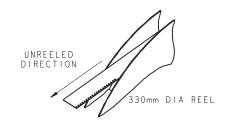
**SECTION A-A** 

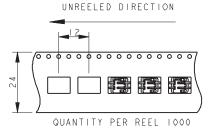




#### **MOUNTING PCB** (TOP SIDE)

- 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.



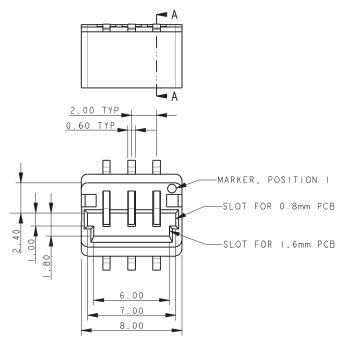


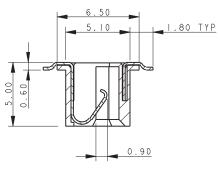




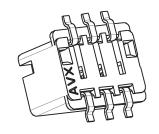


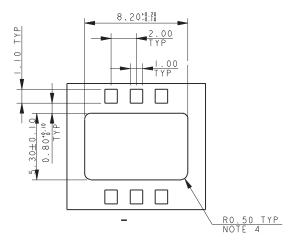
#### 3 WAY THROUGH THE BOARD MATING EDGE CARD CONNECTOR





**SECTION A-A** 



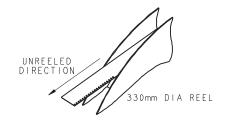


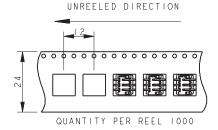
#### MOUNTING PCB

#### (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.



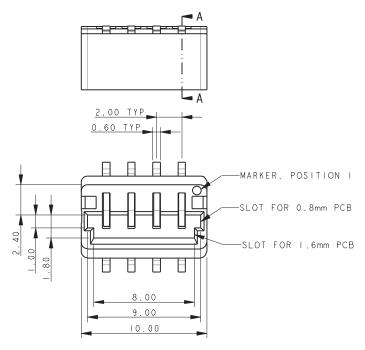


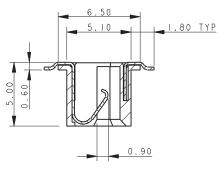




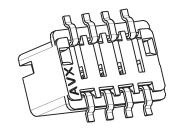


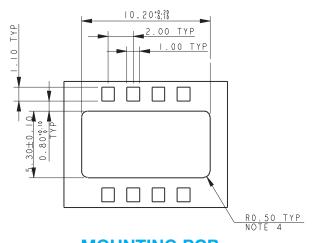
#### 4 WAY THROUGH THE BOARD MATING EDGE CARD CONNECTOR





**SECTION A-A** 

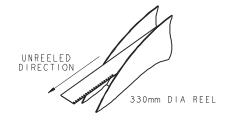


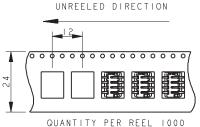


#### MOUNTING PCB (TOP SIDE)

#### NOTES:

- 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.



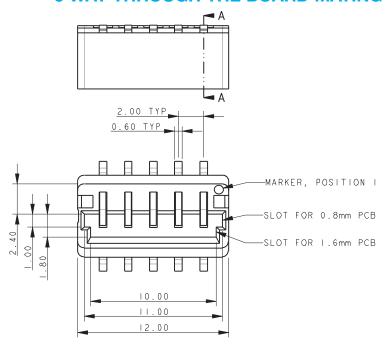


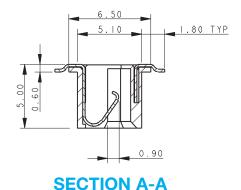


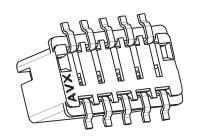


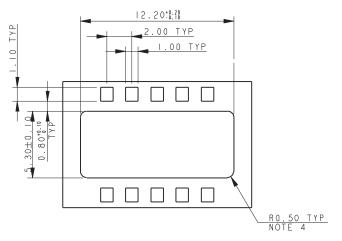


#### 5 WAY THROUGH THE BOARD MATING EDGE CARD CONNECTOR





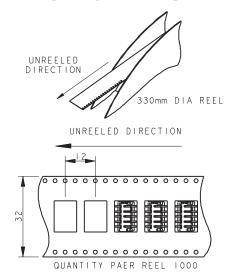




#### MOUNTING PCB (TOP SIDE)

#### NOTES:

- 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.

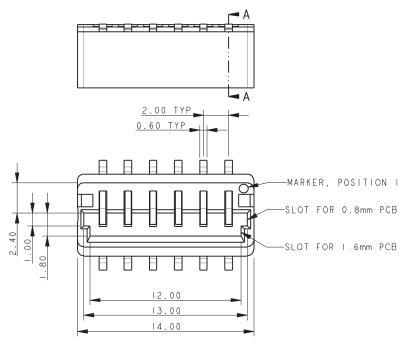


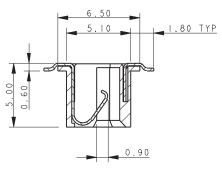




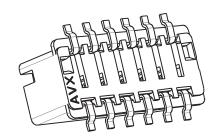


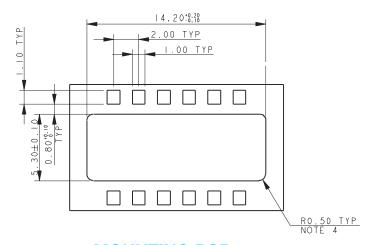
#### 6 WAY THROUGH THE BOARD MATING EDGE CARD CONNECTOR





**SECTION A-A** 

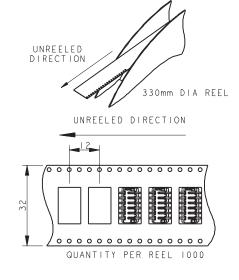




#### MOUNTING PCB (TOP SIDE)

#### NOTES:

- 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.

