IDC Socket: WTB

24-9159

AVX INTERCONNECT
A KYOCERA GROUP COMPANY



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: -40ºC to +125ºC

MECHANICAL

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

HOW TO ORDER

24 — **Prefix**: Right Angle Wired Socket IDC Terminations

9159 — **Series**

00X — **Number of Ways**

Code	No of Ways	Details
THROUGH WIRE CAP		
002	2	Page 2
003	3	Page 3
004	4	Page 4
005	5	Page 5
006	6	Page 6
WIRE STOP CAP		
002	2	Page 7
003	3	Page 8
004	4	Page 9
005	5	Page 10
006	6	Page 11

1 — **2 Part PCB Strip Connector**: 2 Part Wired IDC Strip Connector

X — **Wire Gauge**: 2 = 22AWG, 3 = 24AWG

2 — **Wire Insulation Diameter**: ø1.10mm to ø1.60mm

9 — **Color Options**: 9 = UL

X — **Cap Options**

Code	Cap Option	Description
0	Through Wire	Allows wires to be terminated at any point
9	Wire Stop	Terminates end of wire. End protected with Stop Face

6 — **Plating Option**

Code	Contact
6	Gold on Contact Tin on IDC

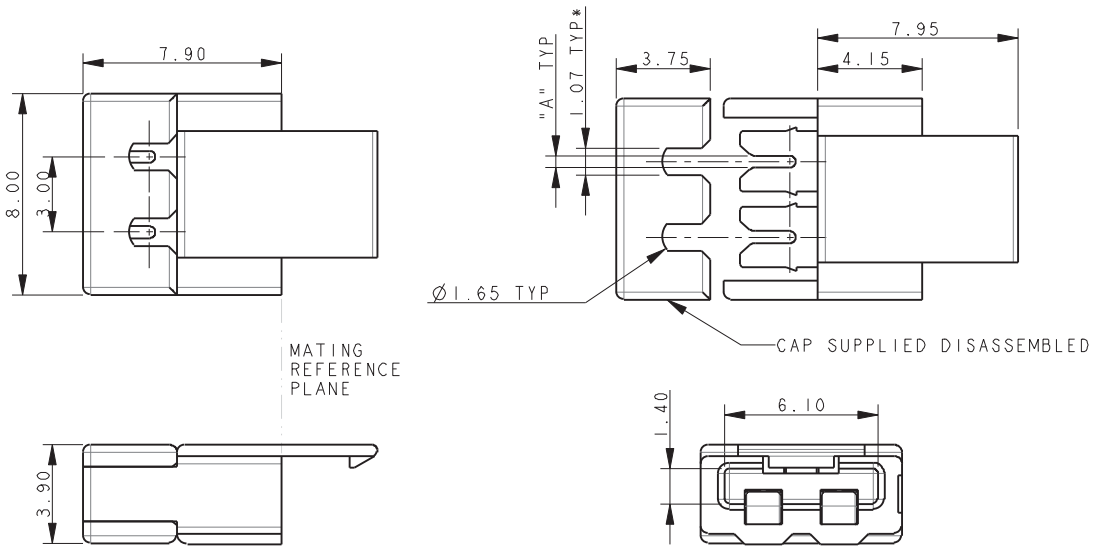
RoHS COMPLIANT

Certification: UL File #E90723

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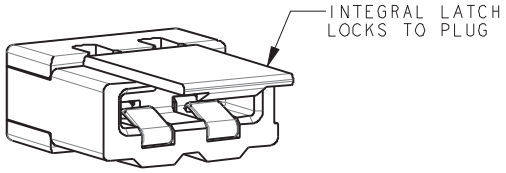
SOCKET WIRED – 2 WAY THROUGH WIRE CAP

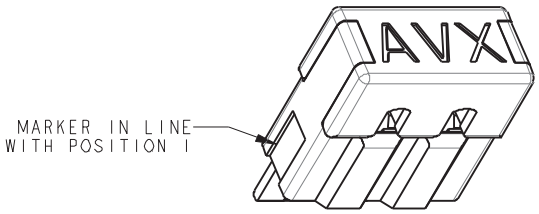


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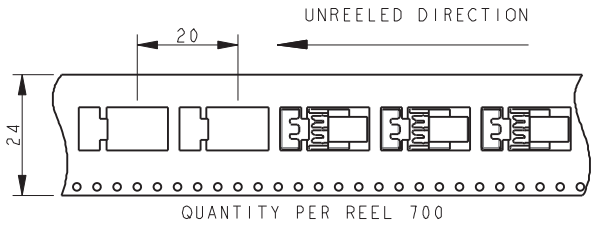
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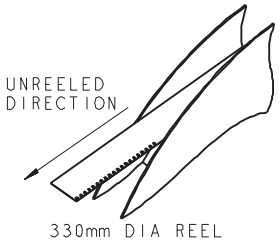
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PACKING DETAILS
CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)



