## **IDC Plug: WTB**

### 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

1

2 Part

PCB Strip

2 Part

Wired IDC

Strip

Connector

- Reference application notes 201-01-123
- Reference Product Specification 201-01-119

#### **FEATURES AND BENEFITS**

- Mates with standard 9159 horizontal socket. keeping same BTB connector system
- Economical and reliable IDC wire 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**

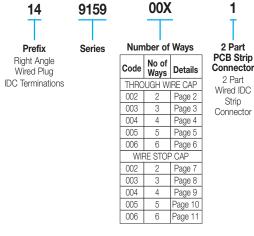
• Insulator Material: Nylon: UL94VO

• Contact Material: Phosphor Bronze

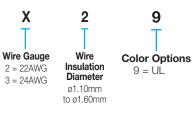
• Plating: Gold / Tin over Nickel

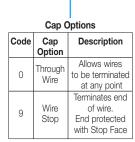
• Durability: 10 Cycles

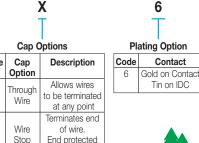
#### **HOW TO ORDER**



Certification: UL File #E90723



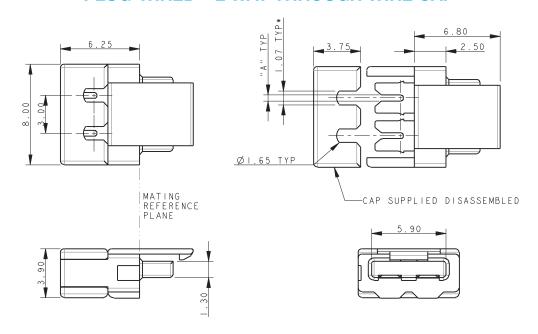






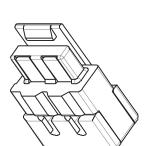


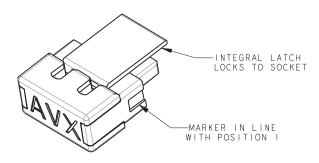
### PLUG-WIRED - 2 WAY THROUGH WIRE CAP



#### 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 1.
- 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 12.





Code

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122

132

Dimension A

0.47

0.37

Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

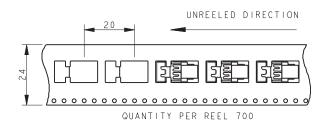
Wire Insulation

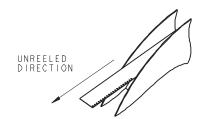
Diameter

1.10 to 1.60

1.10 to 1.60

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

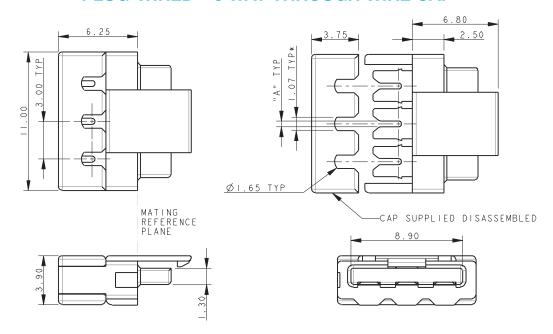






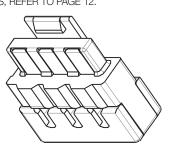


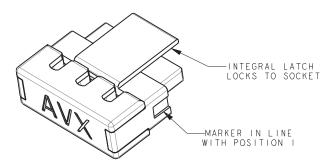
### PLUG-WIRED - 3 WAY THROUGH WIRE CAP



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- 9. ASSEMBLY AIDS, REFER TO PAGE 12.