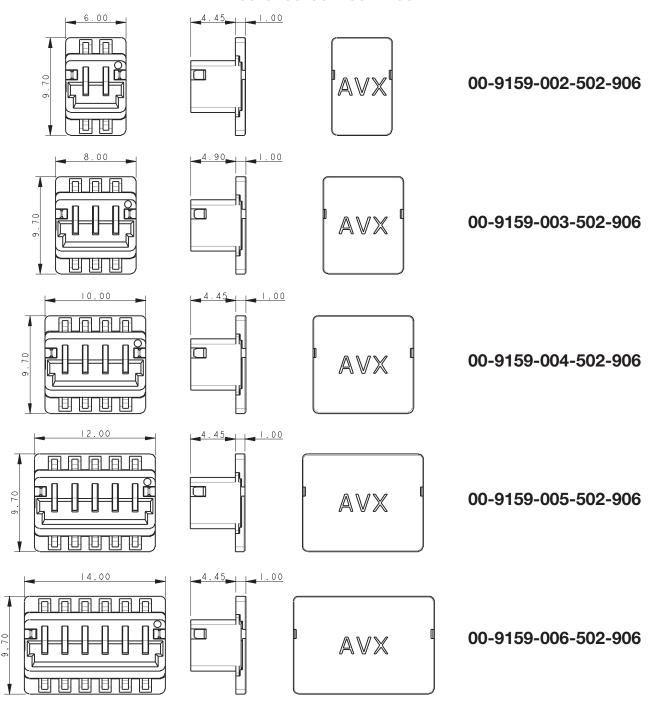




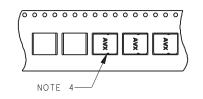


**Series 00-9159** 

## THROUGH THE BOARD MATING EDGE CARD CONNECTOR – WITH CAP 00-9159-00X-502-X06



- 1. 00-9159-00X-501-X06 WITH CAP SUPPLIED FITTED.
- 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.

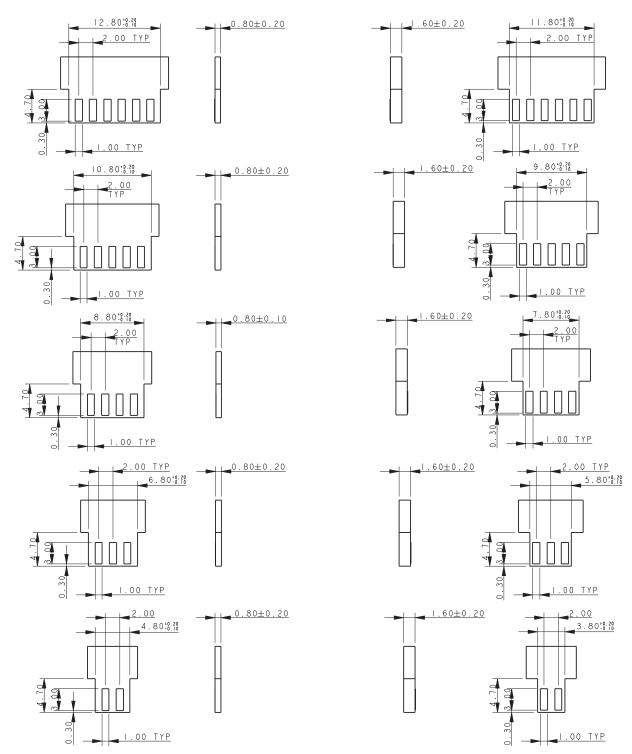






**Series 00-9159** 

## THROUGH THE BOARD MATING EDGE CARD CONNECTOR – MATING PCB MATING PCB – 0.8MM PCB MATING PCB – 1.6MM PCB



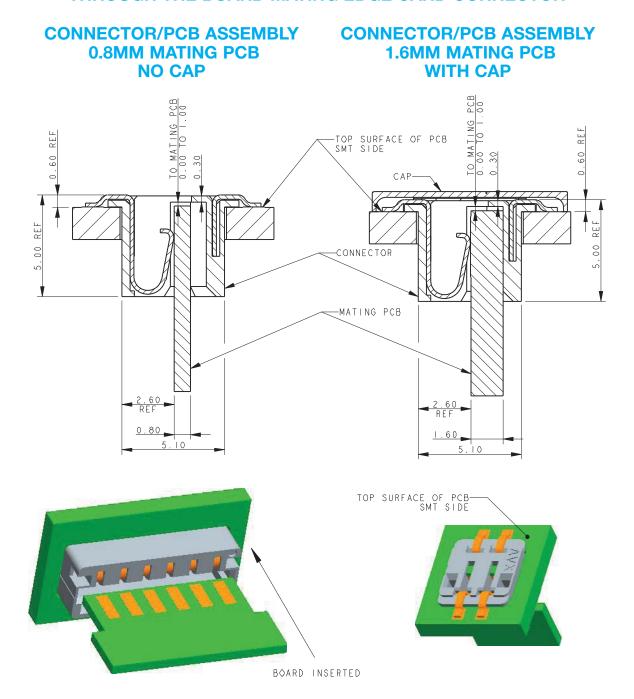
- 1. CORRECT DIMENSIONS FOR EITHER 0.80MM OR F1.60MM PCB THICKENSS MUST BE USED.
- 2. THICKNESS OF PCB INCLUDES ALL LAYERS INCLUDING COPPER AND PLATING.
- 3. PADS TO BE PLATED GOLD OVER NICKEL UNDERCOAT.
- 4. GENERAL TOLERANCE ±0.10 UNLESS STATED.