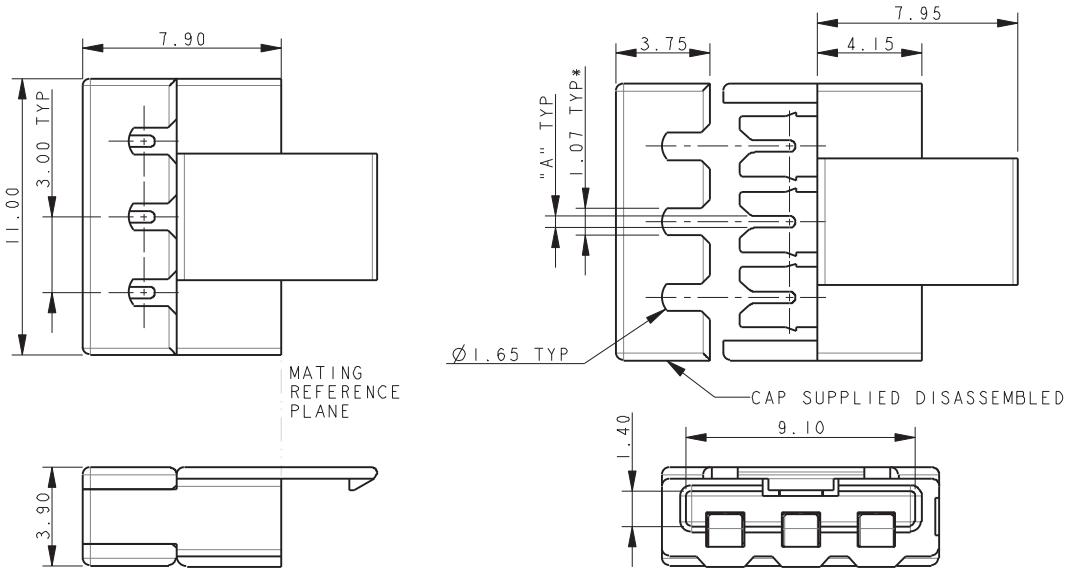


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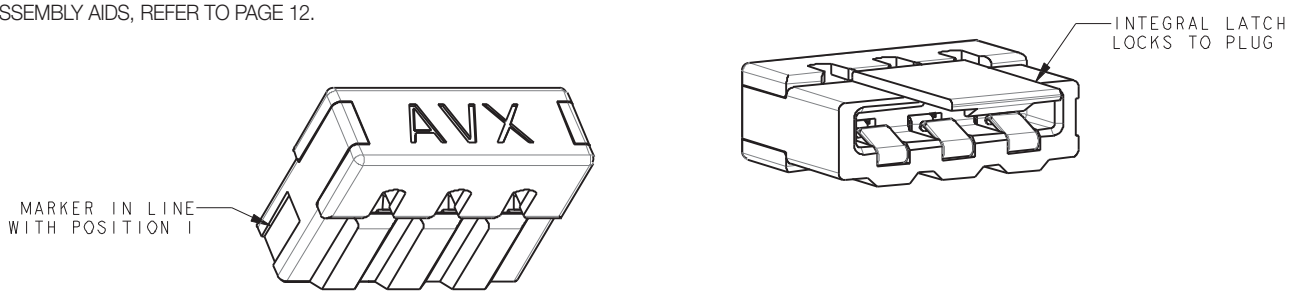
SOCKET WIRED – 3 WAY THROUGH WIRE CAP



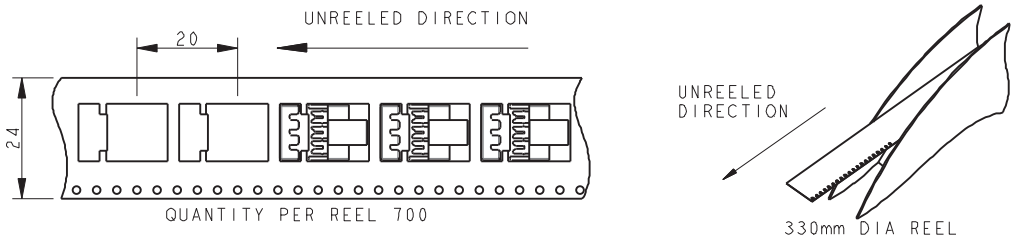
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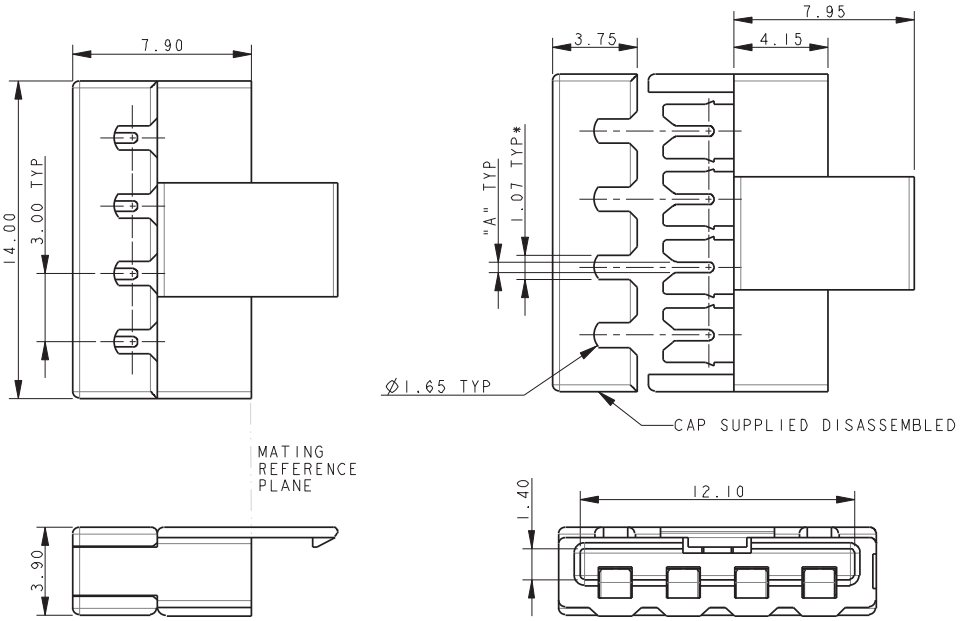
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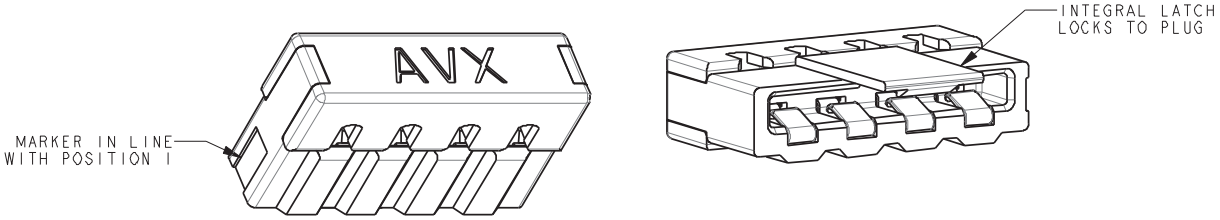
SOCKET WIRED – 4 WAY THROUGH WIRE CAP