Wire Gauge

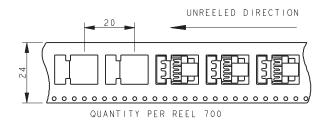
22AWG

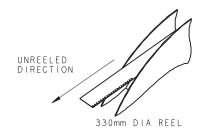
(Stranded Wire)

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 1)

122



Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

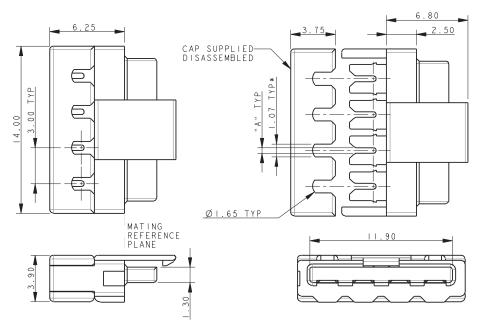
Dimension A

0.47

(Page 1)

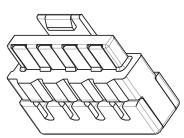
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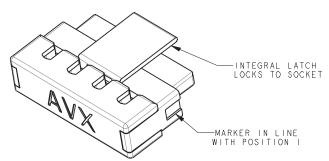
### PLUG-WIRED - 4 WAY THROUGH WIRE CAP



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- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
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- 9. ASSEMBLY AIDS, REFER TO PAGE 12.





Wire Gauge

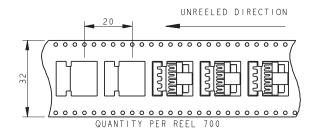
22AWG

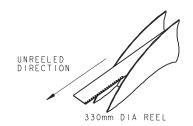
(Stranded Wire)

24AWG

(Standed Wire)

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

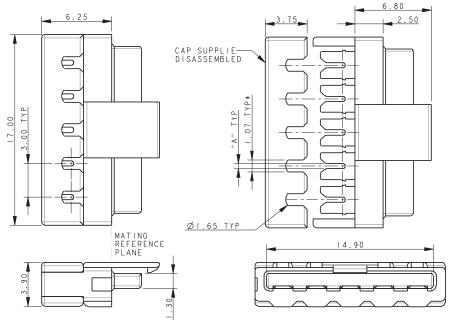






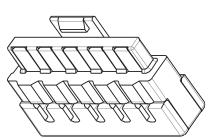


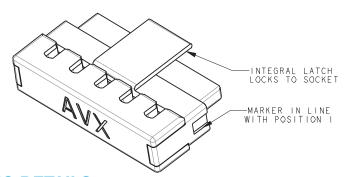
### PLUG-WIRED - 5 WAY THROUGH WIRE CAP



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- 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 12.





Wire Gauge

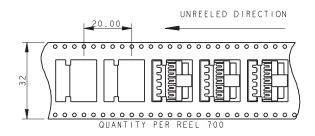
22AWG

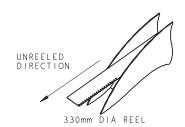
(Stranded Wire)

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

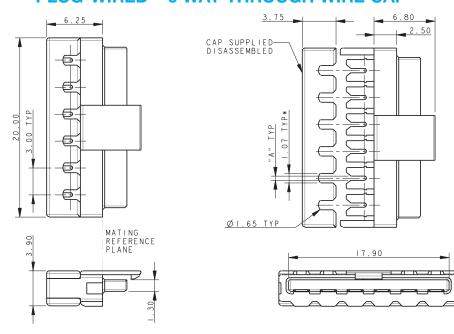
0.47

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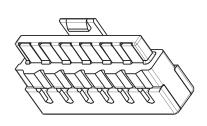


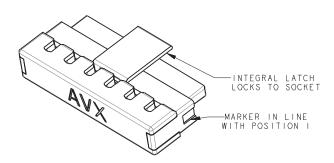
#### PLUG-WIRED - 6 WAY THROUGH WIRE CAP



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- 9. ASSEMBLY AIDS, REFER TO PAGE 12.