**Series 00-9159** 

#### THROUGH THE BOARD MATING EDGE CARD CONNECTOR



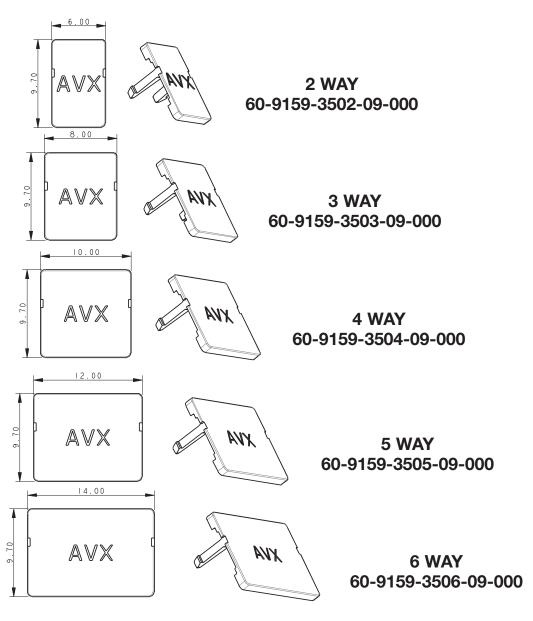
- 1. THROUGH THE BOARD EDGE CARD CONNECTOR.
- 2. FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK. REFER TO PAGE 81 FOR MATING PCB DETAILS.
- 3. CONNECTOR TOP MOUNTING ON PCB.
- 4. PAD DETAILS ON THE MATING PCB ALLOW CONTACT TO BE MADE IN ANY POSITION FROM THE STOP FACE UP TO 1MM FROM THE STOP FACE.
- 5. GENERAL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





#### **Series 00-9159**

#### **ACCESSORY - PROTECTING CAP**

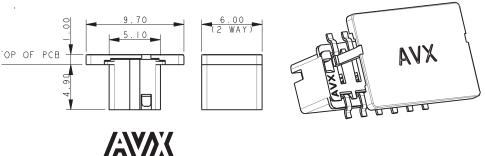


#### NOTES:

84

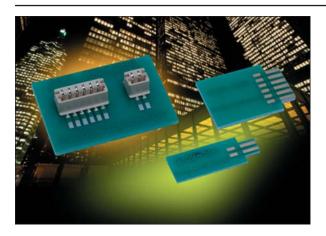
- 1. PROTECTING CAP, ACCESSORY, NOT SUPPLIED WITH CONNECTOR.
- 2. CLIPS TO TOP OF CONNECTOR TO COVE ALL METAL COMPONENTS.
- 3. MATERIAL: PA4T, GLASS FILLED, HALOGEN FREE, UL94 V-0. COLOR CODE REFER TO PAGE 70, "X" IN PART NUMBER.
- 4. SUPPLIED IN BAGS OF 100 PIECES.
- 5. GENERAL TOLERANCE ±0.20.
- 6. UL REFERENCE E90723.

#### **ASSEMBLED CAP**









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

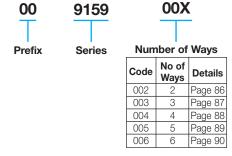
#### **ENVIRONMENTAL**

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

#### **MECHANICAL**

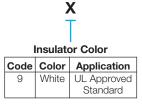
- Insulator Material: Nylon UL94VO
- Contact Material: Beryllium Copper
- Plating: Gold / Tin over Nickel
- Durability 10 Cycles

#### **HOW TO ORDER**



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

551







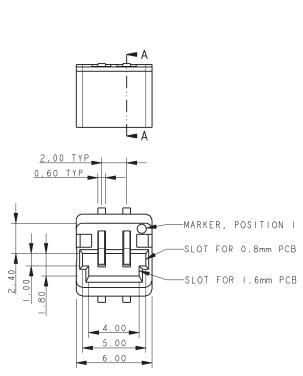
Certification: UL File #E90723

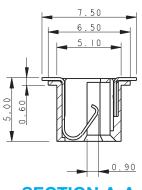




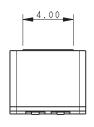


#### **2 WAY TOP MOUNTING EDGE CARD CONNECTOR**

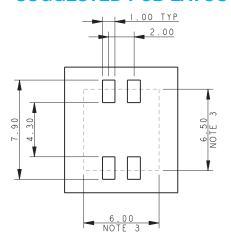


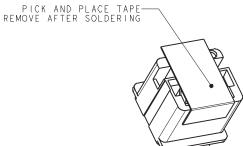




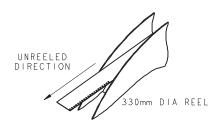


#### SUGGESTED PCB LAYOUT





#### **PACKING DETAILS**



# UNREELED DIRECTION

QUANTITY PER REEL 900

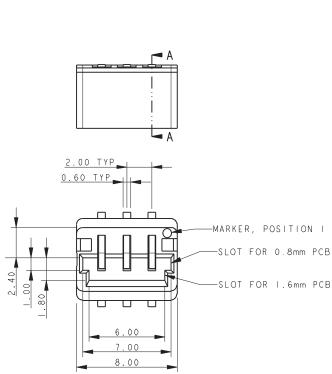
- 5159-500 SERIES TOP MOUNTING EDGE CARD CONNECTOR, 2 WAY. FOR FURTHER DETAILS REFER TO PRODUCT SPECIFICATION 201-01-136 AND APPLICATION NOTES 201-01-137.
- FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK PCB. (DETAILS SAME AS 9159-500), REFER TO PAGE 91.
- 3. CONNECTOR OUTLINE.
- 4. ALL DIMENSIONS ±0.20 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).

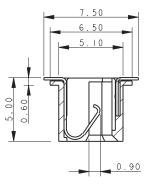




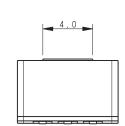


#### 3 WAY TOP MOUNTING EDGE CARD CONNECTOR

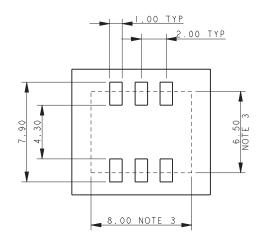


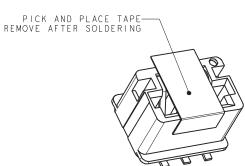


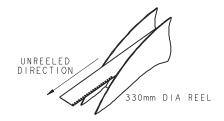
**SECTION A-A** 



#### SUGGESTED PCB LAYOUT







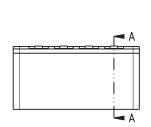
- 5159-500 SERIES TOP MOUNTING EDGE CARD CONNECTOR, 3 WAY. FOR FURTHER DETAILS REFER TO PRODUCT SPECIFICATION 201-01-136 AND APPLICATION NOTES 201-01-137.
- FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK PCB. (DETAILS SAME AS 9159-500), REFER TO PAGE 91.
- 3. CONNECTOR OUTLINE.
- 4. ALL DIMENSIONS  $\pm 0.20$  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).

