RJ45 Connectors

D38999 Derived Cat5e / Cat6 & Cat6a RJ45 Connector Assemblies for Harsh Environments
RJ45 Connectors

D38999 Derived Cat5e / Cat6 & Cat6a RJ45 Connector Assemblies for Harsh Environments

- PC4B0002
  - Cat 5e Box Mount Feedthrough Receptacle
- PC4F0002
  - Cat 5e Jam Nut Feedthrough Receptacle
- PC4D0002
  - Cat 5e Free Plug
- PC4D000291
  - Cat 5e Free Plug (91 Series with Spring Screen Termination)
- PC4B0029
  - Cat 5e Free Plug (91 Series with Spring Screen Termination)
- PC4D0029
  - Cat 6 Jam Nut Feedthrough Receptacle
- PC4F0020
  - Cat 6 Jam Nut Feedthrough Receptacle
- PC4D0024
  - Cat 6 Plug Connector Assembly
- PC4B0022
  - Cat6a Box Mount Feedthrough Receptacle
- PC4F0014
  - Cat6a Jam Nut Feedthrough Receptacle
- PC4D0018 & PC4D0018**
  - Cat6a Free Plug
- PC4D0023
  - Cat6a Field Plug Connector Assembly

RJ45 Cat5 Tooling Options
RJ45 Cat6 & Cat6a Tooling Options
Connector Modifications

Performance
- Cat 5e per ISO/IEC 11801
- Cat 6 1Gb with enhanced grounding option
- Cat 6a 10Gb with enhanced grounding option
- D38999 shell size 19
- Sealed to IP68 for fluid and dust laden environments
- High levels of shock, vibration and mechanical impact protection
- Fully enclosed Aluminium, Marine Bronze and Stainless Steel shells for superior mechanical strength
- Positive cordset retention >100N axial force
- Optional external screen termination features on cable plug
- Isolated RJ-to-shell grounding option

The Polamco high speed RJ45 connector system incorporates a MIL-DTL-38999 series III derived metal shell with full 360 degree EMC and mechanical protection and has been designed to meet the requirements of high speed data connections where reliability through environmental sealing and enhanced mechanical protection and EMC performance are required.
## Material & Plating

