

IDC Socket Wire-To-Board: 24-9159-100

General Description



KYOCERA 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 125°C 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.

The IDC cable socket connector allows for 22-24AWG discrete or cabled wires to be easily and reliably terminated into a 9159 standard interface plug connector. This will allow power and signals to be connected 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
- Molded latch offers positive latching after mating

ELECTRICAL

- Current Rating: 5 Amps / Contact
- Voltage Rating: 125 VAC (RMS) or DC equivalent

ENVIRONMENTAL

- Operating Temperature: -40°C to +125°C
- Storage Temperature: -40°C to +70°C

MECHANICAL

- Insulator Material: Nylon: UL94VO
- Contact Material: Phos 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 52
003	3	Page 53
004	4	Page 54
005	5	Page 55
006	6	Page 56
WIRE STOP CAP		
002	2	Page 57
003	3	Page 58
004	4	Page 59
005	5	Page 60
006	6	Page 61

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

X

Color/Approval

Code	Color	Approval
8	Black	UL Approved
9	White	UL Approved

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



UL



Safety Standards: UL 1977-File #E90723, CSA C22.2 NO. 182.3



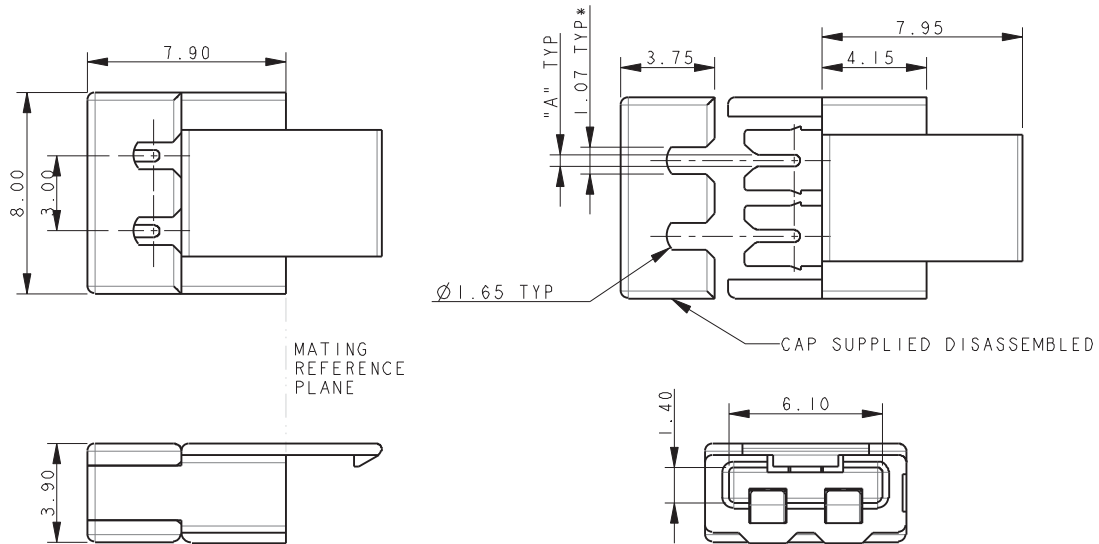
The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

TDS-BTB-0009 | Rev 1

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2 Position Through Wire Cap

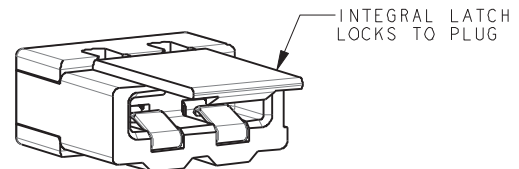
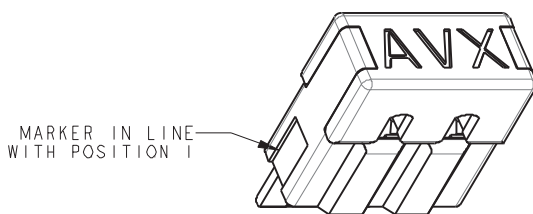
SOCKET WIRED – 2 WAY THROUGH WIRE CAP



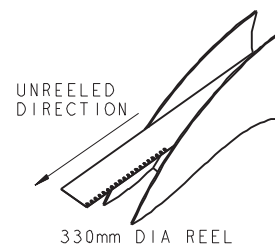
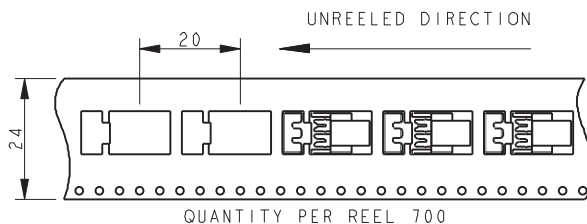
NOTES:

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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 51.
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 62.

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



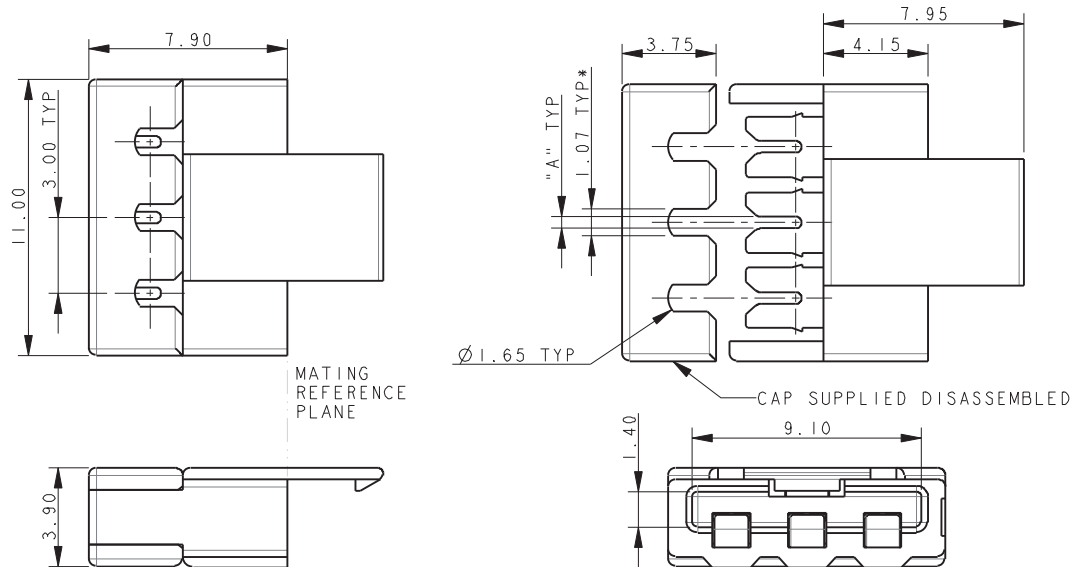
PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)



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3 Position Through Wire Cap

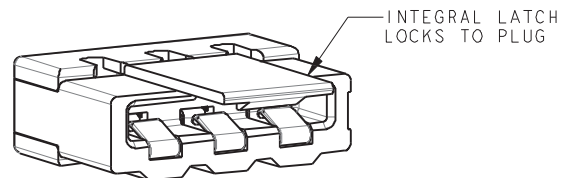
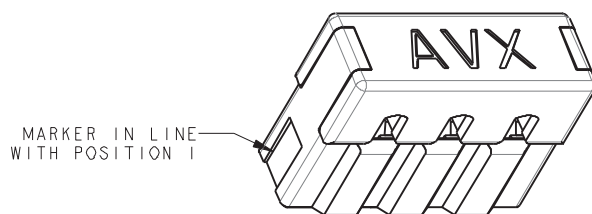
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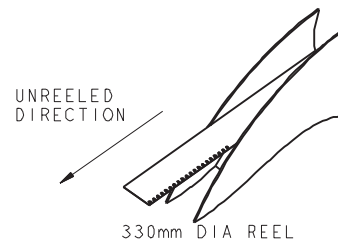
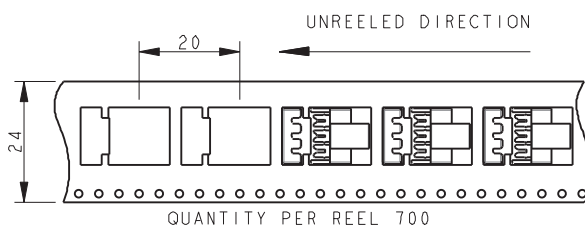
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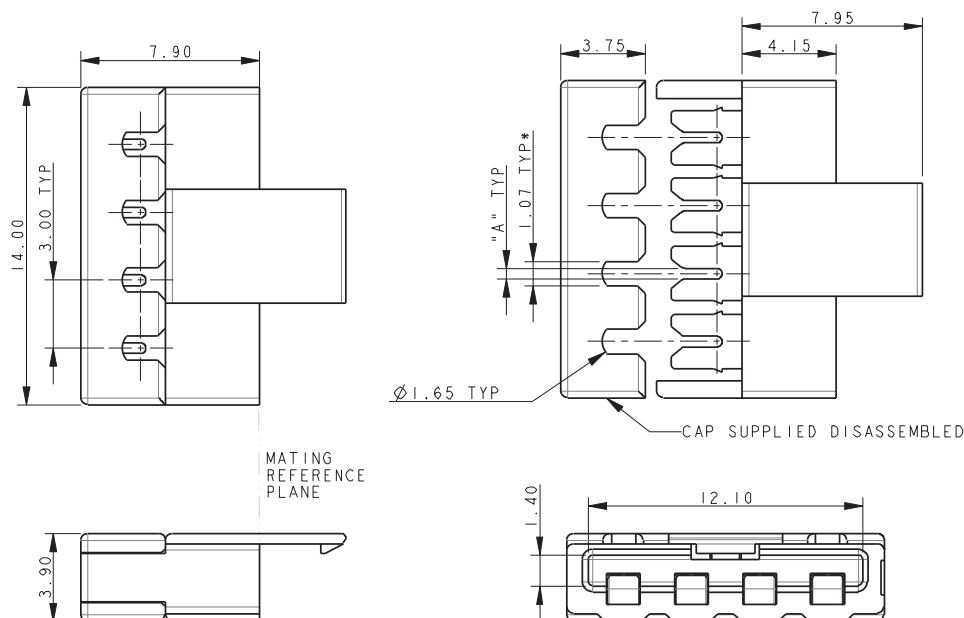
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4 Position Through Wire Cap

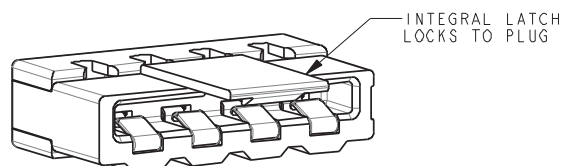
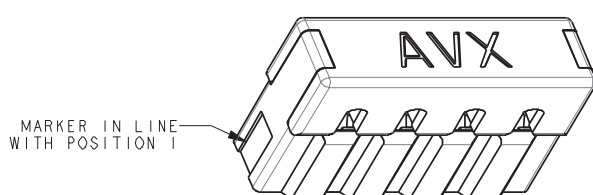
SOCKET WIRED – 4 WAY THROUGH WIRE CAP



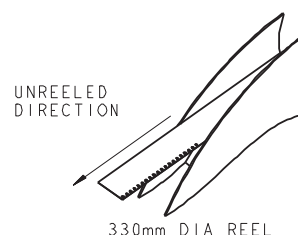
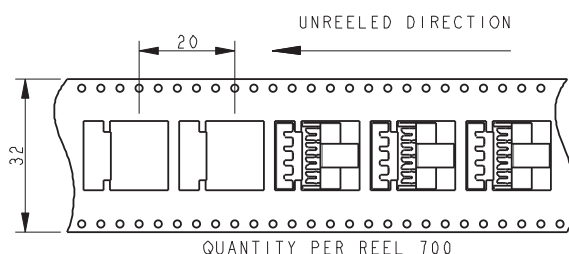
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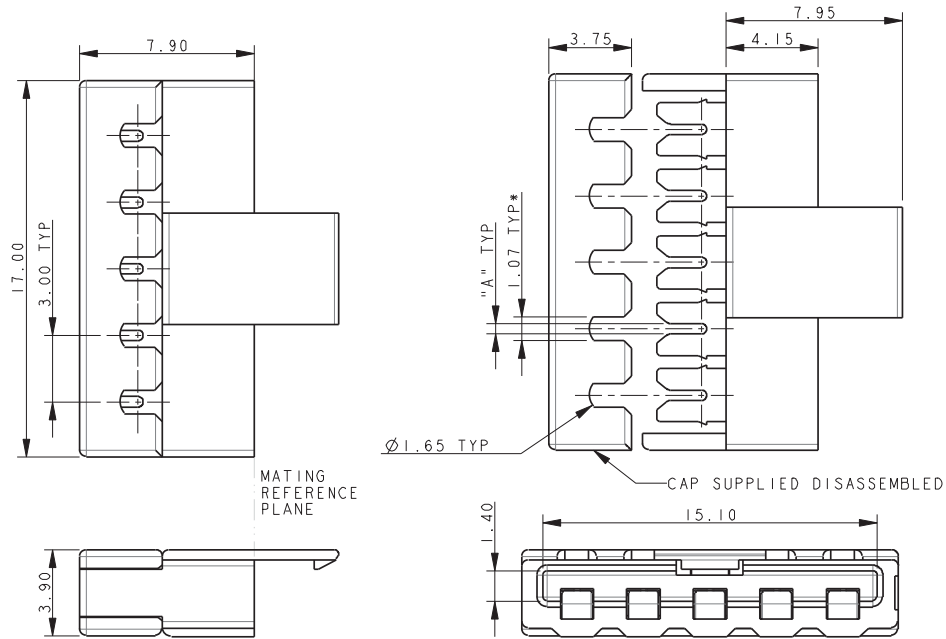
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IDC Socket Wire-To-Board: 24-9159-100

5 Position Through Wire Cap

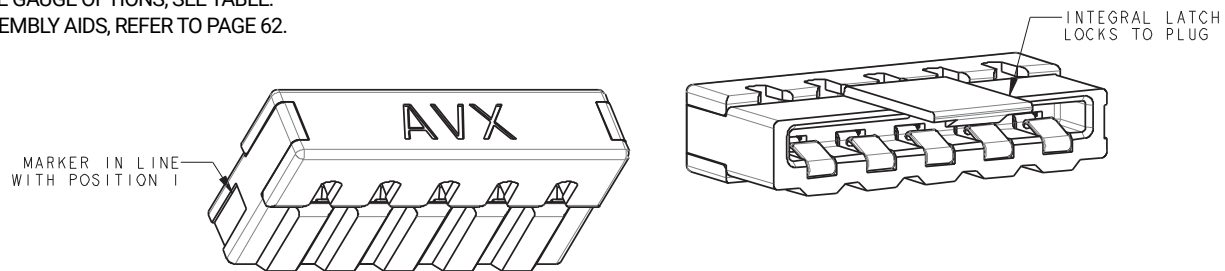
SOCKET WIRED – 5 WAY THROUGH WIRE CAP



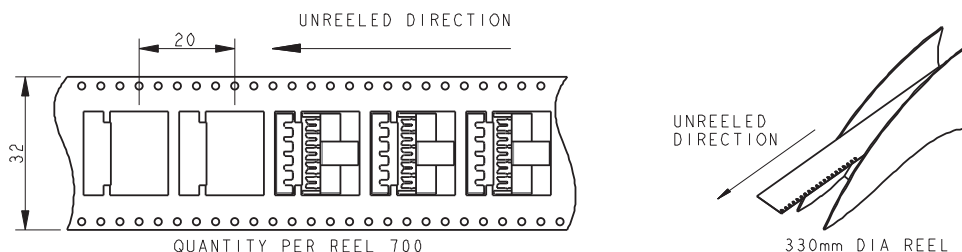
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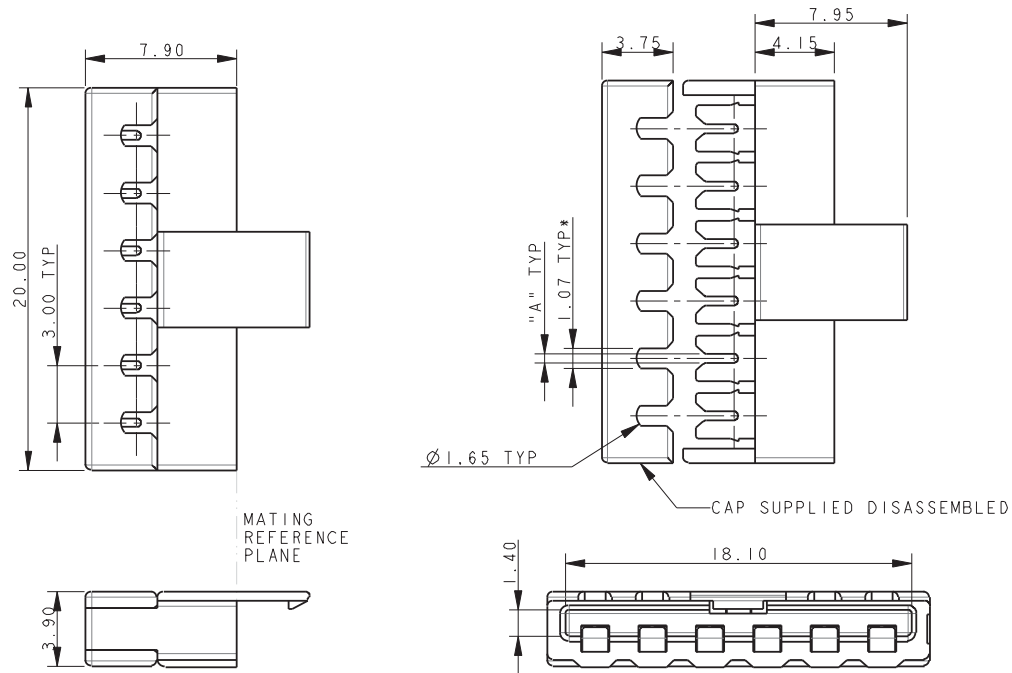
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IDC Socket Wire-To-Board: 24-9159-100

6 Position Through Wire Cap

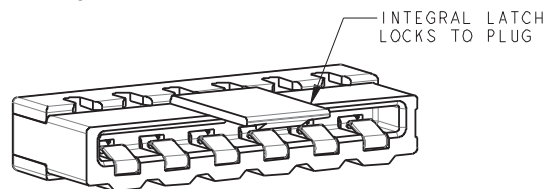
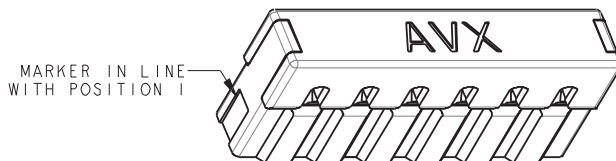
SOCKET WIRED – 6 WAY THROUGH WIRE CAP



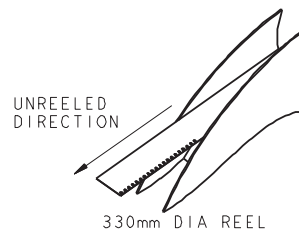
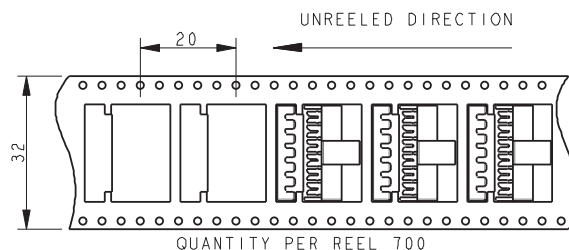
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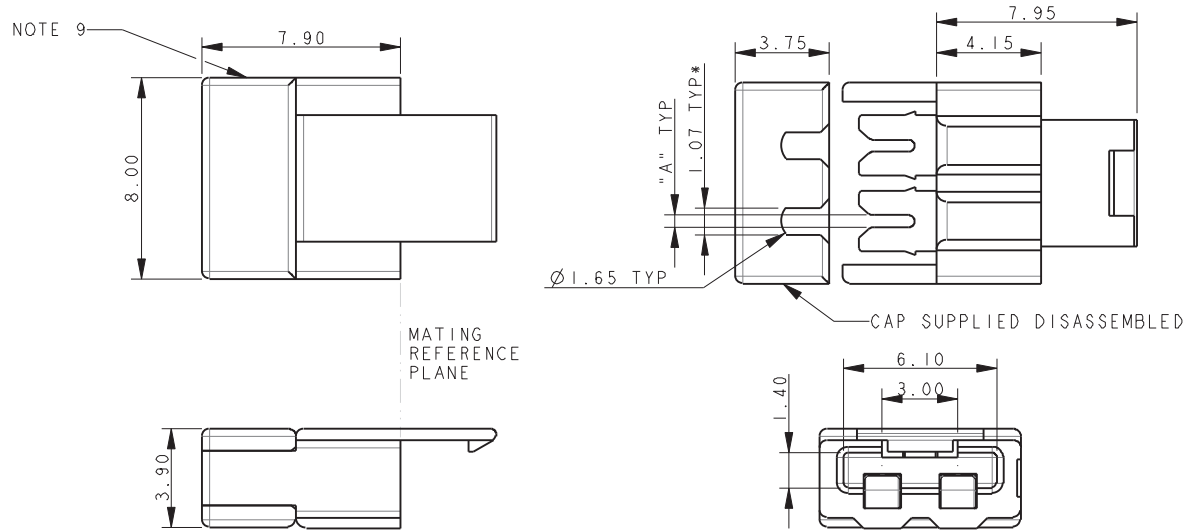
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IDC Socket Wire-To-Board: 24-9159-100

2 Position Wire Stop Cap

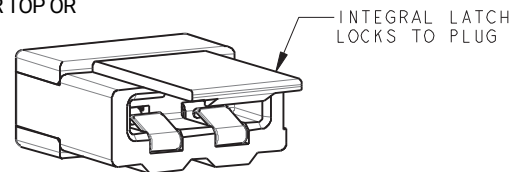
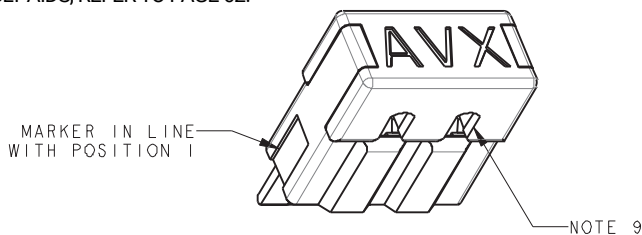
SOCKET-WIRED – 2 WAY WIRE STOP CAP



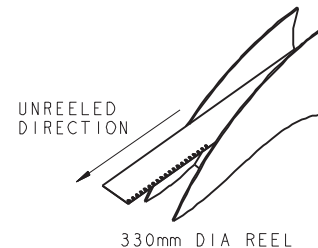
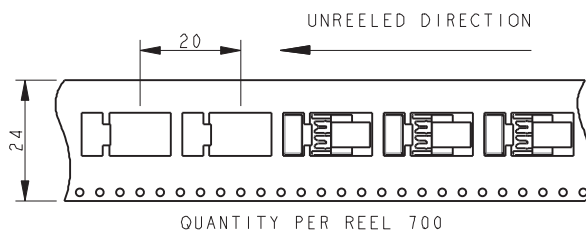
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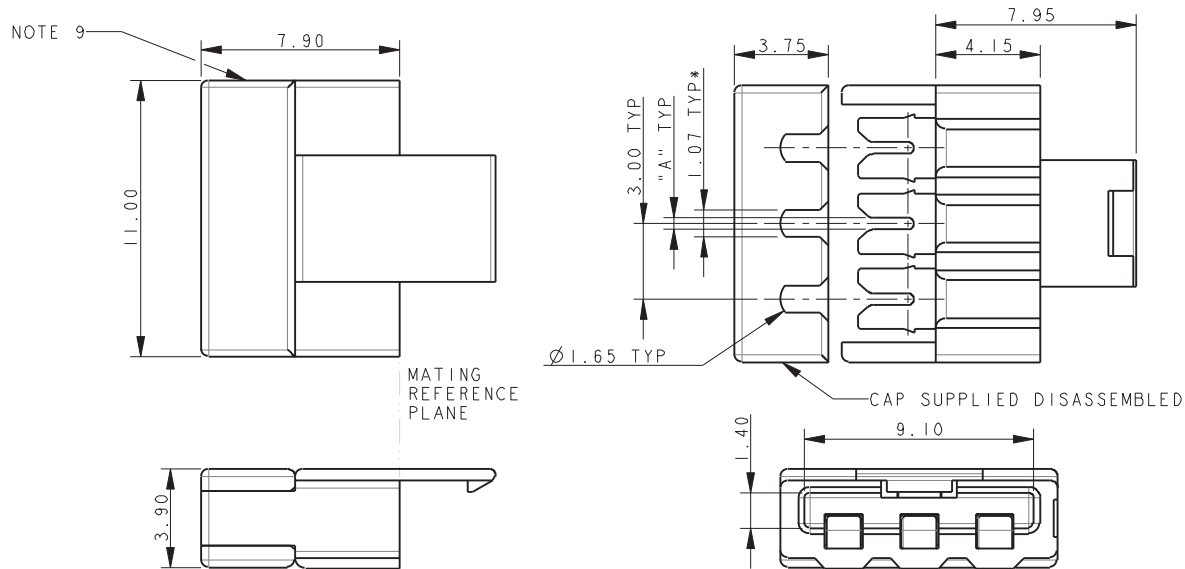
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IDC Socket: 24-9159 WTB

3 Position Wire Stop Cap

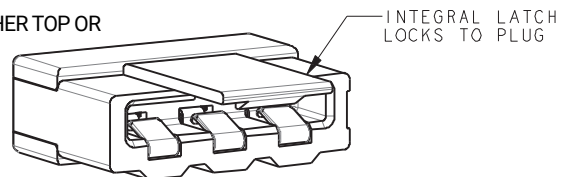
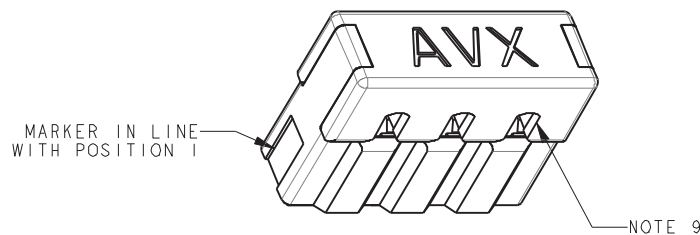
SOCKET-WIRED – 3 WAY WIRE STOP CAP



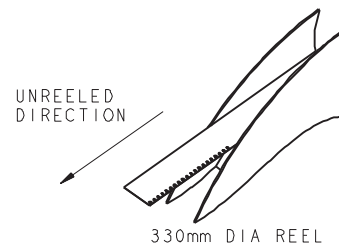
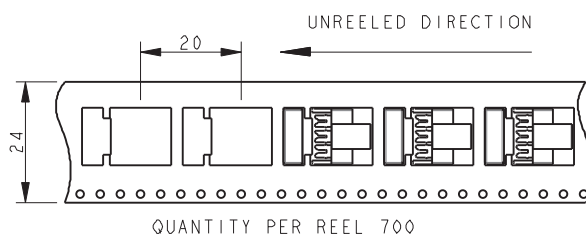
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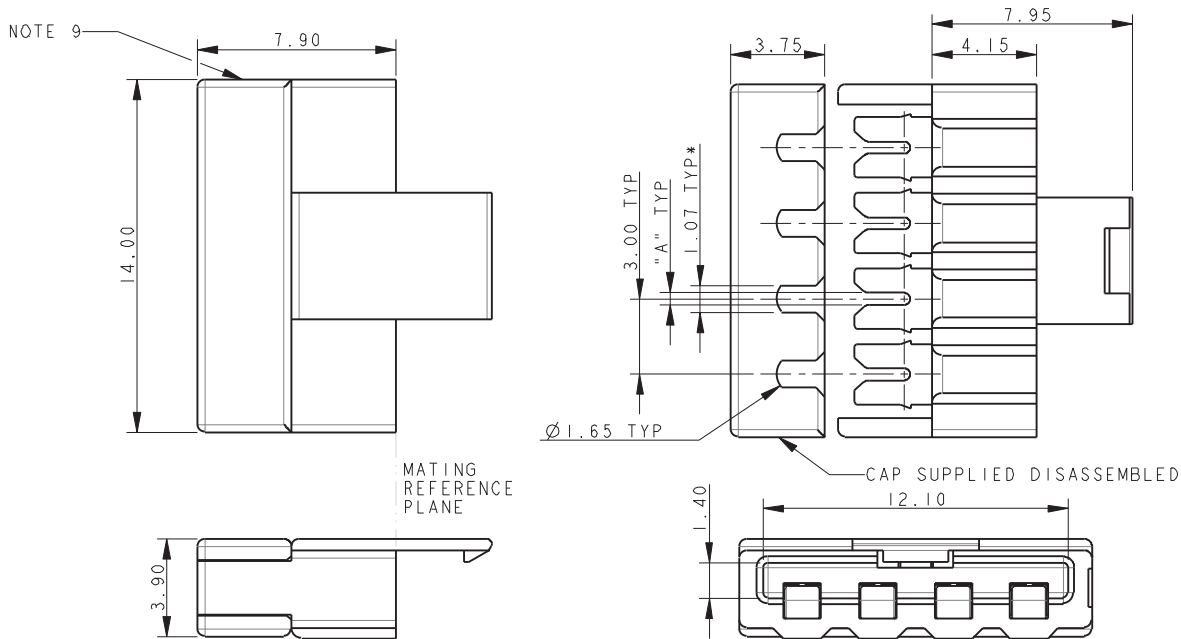
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4 Position Wire Stop Cap

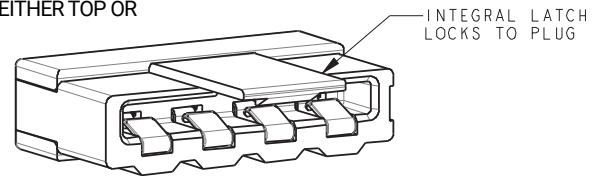
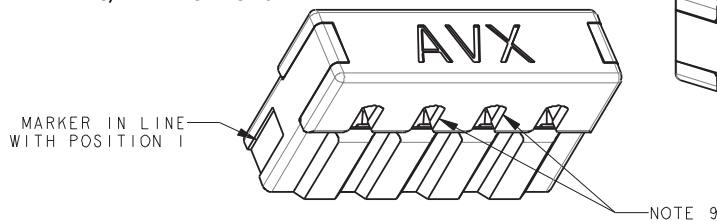
SOCKET-WIRED – 4 WAY WIRE STOP CAP



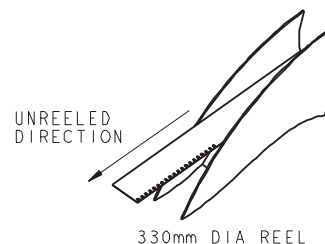
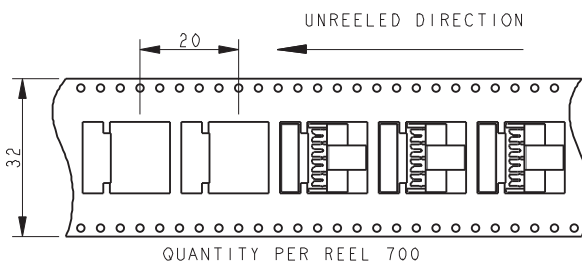
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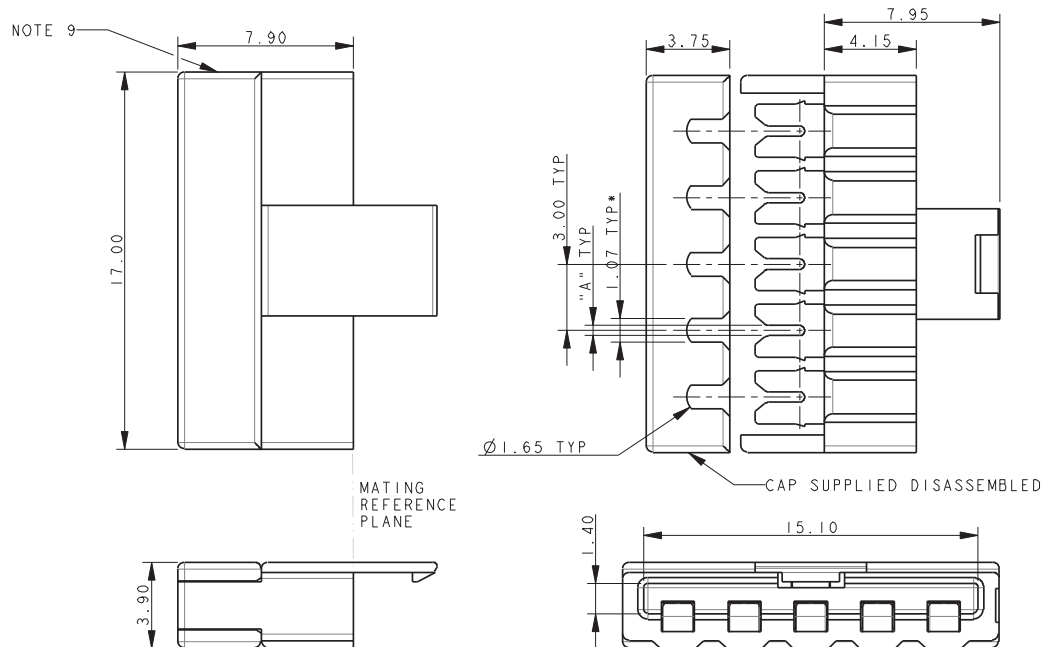
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5 Position Wire Stop Cap

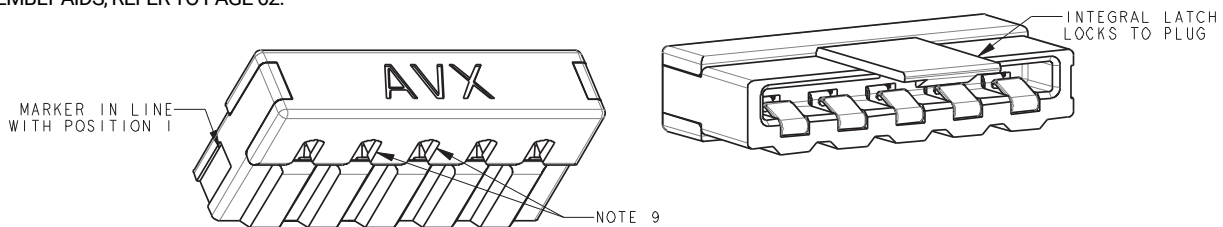
SOCKET-WIRED – 5 WAY WIRE STOP CAP



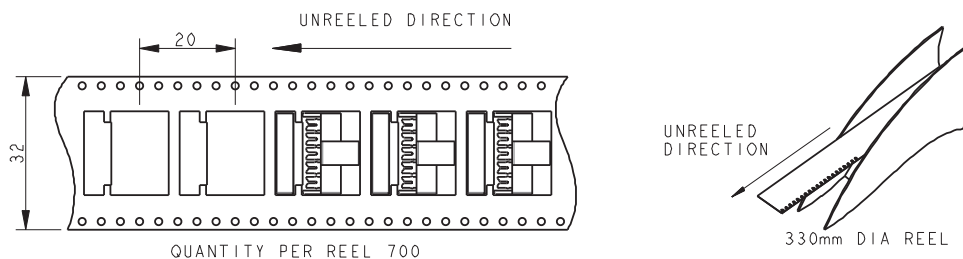
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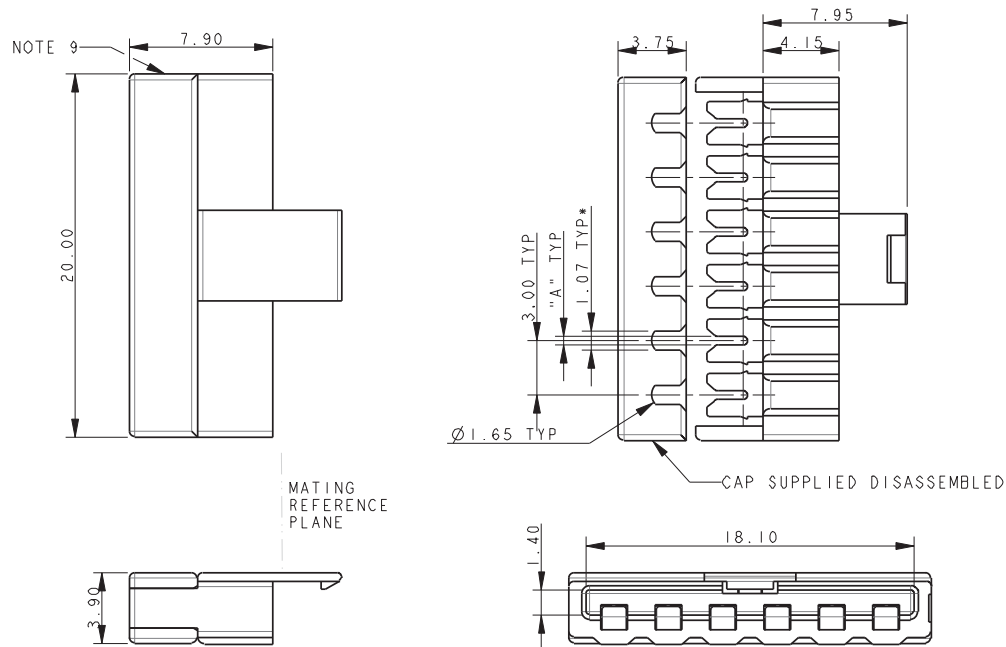
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IDC Socket Wire-To-Board: 24-9159-100

6 Position Wire Stop Cap

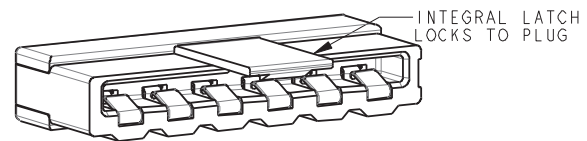
SOCKET-WIRED – 6 WAY WIRE STOP CAP



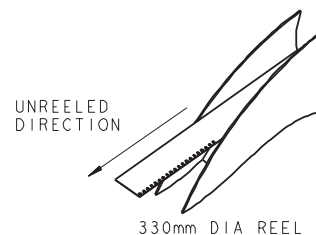
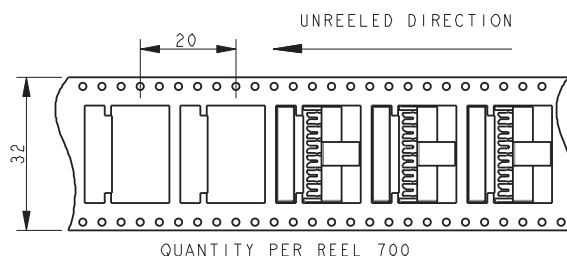
NOTES:

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 ON 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 51.
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 62.

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



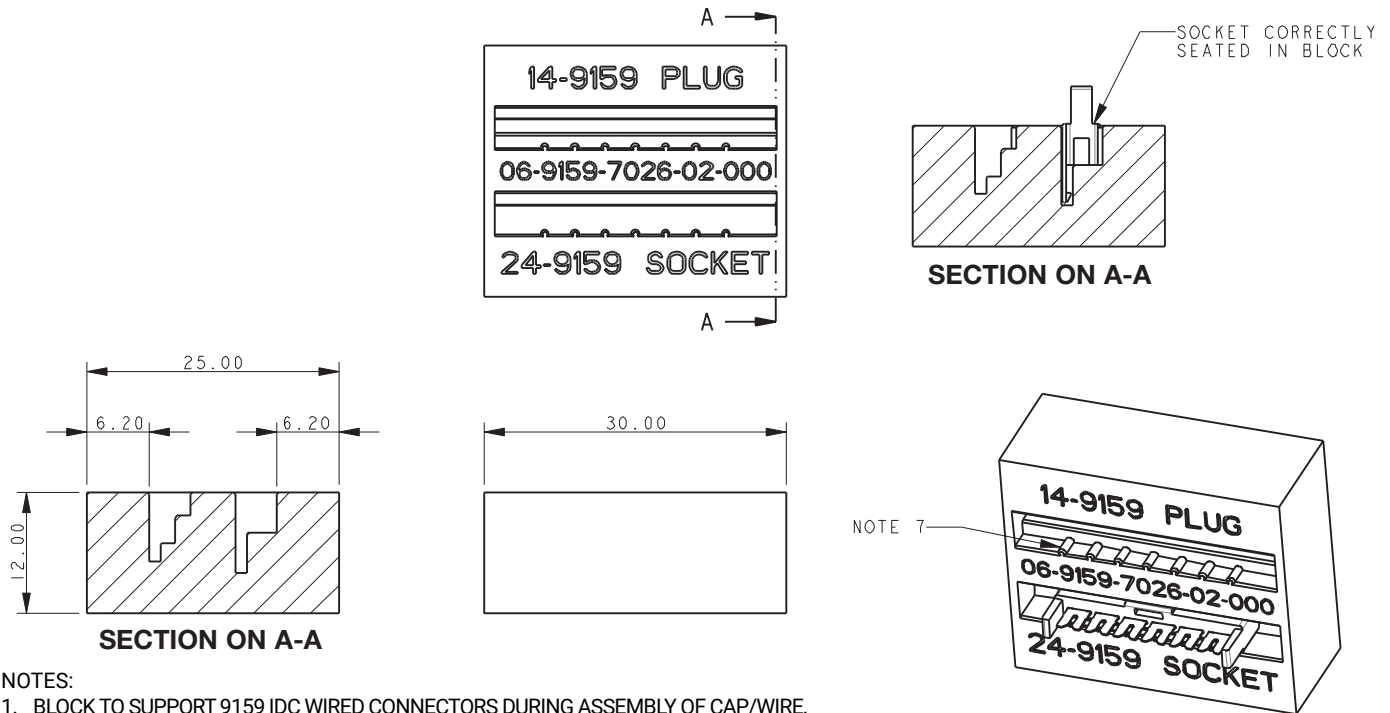
PACKING DETAILS CAP AND CONNECTOR SUPPLIED TOGETHER (2 PARTS)



IDC Socket Wire-To-Board: 24-9159-100

Assembly Support Block, Insertion Tool

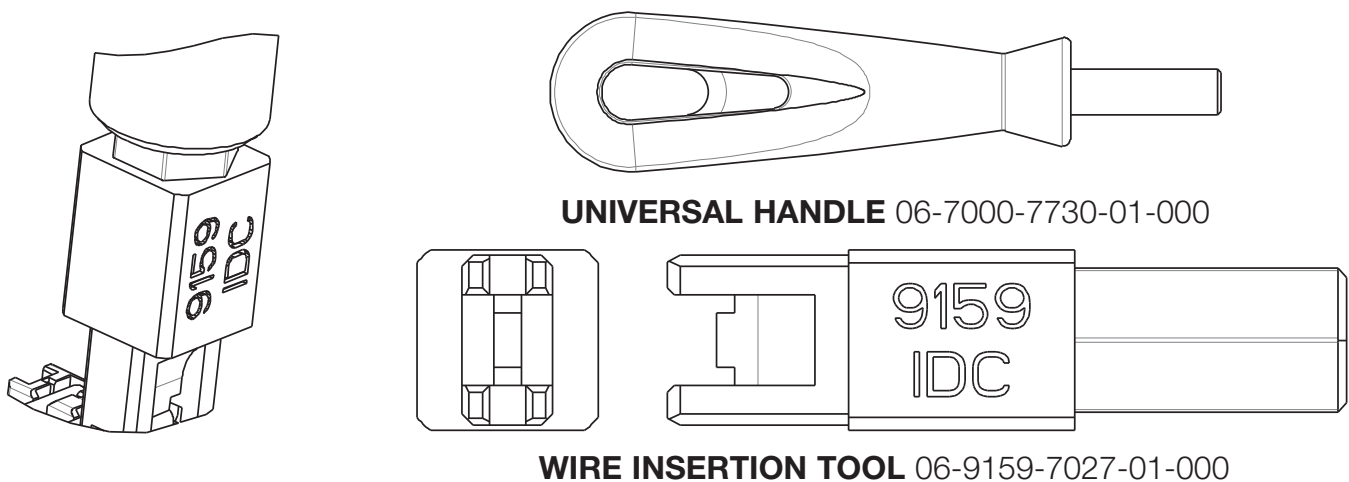
SOCKET-WIRED – ASSEMBLY SUPPORT BLOCK



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.

SOCKET-WIRED – WIRE INSERTION TOOL



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.

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