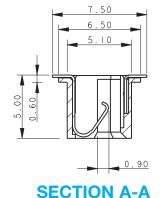


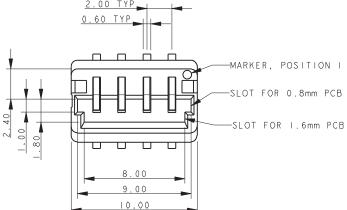
#### **Series 00-9159**

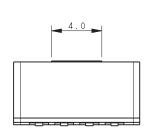


#### **4 WAY TOP MOUNTING EDGE CARD CONNECTOR**

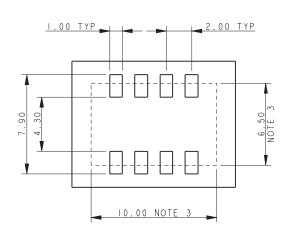


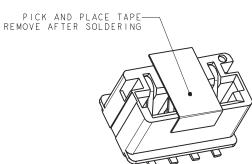


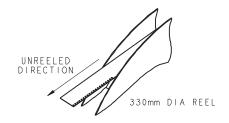




#### SUGGESTED PCB LAYOUT

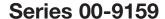






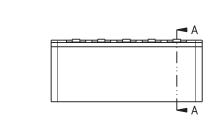
- 5159-500 SERIES TOP MOUNTING EDGE CARD CONNECTOR, 4 WAY. FOR FURTHER DETAILS REFER TO PRODUCT SPECIFICATION 201-01-136 AND APPLICATION NOTES 201-01-137.
- FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK PCB. (DETAILS SAME AS 9159-500), REFER TO PAGE 91.
- 3. CONNECTOR OUTLINE.
- 4. ALL DIMENSIONS  $\pm 0.20$  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).

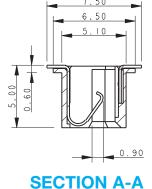


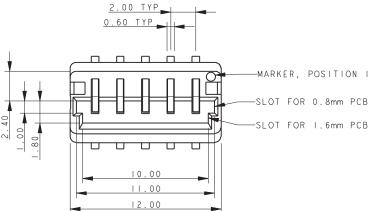


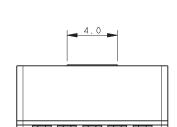


#### **5 WAY TOP MOUNTING EDGE CARD CONNECTOR**

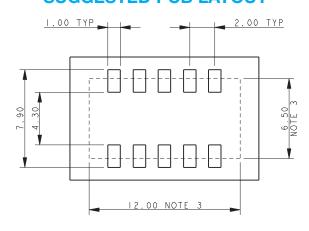


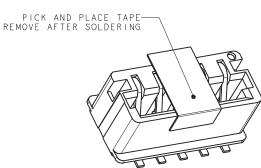






#### SUGGESTED PCB LAYOUT





- UNREELED DIRECTION

  UNREELED DIRECTION

  12
- - QUANTITY PER REEL 900

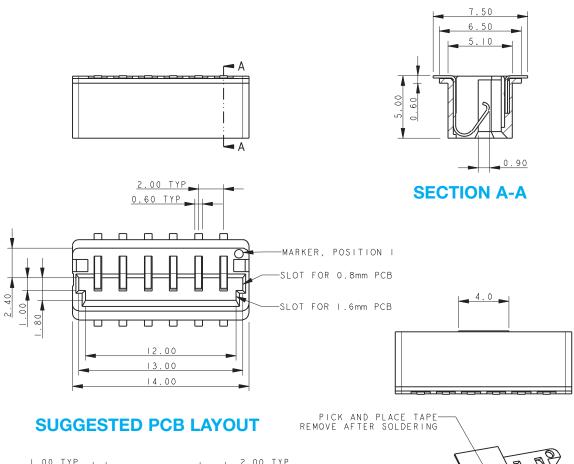
- 5159-500 SERIES TOP MOUNTING EDGE CARD CONNECTOR, 5 WAY. FOR FURTHER DETAILS REFER TO PRODUCT SPECIFICATION 201-01-136 AND APPLICATION NOTES 201-01-137.
- FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK PCB. (DETAILS SAME AS 9159-500), REFER TO PAGE 91.
- 3. CONNECTOR OUTLINE.
- 4. ALL DIMENSIONS ±0.20 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).

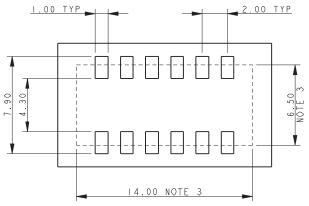


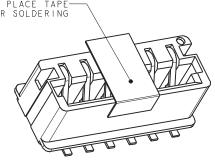




#### **6 WAY TOP MOUNTING EDGE CARD CONNECTOR**

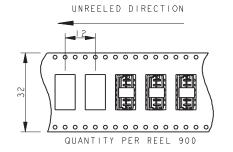






- 5159-500 SERIES TOP MOUNTING EDGE CARD CONNECTOR, 6 WAY. FOR FURTHER DETAILS
  REFER TO PRODUCT SPECIFICATION 201-01-136 AND APPLICATION NOTES 201-01-137.
   FOR MATING PCB EITHER 0.8MM OR 1.6MM THICK PCB. (DETAILS SAME AS 9159-500),
- REFER TO PAGE 91.
  3. CONNECTOR OUTLINE.
- 4. ALL DIMENSIONS ±0.20 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).



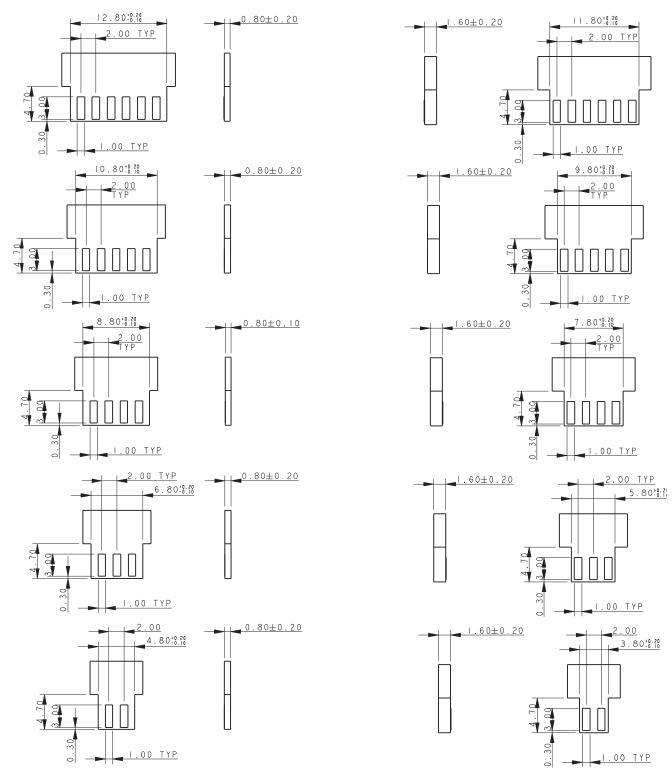








#### **TOP MOUNTING EDGE CARD CONNECTOR - MATING PCB**



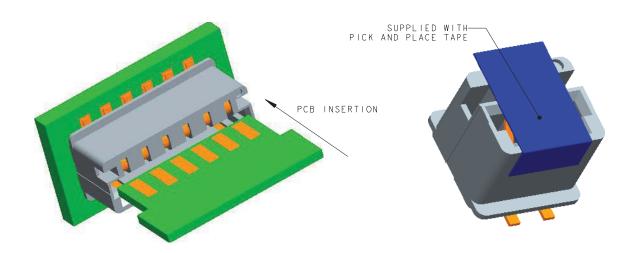
- 1. CORRECT DIMENSION FOR EITHER 0.80MM OR 1.60MM PCB THICKNESS MUST BE USED.
- 2. THICKNESS OF PCB INCLUDES ALL LAYERS INCLUDING COPPER AND PLATING.
- 3. PADS TO BE PLATED GOLD OVER NICKEL UNDERCOAT.
- 4. GENERAL TOLERANCE ±0.10 UNLESS STATED.





#### TOP MOUNTING EDGE CARD CONNECTOR ASSEMBLY

# CONNECTOR/PCB ASSEMBLY 0.8mm MATING PCB 1.6mm MATING PCB 5.10 0.80 2.60 REF 0.00 NECTOR/PCB ASSEMBLY 1.6mm MATING PCB



- 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**

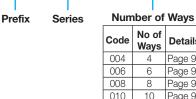
• Operating Temperature: -40°C to +125°C

#### **MECHANICAL**

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

#### **HOW TO ORDER** 9159

00



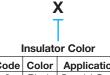
Details Page 94 Page 95 Page 96 Page 97

XXX



**PCB Thickness** 61 = Open Ended **PCB Tickness** 1.6-±0.10

61



Code Color Application Black | Special Order 8 White Standard



**Packaging** 1 = bag



Option 06 = Pure Tin all over



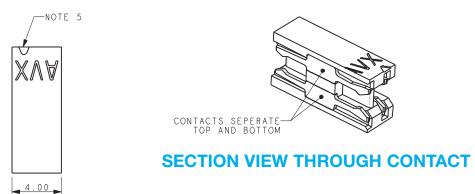


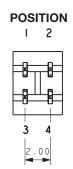


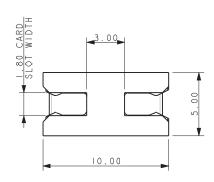




#### **4 WAY SINGLE PART PCB STRIP CONNECTOR - OPEN ENDED**



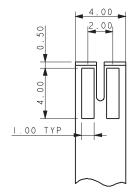


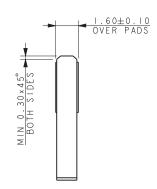


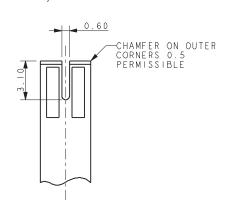
#### NOTES:

- 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  $\pm 0.20$ 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





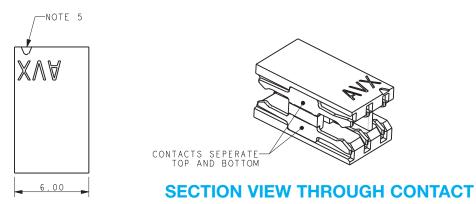


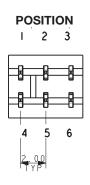


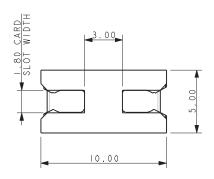
#### **Series 00-9159**



#### **6 WAY SINGLE PART PCB STRIP CONNECTOR - OPEN ENDED**



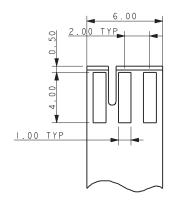


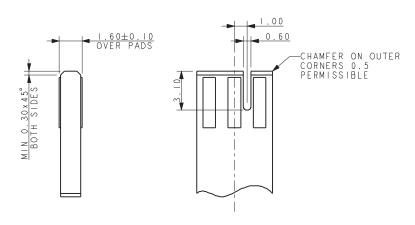


#### NOTES:

- 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  $\pm 0.20$ 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



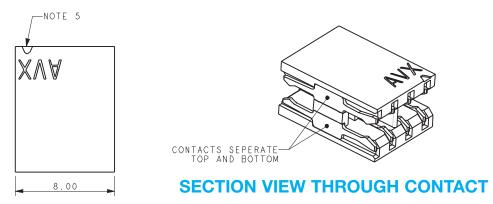


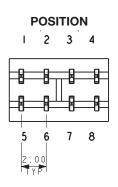


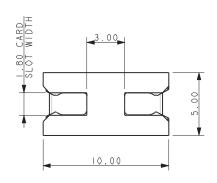




#### **8 WAY SINGLE PART PCB STRIP CONNECTOR - OPEN ENDED**



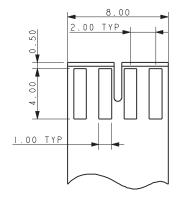


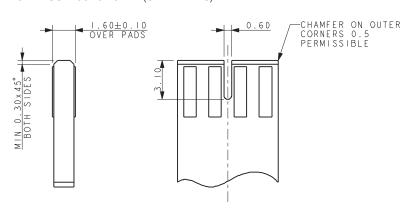


#### NOTES:

- 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  $\pm 0.20$ 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





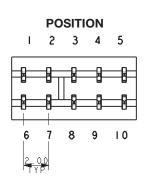


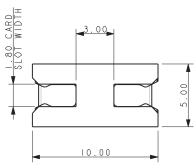




#### 10 WAY SINGLE PART PCB STRIP CONNECTOR - OPEN ENDED



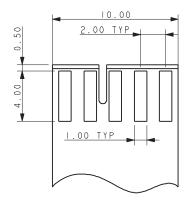


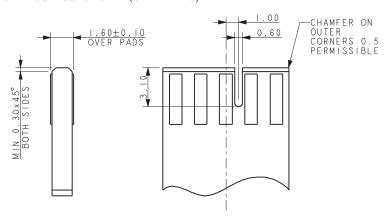


#### NOTES:

- 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 ±0.20MM 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





#### 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

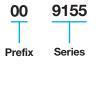
#### **ENVIRONMENTAL**

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**









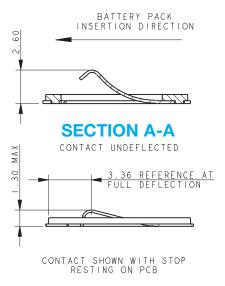


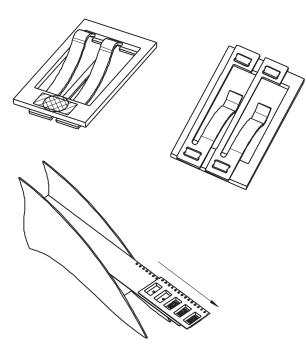


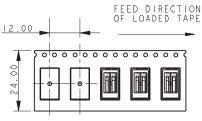
#### **Series 9155-100**



## 2 WAY LOW PROFILE CONNECTOR NO STOP

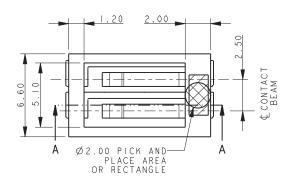


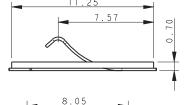


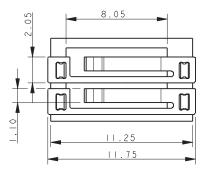


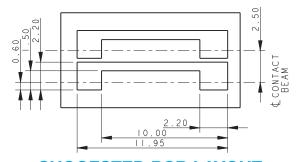
#### **PACKING DETAILS**

REEL QTY	1500
LEADER	500MM
TRAILER	500MM









**SUGGESTED PCB LAYOUT** 

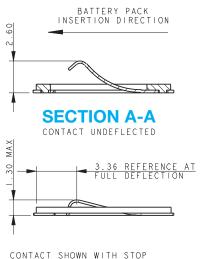
- 1. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPECIFICATION 201-01-094.
- MATERIALS: CONTACT COPPER ALLOY, INSULATOR - GLASS FILLED NYLON. COLOR: BLACK.
- 3. TOLERANCE ±0.20 UNLESS SPECIFIED.
- 4. PACKING DETAILS SEE TABLE.
- 5. FOR MATING PAD DETAILS REFER TO PAGE 103.

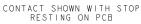


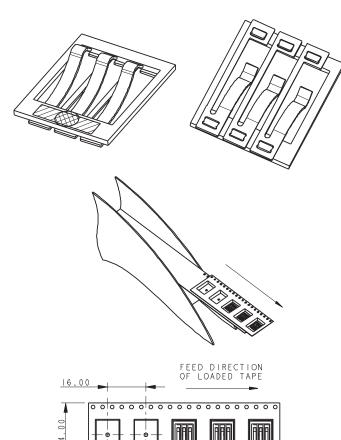
#### **Series 9155-100**



## 3 WAY LOW PROFILE CONNECTOR NO STOP

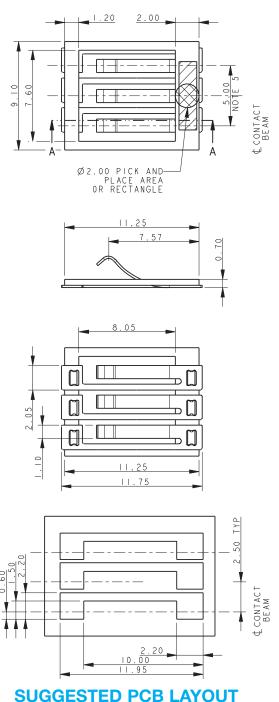






#### **PACKING DETAILS**

REEL QTY	1200	
LEADER	500MM	
TRAILER	500MM	



- 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. 2 EQUAL PITCHES @ 2.50 = 5.00.
- 6. FOR MATING PAD DETAILS REFER TO PAGE 103.



#### **Series 9155-100**

REEL QTY

LEADER

**TRAILER** 

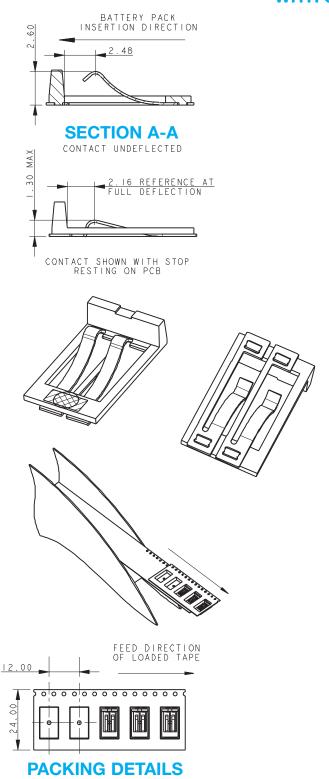
1500

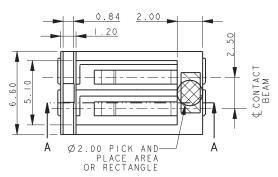
500MM

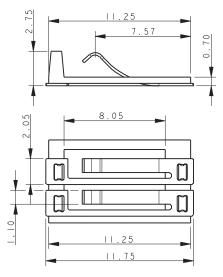
500MM

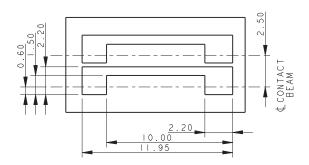


## 2 WAY LOW PROFILE CONNECTOR WITH STOP









#### **SUGGESTED PCB LAYOUT**

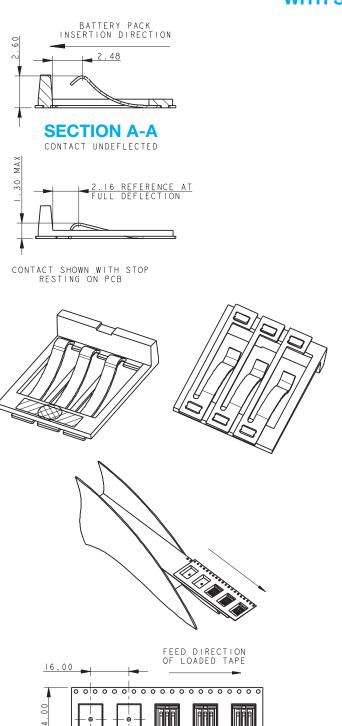
- 1. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPECIFICATION 201-01-094.
- MATERIALS: CONTACT COPPER ALLOY, INSULATOR - GLASS FILLED NYLON. COLOR: BLACK.
- 3. TOLERANCE ±0.20 UNLESS SPECIFIED.
- 4. PACKING DETAILS SEE TABLE.
- 5. FOR MATING PAD DETAILS REFER TO PAGE 103.



#### **Series 9155-100**

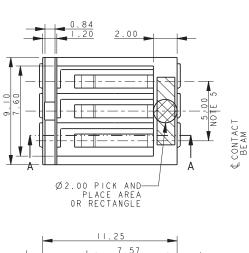


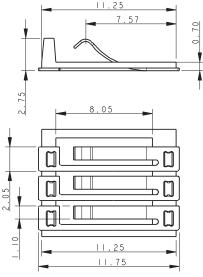
## 3 WAY LOW PROFILE CONNECTOR WITH STOP

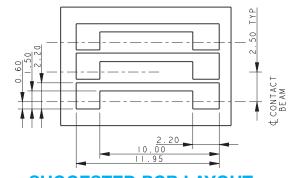


#### **PACKING DETAILS**

REEL QTY	1200
LEADER	500MM
TRAILER	500MM







#### SUGGESTED PCB LAYOUT

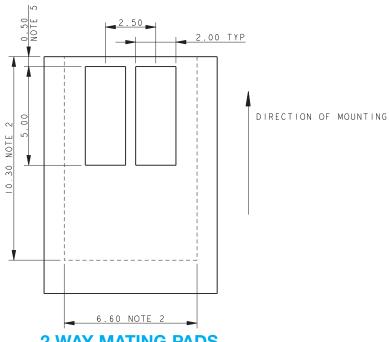
- 1. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPECIFICATION 201-01-094.
- 2. MATERIALS: CONTACT COPPER ALLOY, INSULATOR GLASS FILLED NYLON. COLOR: BLACK.
- 3. TOLERANCE ±0.20 UNLESS SPECIFIED.
- 4. PACKING DETAILS SEE TABLE.
- 5. 2 EQUAL PITCHES @ 2.50 = 5.00.
- 6. FOR MATING PAD DETAILS REFER TO PAGE 103.



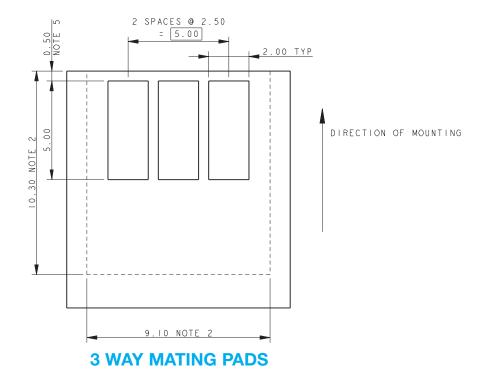
#### **Series 9155-100**



#### **LOW PROFILE MATING PADS**



#### **2 WAY MATING PADS**



- 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**

- Current Rating: 3 Amps
- Voltage Rating: Based on placement distance

#### **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**





Contact Decomption					
Code	Nominal Operating Height	Contact Operating Height Range			
610	1.00mm	0.75mm to 1.25mm			
615	1.50mm	1.25mm to 1.75mm			



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



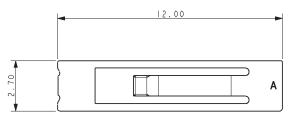


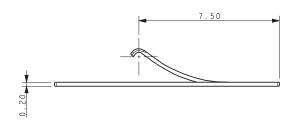
# Single Compression Contact: Board-to-Board (BTB)