<table>
<thead>
<tr>
<th>MATERIAL DESCRIPTION</th>
<th>PLATING CODE</th>
<th>PLATING DESCRIPTION</th>
<th>ROHS COMPLIANT</th>
<th>ENVIRONMENT PROTECTION/ CONDUCTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ALUMINIUM ALLOY 6262 / 6082</td>
<td>A</td>
<td>CADMIUM, OLIVE DRAB (5-10 MICRONS) QQ-P-416, TYPE II, CLASS 3 OVER ELECTROLESS NICKEL</td>
<td>YES (SUBJECT TO EXEMPTION)</td>
<td>CONDUCTIVE 500 HRS SALT SPRAY. EXEMPTION APPLICABLE FOR AEROSPACE / MILITARY APPLICATIONS. SEE ROHS WEBSITES FOR MORE INFORMATION.</td>
</tr>
<tr>
<td>2 NICKEL ALUMINIUM BRONZE DGS 1043/ NES 833</td>
<td>AB</td>
<td>ANODISE BLUE TO DEF 03-25</td>
<td>YES</td>
<td>NON CONDUCTIVE</td>
</tr>
<tr>
<td>3 BRASS CZ 121</td>
<td>AR</td>
<td>ANODISE RED TO DEF 03-25</td>
<td>YES</td>
<td>NON CONDUCTIVE</td>
</tr>
<tr>
<td>4 STAINLESS STEEL 303 S31</td>
<td>B</td>
<td>CADMIUM, OLIVE DRAB (5-10 MICRONS) QQ-P-416, TYPE II, CLASS 3 OVER ELECTROLESS NICKEL</td>
<td>YES (SUBJECT TO EXEMPTION)</td>
<td>CONDUCTIVE 500 HRS SALT SPRAY. EXEMPTION APPLICABLE FOR AEROSPACE / MILITARY APPLICATIONS. SEE ROHS WEBSITES FOR MORE INFORMATION.</td>
</tr>
<tr>
<td>44 STAINLESS STEEL 304</td>
<td></td>
<td>C ELECTROLESS NICKEL, AMS-C-26074, CLASS 4, GRADE B</td>
<td>YES</td>
<td>CONDUCTIVE</td>
</tr>
<tr>
<td>46 STAINLESS STEEL 316</td>
<td></td>
<td>CHP ELECTROLESS NICKEL, HIGH PHOSPHOR (9%- 14%), 22 MICRONS MINIMUM, BSEN ISO 4527:2003</td>
<td>YES</td>
<td>CONDUCTIVE</td>
</tr>
<tr>
<td>5 H.D.H.C COPPER CA 104</td>
<td></td>
<td>D BLACK ANODISE HARD PER MIL-A-8625, TYPE III, CLASS 2</td>
<td>YES</td>
<td>NON CONDUCTIVE</td>
</tr>
<tr>
<td>6 STAINLESS STEEL NUT / ALUMINIUM BODY</td>
<td></td>
<td>F 30-50 MICRONS BRIGHT ELECTROLESS NICKEL TO MIL-C-26074D, CLASS 4, GRADE C</td>
<td>YES</td>
<td>CONDUCTIVE 500 HRS SALT SPRAY</td>
</tr>
<tr>
<td>7 BLACK ACETAL</td>
<td></td>
<td>G BLACK ANODISE, SULPHURIC, PER MIL-A-8625, TYPE II, CLASS 2</td>
<td>YES</td>
<td>NON CONDUCTIVE</td>
</tr>
<tr>
<td>73 PEEK GL30</td>
<td></td>
<td>H CADMIUM GOLD, PER QQ-P-416, TYPE II, CLASS 3</td>
<td>YES (SUBJECT TO EXEMPTION)</td>
<td>CONDUCTIVE. EXEMPTION APPLICABLE FOR AEROSPACE / MILITARY APPLICATIONS. SEE ROHS WEBSITES FOR MORE INFORMATION.</td>
</tr>
<tr>
<td>74 ULTEM 2300 (30% GLASS FILLED)</td>
<td></td>
<td>HA HARD ANODISE, GREY, 30-50 MICRONS</td>
<td>YES</td>
<td>NON CONDUCTIVE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>J PASSIVATE, PER QQ-P-35 OR MI-S-5002</td>
<td>YES</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>K CHROMIC ANODISING, DEF 151, TYPE II</td>
<td>NO</td>
<td>NON CONDUCTIVE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L ALOCROM 1200</td>
<td>NO</td>
<td>CONDUCTIVE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LR IRIDITE CONVERSION ROHS COMPLIANT VERSION OF ALOCROM 1200, CLEAR/ IRIDESCENT, ALUMINIUM ONLY</td>
<td>YES</td>
<td>CONDUCTIVE</td>
</tr>
</tbody>
</table>