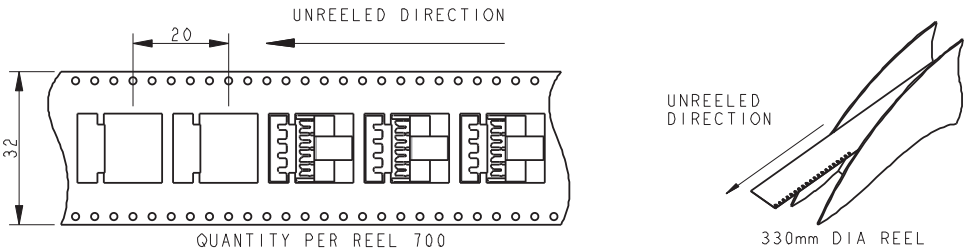
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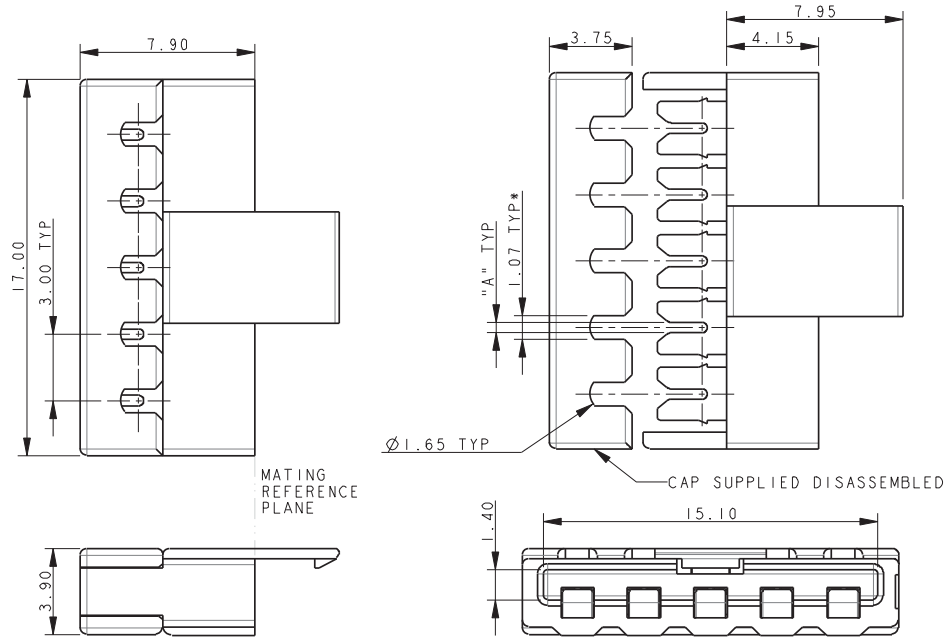
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IDC Socket: WTB

24-9159

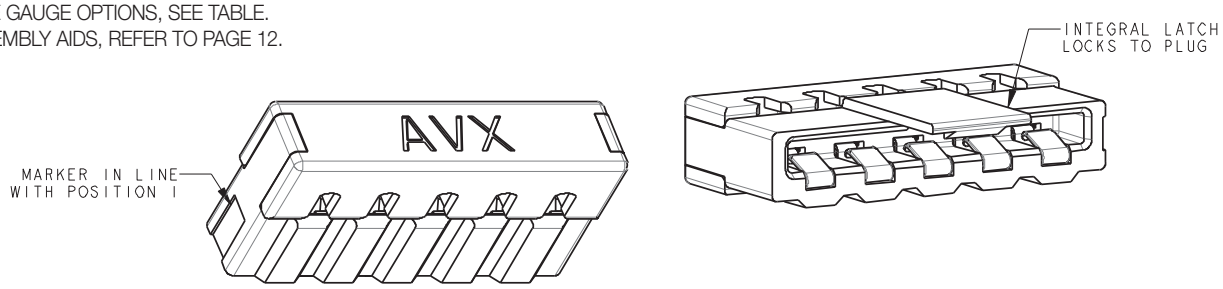
SOCKET WIRED – 5 WAY THROUGH WIRE CAP



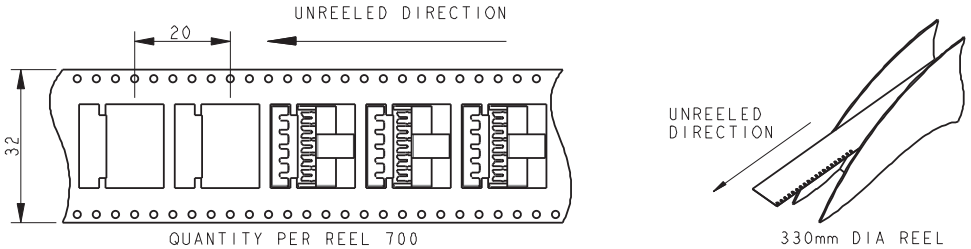
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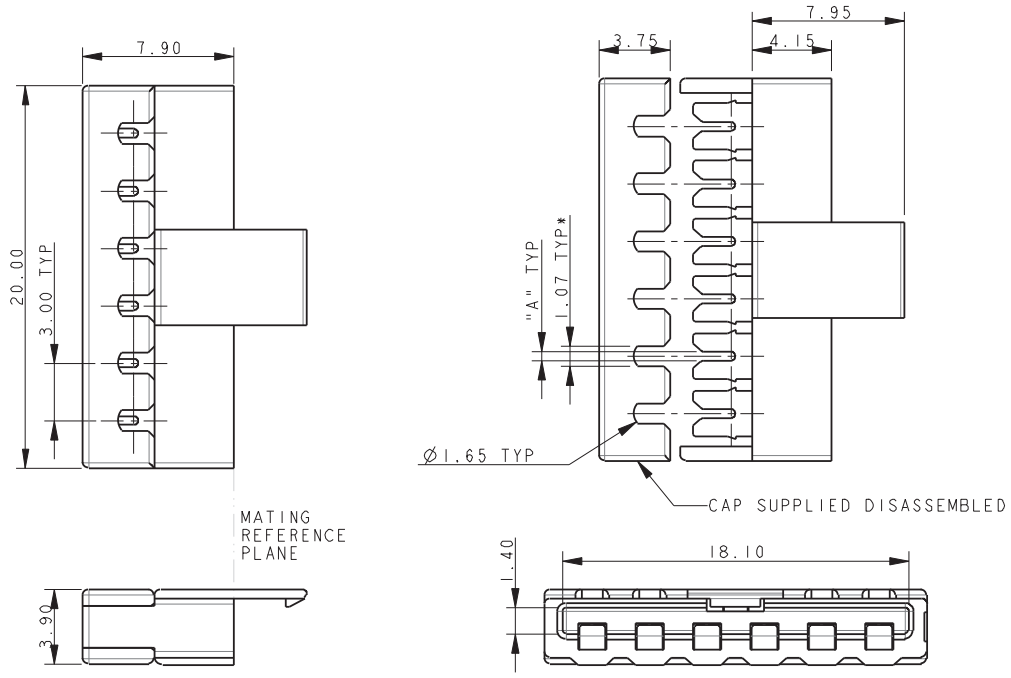
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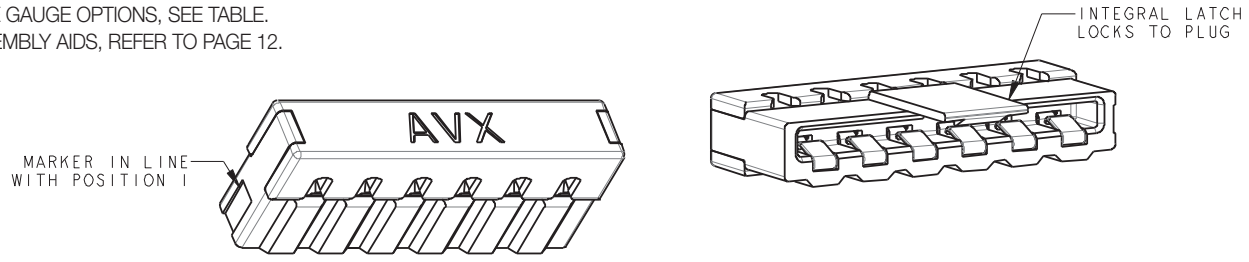
SOCKET WIRED – 6 WAY THROUGH WIRE CAP