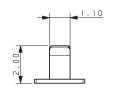


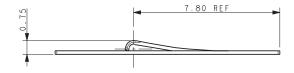
**Series 70-9155** 

#### 70-9155-001-610-006 NOMINAL WORKING HEIGHT 1.00MM



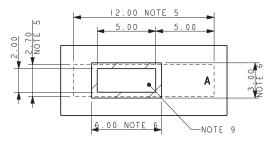






## FULLY DEFLECTED CONTACT

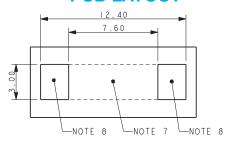
## SUGGESTED MATING PCB LAYOUT

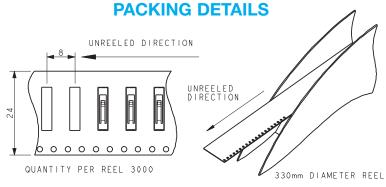


#### NOTES:

- 1. 9155 LOW PROFILE CONTACT, WORKING HEIGHT 0.75MM TO 1.25MM.
- 2. FOR FULL DETAILS REFER TO PRODUCT SPECIFICATION 201-01-153 AND APPLICATIONS NOTES 201-01-154.
- 3. MATERIAL: COPPER ALLOY 0.2MM THICK.
- 4. PLATING: NICKEL ALL OVER WITH GOLD ON CONTACT NOSE AND TIN ON THE REMAINDER. PARTS TO BE PACKED IN TAPE AND REEL. QTY PER REEL 3000.
- 5. OUTLINE OF CONNECTOR, ORIENTATION END "A".
- 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.

## SUGGESTED SMT PCB LAYOUT





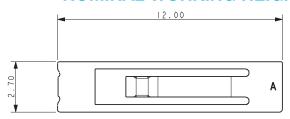


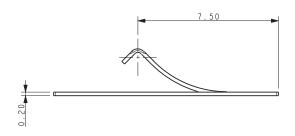
# Single Compression Contact: Board-to-Board (BTB)

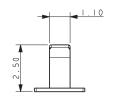


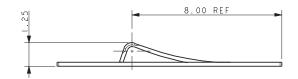
**Series 70-9155** 

#### 70-9155-001-610-006 NOMINAL WORKING HEIGHT 1.50MM



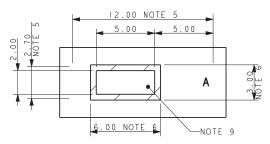






## FULLY DEFLECTED CONTACT

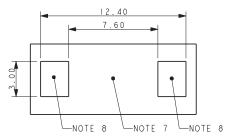
## SUGGESTED MATING PCB LAYOUT

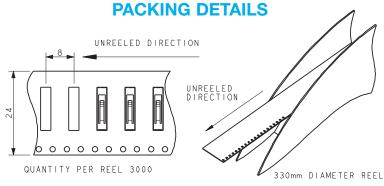


#### NOTES:

- 1. 9155 LOW PROFILE CONTACT, WORKING HEIGHT 0.75MM TO 1.25MM.
- 2. FOR FULL DETAILS REFER TO PRODUCT SPECIFICATION 201-01-153 AND APPLICATIONS NOTES 201-01-154.
- 3. MATERIAL: COPPER ALLOY 0.2MM THICK.
- 4. PLATING: NICKEL ALL OVER WITH GOLD ON CONTACT NOSE AND TIN ON THE REMAINDER. PARTS TO BE PACKED IN TAPE AND REEL. QTY PER REEL 3000.
- 5. OUTLINE OF CONNECTOR, ORIENTATION END "A".
- 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.

## SUGGESTED SMT PCB LAYOUT







#### **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

AVX Canada Tel: 905-238-3151

**AVX South America** Tel: +55-11-4688-1960

#### **EUROPE**

AVX Limited, England Tel: +44-1276-697000

AVX S.A.S., France Tel: +33-1-69-18-46-00

AVX GmbH, Germany Tel: +49-0811-95949-0

AVX SRL, Italy Tel: +39-02-614-571

**AVX Czech Republic** Tel: +420-57-57-57-521

AVX/ELCO UK Tel: +44-1638-675000

ELCO Europe GmbH Tel: +49-2741-299-0

AVX S.A., Spain Tel: +34-91-63-97-197

AVX Benelux Tel: +31-187-489-337

#### **ASIA-PACIFIC**

AVX/Kyocera (S) Pte Ltd., Singapore

Tel: +65-6286-7555

AVX/Kyocera, Asia, Ltd., Hong Kong

Tel: +852-2363-3303

AVX/Kyocera Yuhan Hoesa, South Korea Tel: +82-2785-6504

> AVX/Kyocera HK Ltd., Taiwan

Tel: +886-2-2656-0258

AVX/Kyocera (M) Sdn Bhd, Malaysia

Tel: +60-4228-1190

AVX/Kyocera International Trading Co. Ltd., Shanghai

Tel: +86-21-3255 1933

AVX/Kyocera Asia Ltd., Shenzen

Tel: +86-755-3336-0615

AVX/Kyocera International Trading Co. Ltd., Beijing

Tel: +86-10-6588-3528

AVX/Kyocera India Liaison Office

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#### **ASIA-KED**

(KYOCERA Electronic Devices)

KED Hong Kong Ltd. Tel: +852-2305-1080/1223

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KED Company Ltd. Shanghai

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KED Hong Kong Ltd. Beijing

Tel: +86-10-5869-4655

KED Taiwan Ltd. Tel: +886-2-2950-0268

KED Korea Yuhan Hoesa, South Korea

Tel: +82-2-783-3604/6126

KED (S) Pte Ltd. Singapore Tel: +65-6509-0328

Kyocera Corporation Japan

Tel: +81-75-604-3449

#### Contact:





OOO «ЛайфЭлектроникс" "LifeElectronics" LLC

ИНН 7805602321 КПП 780501001 P/C 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 3010181090000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

#### Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный) Email: org@lifeelectronics.ru