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Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

Wire Insulation

Diameter

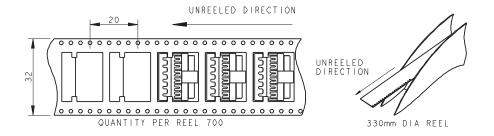
1.10 to 1.60

1.10 to 1.60

Dimension A

0.47

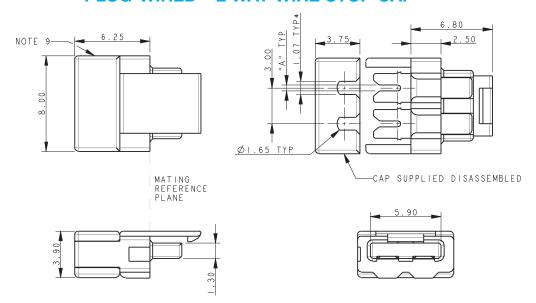
# PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)







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

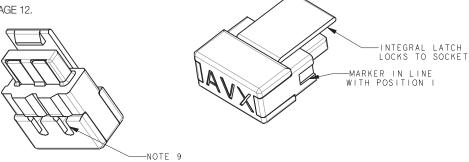


#### NOTES:

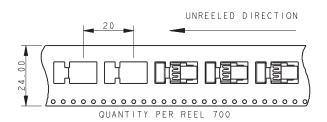
- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
- 2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
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- 7. PACKING IN TAPE AND REEL. QTY PER REEL 700, POCKET CONTAINS 1 CONNECTOR AND 1 CAP.
- 8. WIRE GAUGE OPTIONS, SEE TABLE.

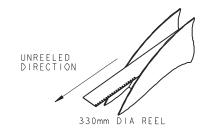
 SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.

10. ASSEMBLY AIDS, REFER TO PAGE 12.



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





Code

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122

132

**Dimension A** 

0.47

0.37

Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

Wire Insulation

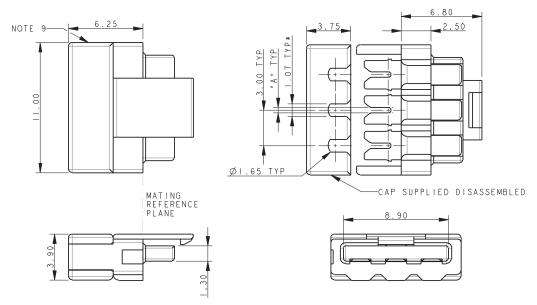
Diameter

1.10 to 1.60





### PLUG-WIRED - 3 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.
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SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.

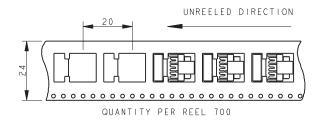
UNDERSIDE WIRE ENTRY.

10. ASSEMBLY AIDS, REFER TO PAGE 12.

INTEGRAL LATCH LOCKS TO SOCKET

WITH POSITION I

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





Code

(Page 1)

122

132

Dimension A

0.47

0.37

Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

Wire Insulation

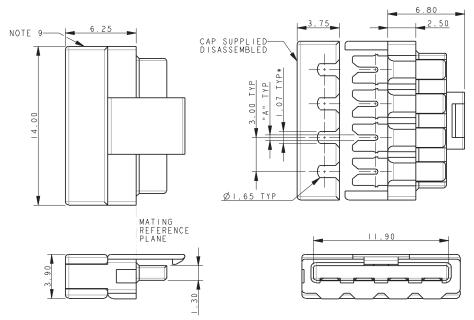
Diameter

1.10 to 1.60





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

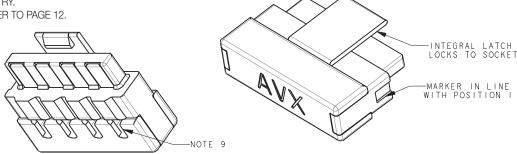


#### NOTES:

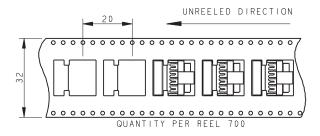
- 1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119. FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
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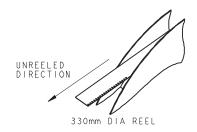
9. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.

10. ASSEMBLY AIDS, REFER TO PAGE 12.



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





Code

(Page 1)

122

Dimension A

0.47

0.37

Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)



Wire Insulation

Diameter

1.10 to 1.60



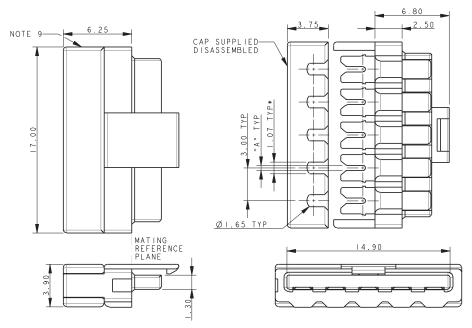
Wire Insulation

Diameter

1.10 to 1.60

1.10 to 1.60

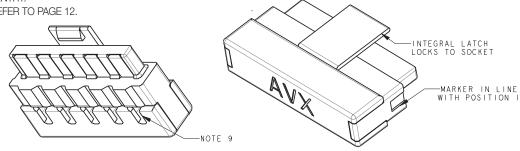
### PLUG-WIRED - 5 WAY WIRE STOP CAP



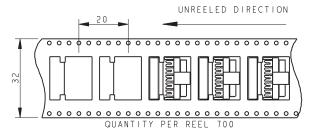
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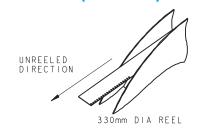
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- SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.





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





Code

(Page 1)

122

Dimension A

0.47

0.37

Wire Gauge

22AWG

(Stranded Wire)

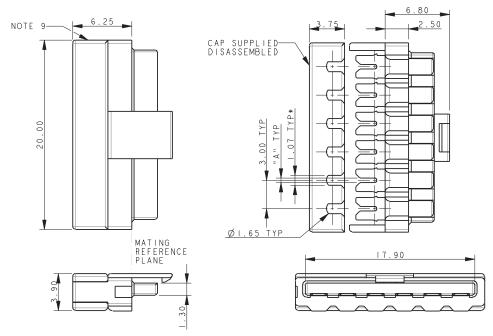
24AWG

(Standed Wire)



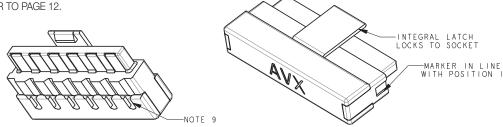


### PLUG-WIRED - 6 WAY WIRE STOP CAP

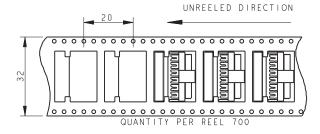


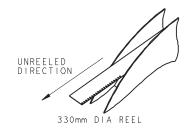
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# PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)





Code

(Page 1)

122

Dimension A

0.47

0.37

Wire Gauge

22AWG

(Stranded Wire)

24AWG

(Standed Wire)

Wire Insulation

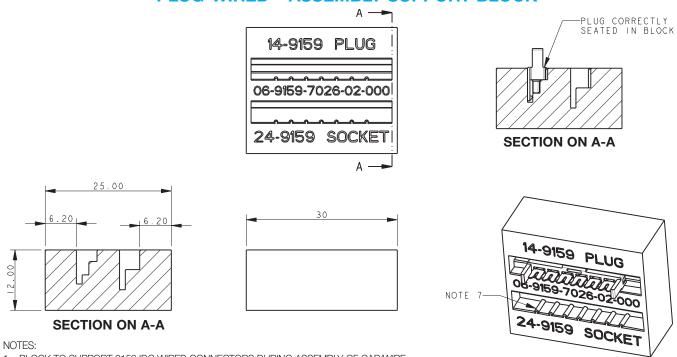
Diameter

1.10 to 1.60



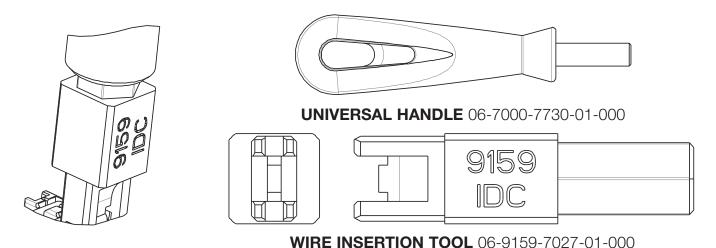


## PLUG-WIRED - ASSEMBLY SUPPORT BLOCK



- 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.

### 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.





## **PLUG-WIRED - ASSEMBLY**