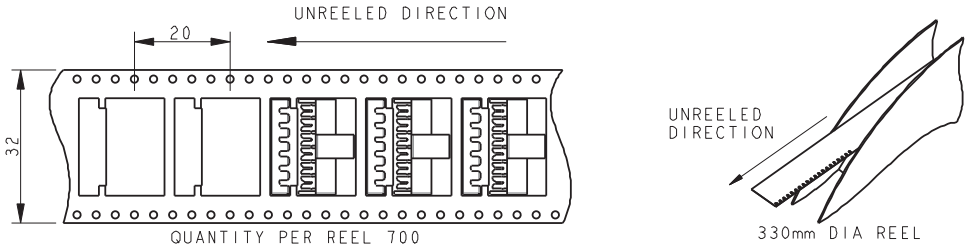
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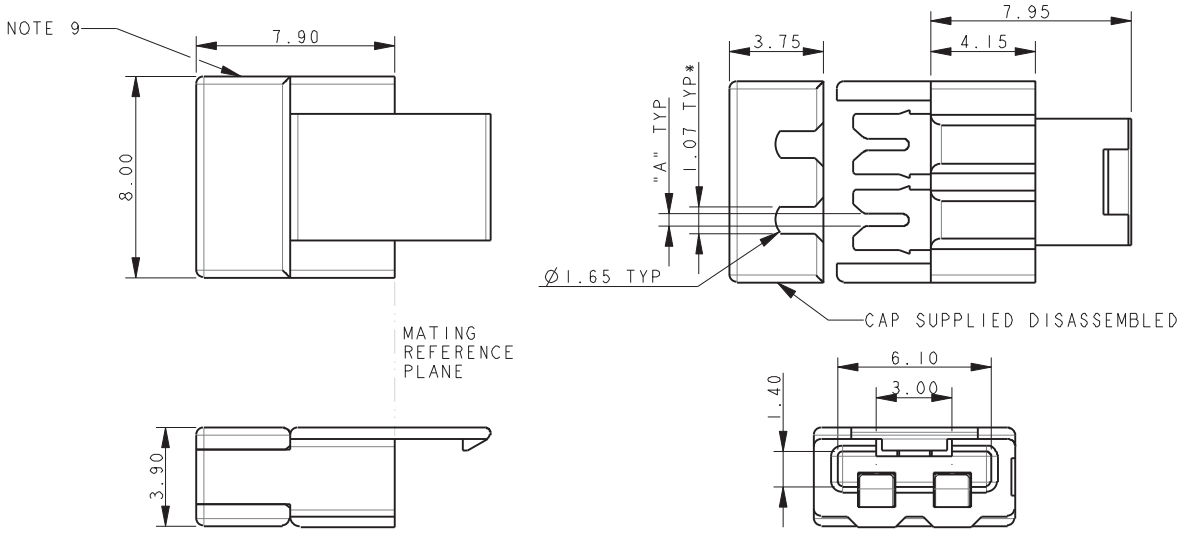


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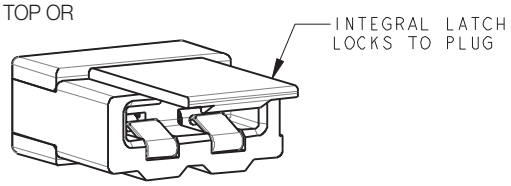
SOCKET-WIRED – 2 WAY WIRE STOP CAP