**NOTE:** PLEASE CONTACT SALES OFFICE FOR MATERIALS NOT LISTED ABOVE
<table>
<thead>
<tr>
<th>PLATING CODE</th>
<th>PLATING DESCRIPTION</th>
<th>ROHS COMPLIANT</th>
<th>ENVIRONMENT PROTECTION/ CONDUCTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>LV</td>
<td>5 MICRONS SILVER AND BLACKEN TO DEF 03-9</td>
<td>YES</td>
<td>CONDUCTIVE</td>
</tr>
<tr>
<td>M</td>
<td>BRIGHT CADMIUM OVER NICKEL QQ-P-416, TYPE II, CLASS 3</td>
<td>YES (SUBJECT TO EXEMPTION)</td>
<td>CONDUCTIVE 500 HRS SALT SPRAY. EXEMPTION APPLICABLE FOR AEROSPACE / MILITARY APPLICATIONS. SEE ROHS WEBSITES FOR MORE INFORMATION.</td>
</tr>
<tr>
<td>P</td>
<td>HEAVY NICKEL TO PLATING SPECIFICATION CP07 (500 HOUR SALT SPRAY FINISH)</td>
<td>YES</td>
<td>CONDUCTIVE 500 HRS SALT SPRAY</td>
</tr>
<tr>
<td>R</td>
<td>CADMIUM, OLIVE DRAB (5-10 MICRONS) QQ-P-416, TYPE II, CLASS 3 OVER ELECTROLESS NICKEL (2.5 - 7.5 MICRONS) REAR OF BACKSHELL TO HAVE SELECTIVE ELECTROLESS PLATING C-PLATE</td>
<td>YES (SUBJECT TO EXEMPTION)</td>
<td>CONDUCTIVE 500 HRS SALT SPRAY. EXEMPTION APPLICABLE FOR AEROSPACE / MILITARY APPLICATIONS. SEE ROHS WEBSITES FOR MORE INFORMATION.</td>
</tr>
<tr>
<td>T</td>
<td>TIN PLATE (COPPER) TO DEF 03-8</td>
<td>YES</td>
<td>CONDUCTIVE</td>
</tr>
<tr>
<td>TN</td>
<td>NICKEL/PTFE</td>
<td>YES</td>
<td>CONDUCTIVE 500 HRS SALT SPRAY</td>
</tr>
<tr>
<td>U</td>
<td>UNPLATED CLEAN FINISH NOT SHOT BLASTED</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>SILVER PLATE 5 MICRONS TO DEF 03-9</td>
<td>YES</td>
<td>CONDUCTIVE</td>
</tr>
<tr>
<td>Y</td>
<td>YELLOW CHROMATE OVER CADMIUM QQ-P-416, TYPE II, CLASS 2</td>
<td>NO</td>
<td>CONDUCTIVE</td>
</tr>
<tr>
<td>Z</td>
<td>SHOT BLAST FOR NON-REFLECTIVE FINISH</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>ZB</td>
<td>ZINC COBALT, OLIVE DRAB (5-10 MICRONS) OVER ELECTROLESS NICKEL (2.5 - 7.5 MICRONS)</td>
<td>YES</td>
<td>CONDUCTIVE 350 HRS SALT SPRAY.</td>
</tr>
<tr>
<td>ZBC</td>
<td>ZB-NUT (ZINC COBALT OLIVE DRAB OVER ELECTROLESS NICKEL) C-FOLLOWER (ELECTROLESS NICKEL) - 91 SERIES ONLY</td>
<td>YES</td>
<td>CONDUCTIVE 350 HRS SALT SPRAY. ZB.</td>
</tr>
<tr>
<td>ZBBC</td>
<td>ZB-NUT (ZINC COBALT OLIVE DRAB OVER ELECTROLESS NICKEL) ZB-FOLLOWER (ZINC COBALT OLIVE DRAB OVER ELECTROLESS NICKEL) WITH C MASKED AREA (ELECTROLESS NICKEL - SEE ABOVE) - 91 SERIES ONLY</td>
<td>YES</td>
<td>CONDUCTIVE 350 HRS SALT SPRAY.</td>
</tr>
<tr>
<td>ZK</td>
<td>ZINC COBALT BLACK PASSIVATE (5 - 10 MICRONS) OVER ELECTROLESS NICKEL (2.5 - 7.5 MICRONS)</td>
<td>YES</td>
<td>CONDUCTIVE 350 HRS SALT SPRAY.</td>
</tr>
<tr>
<td>ZN</td>
<td>ZINC NICKEL BLACK PASSIVATE (5-12 MICRONS) OVER ELECTROLESS NICKEL (8-12 MICRONS), ASTM B 841 CLASS 1</td>
<td>NO</td>
<td>ROHS COMPLIANT VARIANT UNDER DEVELOPMENT, SUBJECT TO TESTING SHOULD BE AVAILABLE FIRST QUARTER 2011</td>
</tr>
<tr>
<td>ZNB</td>
<td>ELECTROLESS NICKEL 8-12 MICRONS/ZINC NICKEL 5-12/PURE ZINC/Olive DRAB PASSIVATION, ASTM B 841 CLASS 1</td>
<td>NO</td>
<td>CONDUCTIVE (NOT ROHS COMPLIANT, UNTESTED 500 HRS SALT SPRAY FINISH)</td>
</tr>
<tr>
<td>ZNY</td>
<td>ELECTROLESS NICKEL 8-12 MICRONS/ZINC NICKEL 5-12 MICRONS/YELLOW PASSIVATION, ASTM B 841 CLASS 1</td>
<td>NO</td>
<td>CONDUCTIVE (NOT ROHS COMPLIANT, UNTESTED 500 HRS SALT SPRAY FINISH)</td>
</tr>
<tr>
<td>ZY</td>
<td>ZINC COBALT YELLOW CHROMATE (7.5 - 12.5 MICRONS) OVER ELECTROLESS NICKEL (2.5 - 7.5 MICRONS)</td>
<td>NO</td>
<td>CONDUCTIVE 500 HRS SALT SPRAY</td>
</tr>
</tbody>
</table>
**RJ45 Cat5 Connectors**

**PC4B0002 - Box Mount Feedthrough Receptacle**

**Connector Modifications: See Page 19**

---

**Notes**
- Generally to the requirements of MIL-DTL-38999

**Materials**
- RJ45
- Contacts 30µ Au/Ni
- Shielding - