AVX industrial/transportation grade insulation displacement connectors (IDC) have been proven in the market for over ten years. Providing a very simple one-step termination process, these connectors proved a robust wire-to-board (WTB) termination in harsh applications.

The 9176-800 series has been developed specifically for 22-30AWG discrete wires in size critical applications. By reducing the “Z” axis height by 1.0mm and the overall volume by up to 50%, this new package size is an ideal choice in space constrained applications over previous IDC connectors. In addition, an expanded size range is available starting from a 1 position up to 4 positions in each wire gauge. The entire range provides new packaging solutions in industrial, medical and transportation applications such as smart metering, LED lighting, industrial controls and portable monitoring and measurement devices.

### APPLICATIONS
- Connecting discrete wires and components to a PCB
- Bringing power and signals onto a PCB
- Daisy chaining or interconnecting PCB’s together
- Application Notes: Refer to 201-01-216

### ELECTRICAL
- Current Rating: 22AWG: 7 amps
  24AWG: 6 amps
  26AWG: 5 amps
  28AWG: 4 amps
  30AWG: 3 amps
- Voltage Rating: 1p: 600V
  2p-4p: 100V
- Durability: 1 Cycle

### ENVIRONMENTAL
- Operating Temperature: -40°C to +125°C

### MECHANICAL
- Insulator Material: Glass-Filled Nylon 46; UL94V0
- Contact Material: Phosphor Bronze
- Plating: Lead-Free Tin Over Nickel

### FEATURES AND BENEFITS
- Redundant and fatigue resistant phosphor bronze material provides a gas tight, cold welded connection to the wire
- IDC connectors can be potted or over molded to encapsulate electronic modules and provide environmental protection
- The 1p version is available in industry standard colors to match individual wires for error free wire termination

### HOW TO ORDER

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Series</th>
<th>Number of Ways</th>
<th>Wire Gauge Size</th>
<th>Insulator Color</th>
<th>Plating Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>9176</td>
<td>00X</td>
<td>8XX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wire to Board Connector</td>
<td>001 = 1</td>
<td>002 = 2</td>
<td>003 = 3</td>
<td>004 = 4</td>
<td>9 = White Standard</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Code</td>
<td>Accepted Wire Gauge</td>
<td>Maximum Wire Insulation Diameter</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>853</td>
<td>22AWG Solid and Stranded</td>
<td>1.40</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>863</td>
<td>24AWG Solid and Stranded</td>
<td>1.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>873</td>
<td>26AWG Solid and Stranded</td>
<td>1.40</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>883</td>
<td>28AWG Solid and Stranded</td>
<td>0.80 to 1.40</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>884</td>
<td>30AWG Solid and Stranded</td>
<td>0.80</td>
</tr>
</tbody>
</table>

Certification: UL File #E90723
SUGGESTED PCB LAYOUT

PACKING DETAILS

NOTES:
1. 1 WAY CONNECTOR FOR IDC WIRE TO BOARD CONNECTOR.
2. CONTACT/CAP TO MATCH 22AWG TO 30AWG STRANDED AND SOLID WIRE, MAXIMUM INSULATOR 0.80 DIAMETER OR 1.40MM DIAMETER. REFER TO PAGE 54 FOR CORRECT OPTIONS.
3. FLAT FACE ON TOP OF CAP TO AID PICK AND PLACE ASSEMBLY.
4. FOR FULL PRODUCT SPECIFICATION REFER TO AVX SPEC 201-01-215.
5. ASSEMBLY PROCEDURE, REFER TO APPLICATION NOTES 201-01-216.
6. GENERAL TOLERANCE ±0.20 UNLESS STATED.
7. PACKED IN TAPE AND REEL, QUANTITY PER REEL 1700.
8. CONNECTOR OUTLINE.
9. CONTACT MATERIAL: TIN PLATED COPPER ALLOY.
10. INSULATOR MATERIAL: HIGH TEMPERATURE NYLON, GLASS FILLED.
   UL94 V-0, COLOR REFER TO PAGE 54.
11. UL REFERENCE E90723 (US AND CANADA).
Low Profile IDC 22-30AWG

PART NUMBER                    WIRE GAUGE                    B            A
See page 54
00-9176-002-853-X06      22AWG Solid and Stranded       1.50       0.47
00-9176-002-863-X06      24AWG Solid and Stranded       1.50       0.37
00-9176-002-873-X06      26AWG Solid and Stranded       1.50       0.28
00-9176-002-883-X06      28AWG Solid and Stranded       1.50       0.20
00-9176-002-893-X06      30AWG Solid and Stranded       1.50       0.20
00-9176-002-894-X06      30AWG Solid and Stranded       0.90       0.20