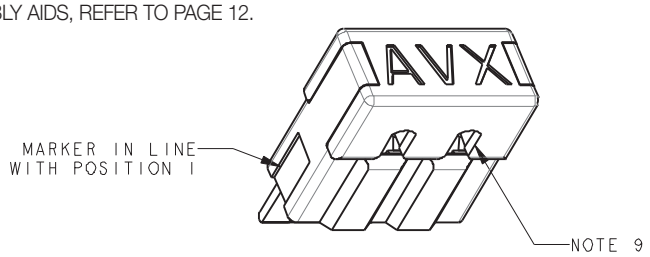


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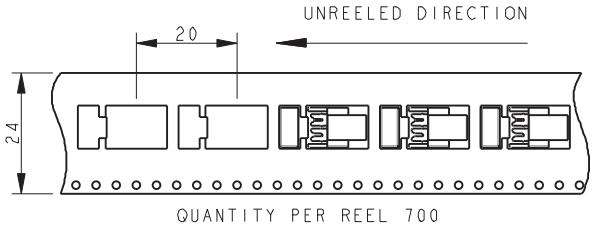
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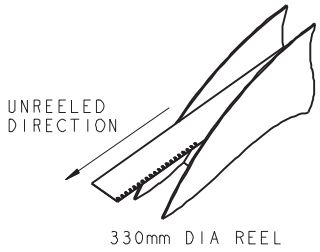
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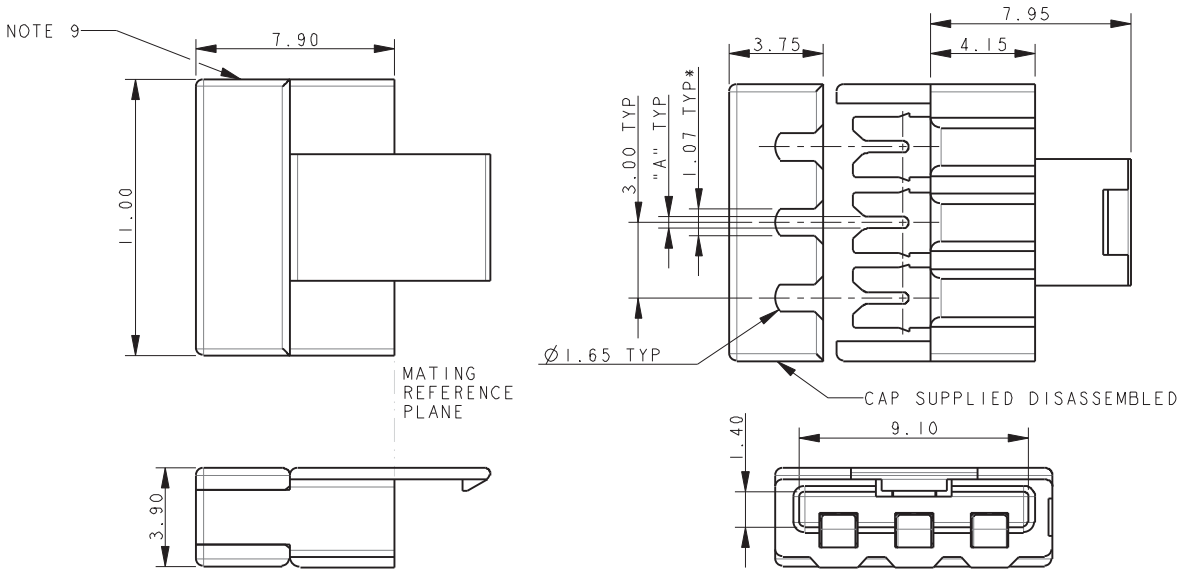


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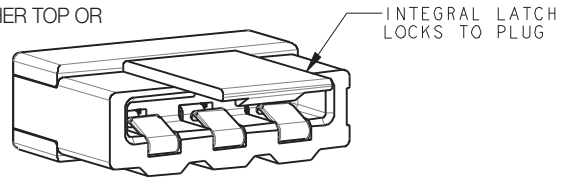
SOCKET-WIRED – 3 WAY WIRE STOP CAP

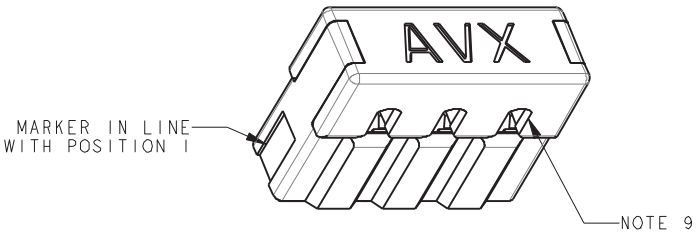


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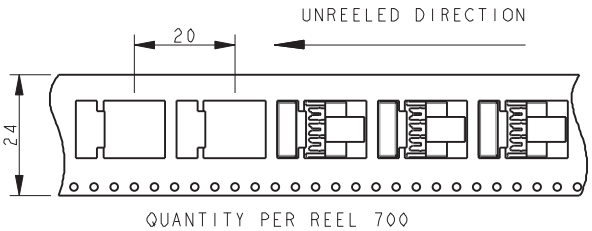
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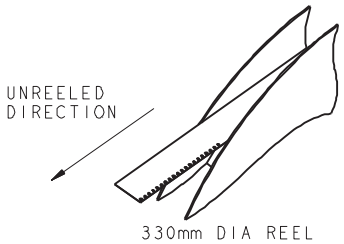
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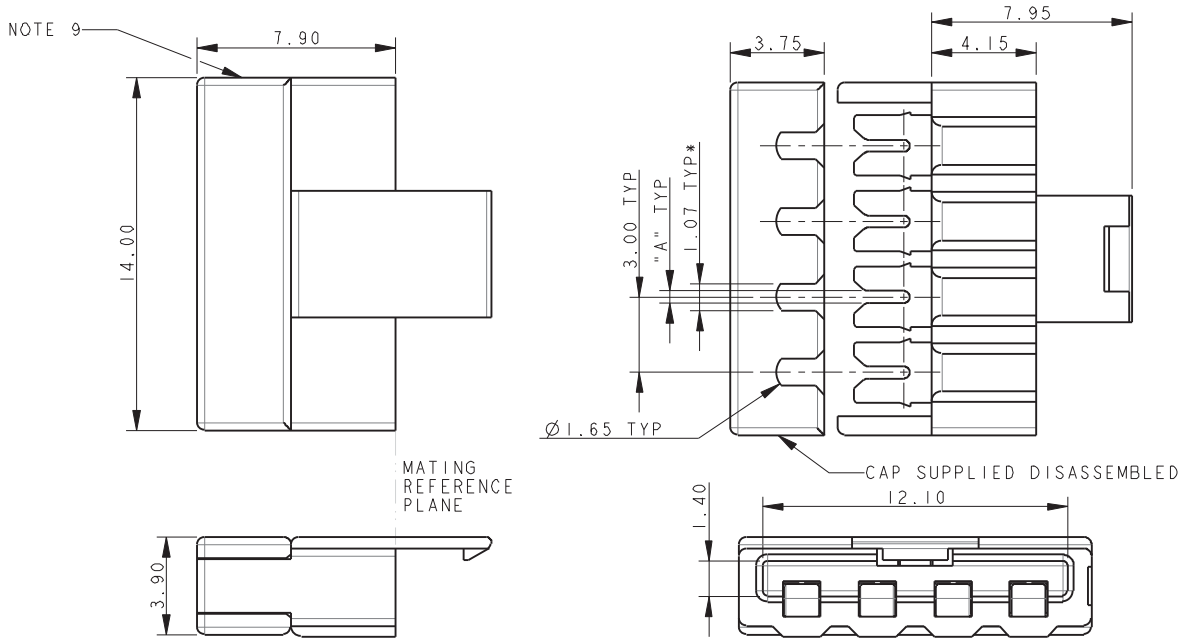




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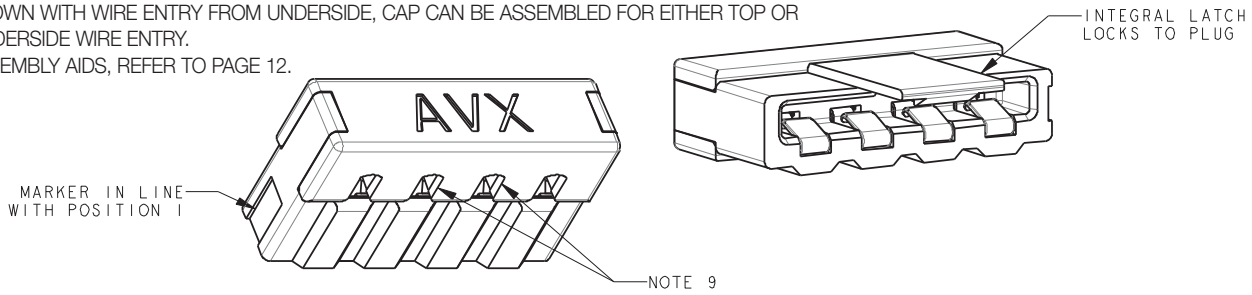
SOCKET-WIRED – 4 WAY WIRE STOP CAP



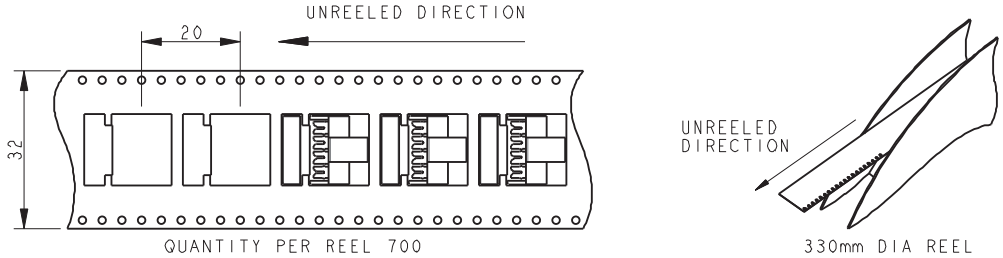
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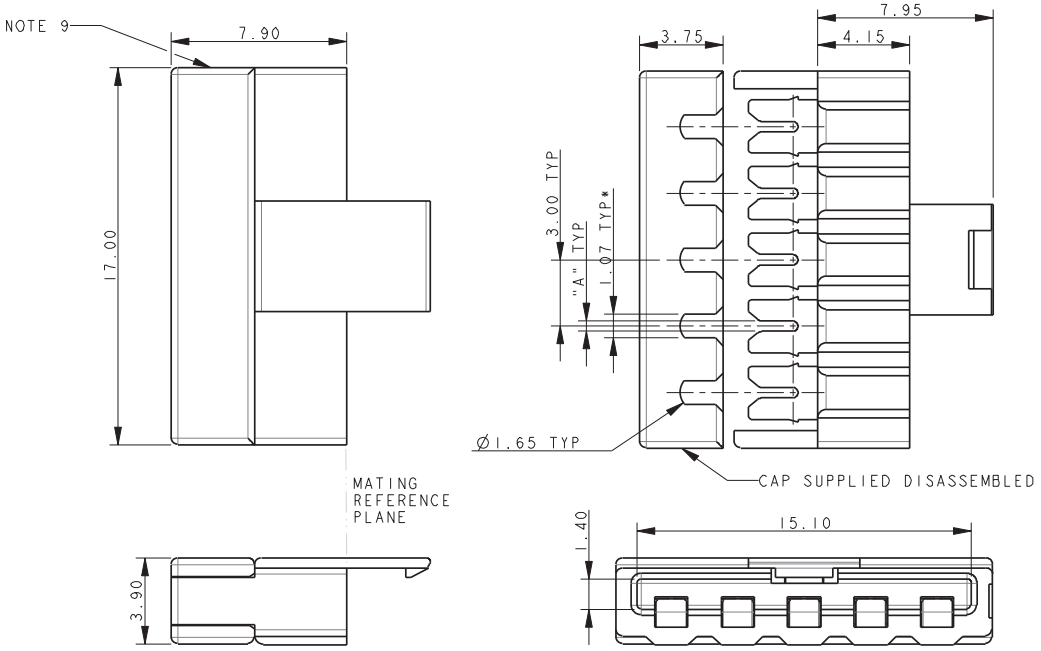
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PACKING DETAILS
CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)



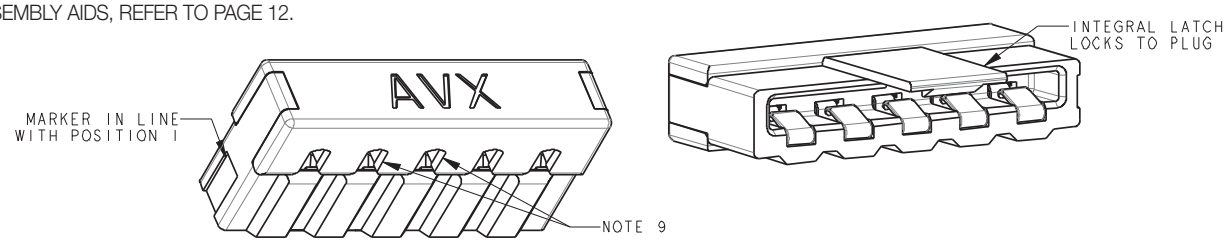
SOCKET-WIRED – 5 WAY WIRE STOP CAP



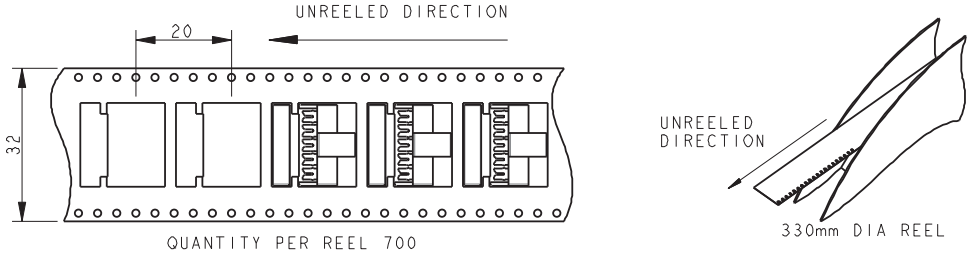
NOTES:

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 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. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.
10. ASSEMBLY AIDS, REFER TO PAGE 12.

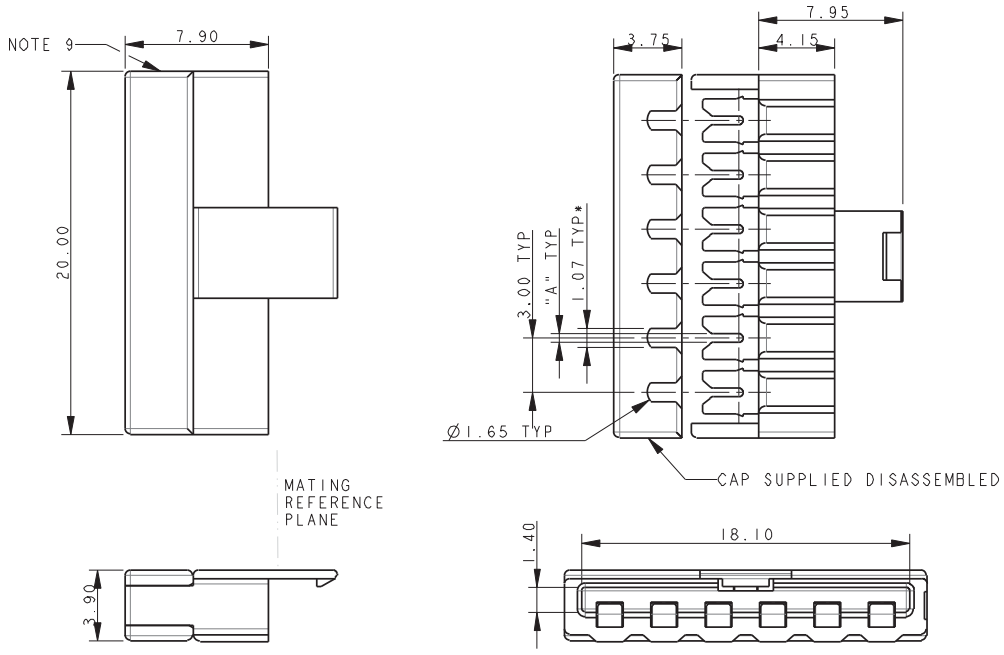
Wire Gauge	Code (page 1)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60



PACKING DETAILS
CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)



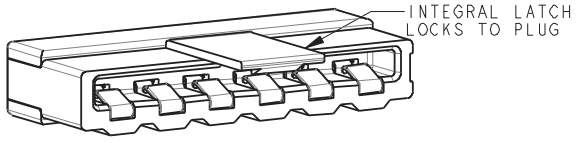
SOCKET-WIRED – 6 WAY WIRE STOP CAP

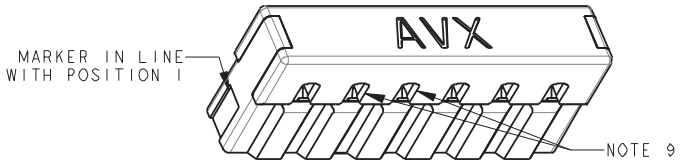


NOTES:

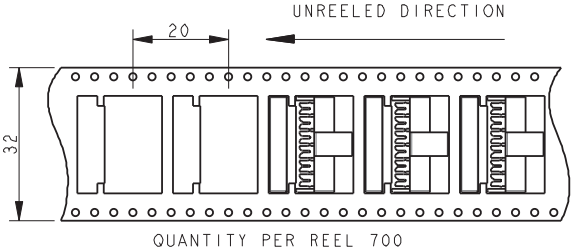
1. FOR MORE INFORMATION REFER TO PRODUCT SPEC 201-01-119.
   FOR WIRE ASSEMBLY REFER TO APPLICATION NOTES 201-01-123.
2. WIRE STOP CAP, WITH STOP FACE O ONE SIDE TO PROTECT END OF WIRE.
3. CAP ACTS AS WIRE ASSEMBLY TOOL. WIRE PREFIT TO CAP, NARROW SLOT TO GRIP WIRE, PERMANENT ASSEMBLY.
4. GENERAL TOLERANCE ±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. SHOWN WITH WIRE ENTRY FROM UNDERSIDE, CAP CAN BE ASSEMBLED FOR EITHER TOP OR UNDERSIDE WIRE ENTRY.
10. ASSEMBLY AIDS, REFER TO PAGE 12.

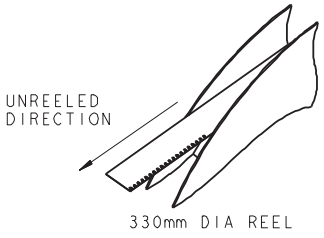
Wire Gauge	Code (page 1)	Dimension A	Wire Insulation Diameter
22AWG (Stranded Wire)	122	0.47	1.10 to 1.60
24AWG (Standed Wire)	132	0.37	1.10 to 1.60





PACKING DETAILS
CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)

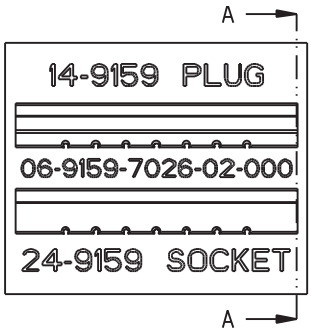


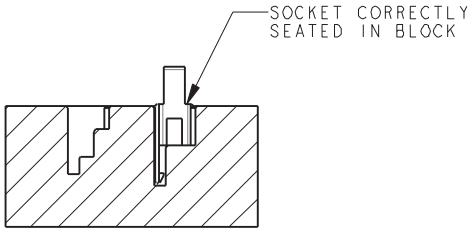


IDC Socket: WTB

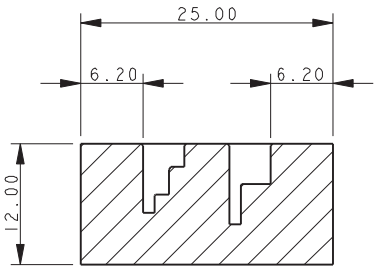
24-9159

SOCKET-WIRED – ASSEMBLY SUPPORT BLOCK

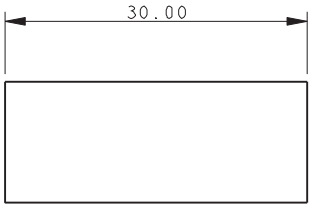


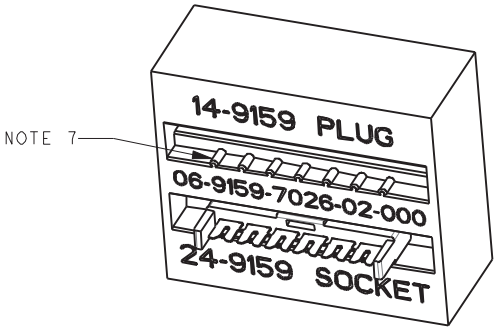


SECTION ON A-A



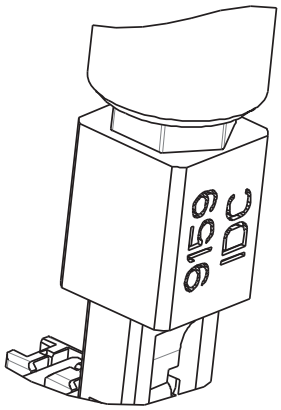
SECTION ON A-A

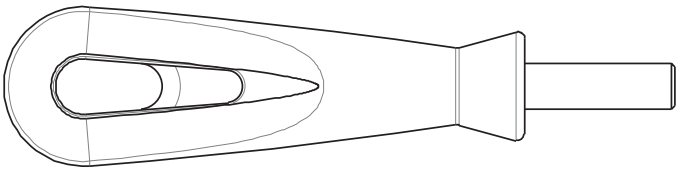




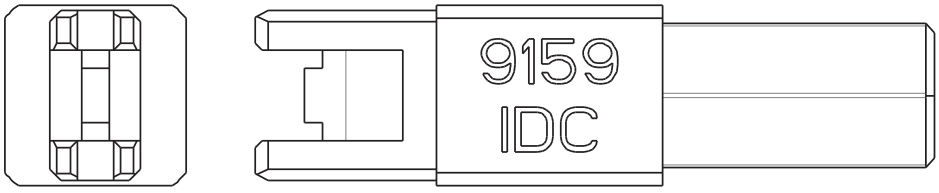
NOTES:
1. BLOCK TO SUPPORT 9159 IDC WIRED CONNECTORS DURING ASSEMBLY OF CAP/WIRE.
2. PART NUMBER 06-9159-7026-01-000, MATERIAL ALUMINUM.
   PART NUMBER 06-9159-7026-02-000, MATERIAL NYLON 46.
3. CAN BE USED WITH EITHER THE PLUG OR SOCKET CONNECTORS, USE THE CORRECT SLOT AS IDENTIFIED.
4. FOR FULL WIRE 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.

SOCKET-WIRED – WIRE INSERTION TOOL





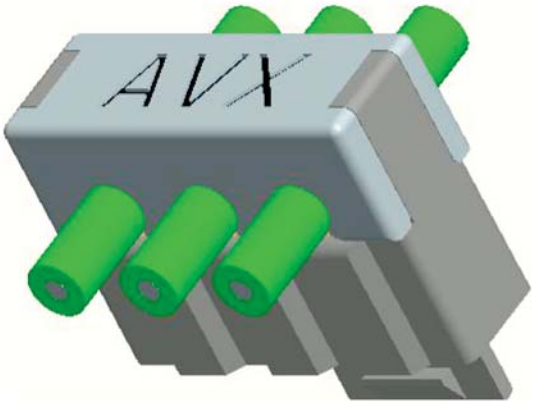
UNIVERSAL HANDLE 06-7000-7730-01-000



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

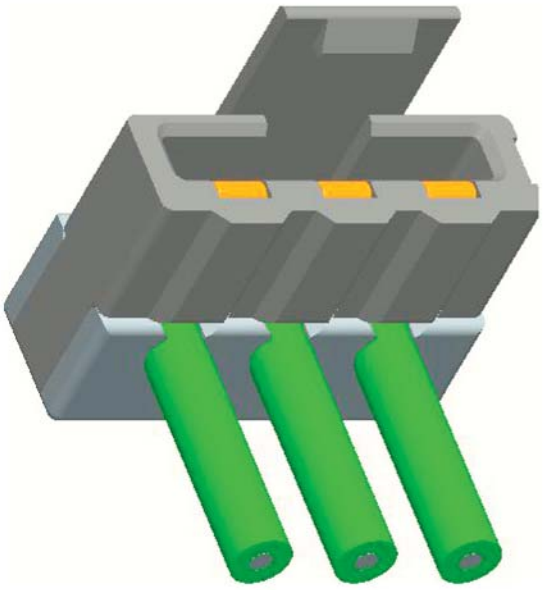
NOTES:
1. TOOL 06-9159-7027-01-000 TO INSERT WIRES INTO CAP.
2. FOR USE WITH UNIVERSAL HANDLE 06-7000-7720-01-000.
3. CAN BE USED WITH BOTH THROUGH WIRE AND WIRE STOP CAPS.
4. REFER TO APPLICATION NOTES 201-01-123 FOR FURTHER DETAILS.

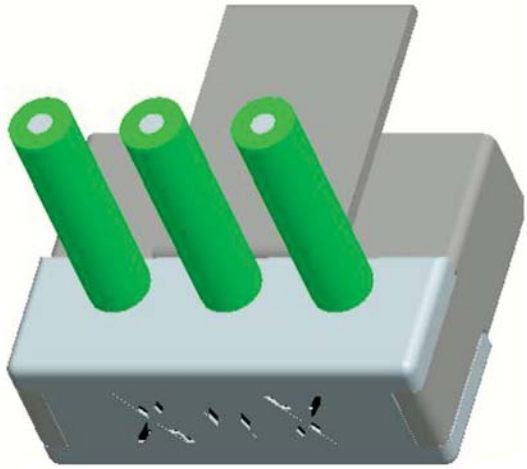
SOCKET-WIRED – ASSEMBLY



THROUGH WIRE

WIRED STOP
WIRE ENTRY UNDERSIDE





WIRED STOP
WIRE ENTRY TOP