SUGGESTED PCB LAYOUT

NOTES:
1. 2 WAY CONNECTOR FOR IDC WIRE TO BOARD CONNECTOR.
2. CONTACT/CAP TO MATCH 22AWG TO 30AWG STRANDED AND SOLID WIRE. MAXIMUM INSULATOR 0.80 DIAMETER OR 1.40MM DIAMETER. REFER TO PAGE 54 FOR CORRECT OPTIONS.
3. FLAT FACE ON TOP OF CAP TO AID PICK AND PLACE ASSEMBLY.
4. FOR FULL PRODUCT SPECIFICATION REFER TO AVX SPEC 201-01-215.
5. ASSEMBLY PROCEDURE, REFER TO APPLICATION NOTES 201-01-216.
6. GENERAL TOLERANCE ±0.20 UNLESS STATED.
7. PACKED IN TAPE AND REEL, QUANTITY PER REEL 1700.
8. CONNECTOR OUTLINE.
9. CONTACT MATERIAL: TIN PLATED COPPER ALLOY.
10. INSULATOR MATERIAL: HIGH TEMPERATURE NYLON, GLASS FILLED. UL94 V-0. COLOR REFER TO PAGE 54.
11. UL REFERENCE E90723 (US AND CANADA).
Low Profile IDC 22-30AWG

SUGGESTED PCB LAYOUT

NOTES:
1. 3 WAY CONNECTOR FOR IDC WIRE TO BOARD CONNECTOR.
2. CONTACT/CAP TO MATCH 22AWG TO 30AWG STRANDED AND SOLID WIRE, MAXIMUM INSULATOR 0.80 DIAMETER OR 1.40MM DIAMETER. REFER TO PAGE 54 FOR CORRECT OPTIONS.
3. FLAT FACE ON TOP OF CAP TO AID PICK AND PLACE ASSEMBLY.
4. FOR FULL PRODUCT SPECIFICATION REFER TO AVX SPEC 201-01-215.
5. ASSEMBLY PROCEDURE, REFER TO APPLICATION NOTES 201-01-216.
6. GENERAL TOLERANCE ±0.20 UNLESS STATED.
7. PACKED IN TAPE AND REEL, QUANTITY PER REEL 1700.
8. CONNECTOR OUTLINE.
9. CONTACT MATERIAL: TIN PLATED COPPER ALLOY.
10. INSULATOR MATERIAL: HIGH TEMPERATURE NYLON, GLASS FILLED. UL94 V-0. COLOR REFER TO PAGE 54.
11. UL REFERENCE E90723 (US AND CANADA).

PACKING DETAILS

PART NUMBER    WIRE GAUGE    B    A
See page 54
00-9176-003-853-X06    22AWG Solid and Stranded    1.50    0.47
00-9176-003-863-X06    24AWG Solid and Stranded    1.50    0.37
00-9176-003-873-X06    26AWG Solid and Stranded    1.50    0.28
00-9176-003-883-X06    28AWG Solid and Stranded    1.50    0.20
00-9176-003-894-X06    30AWG Solid and Stranded    0.90    0.20
00-9176-003-884-X06    28AWG Solid and Stranded    0.90    0.20
00-9176-003-894-X06    30AWG Solid and Stranded    1.50    0.20
00-9176-003-894-X06    30AWG Solid and Stranded    0.90    0.20
Low Profile IDC 22-30AWG
9176-800

SUGGESTED PCB LAYOUT

PART NUMBER | WIRE GAUGE | B    | A
-------------|-------------|------|------
00-9176-004-B33-X06 | 22AWG Solid and Stranded | 1.50 | 0.47
00-9176-004-B36-X06 | 24AWG Solid and Stranded | 1.50 | 0.37
00-9176-004-B73-X06 | 26AWG Solid and Stranded | 1.50 | 0.28
00-9176-004-B83-X06 | 28AWG Solid and Stranded | 1.50 | 0.20
00-9176-004-B84-X06 | 28AWG Solid and Stranded | 0.90 | 0.20
00-9176-004-B93-X06 | 30AWG Solid and Stranded | 1.50 | 0.20
00-9176-004-B94-X06 | 30AWG Solid and Stranded | 0.90 | 0.20

NOTES:
1. 4 WAY CONNECTOR FOR IDC WIRE TO BOARD CONNECTOR.
2. CONTACT/CAP TO MATCH 22AWG TO 30AWG STRANDED AND SOLID WIRE, MAXIMUM INSULATOR 0.80 DIAMETER OR 1.40MM DIAMETER, REFER TO PAGE 54 FOR CORRECT OPTIONS.
3. FLAT FACE ON TOP OF CAP TO AID PICK AND PLACE ASSEMBLY.
4. FOR FULL PRODUCT SPECIFICATION REFER TO AVX SPEC 201-01-215.
5. ASSEMBLY PROCEDURE, REFER TO APPLICATION NOTES 201-01-216.
6. GENERAL TOLERANCE ±0.20 UNLESS STATED.
7. PACKED IN TAPE AND REEL, QUANTITY PER REEL 1700.
8. CONNECTOR OUTLINE.
9. CONTACT MATERIAL: TIN PLATED COPPER ALLOY.
10. INSULATOR MATERIAL: HIGH TEMPERATURE NYLON, GLASS FILLED, UL94 V-0, COLOR REFER TO PAGE 54.
11. UL REFERENCE E90723 (US AND CANADA).
Low Profile IDC 22-30AWG
9176-800

CONNECTOR DETAILS

00-9176-00X-8X4-X06
00-9176-00X-8X3-X06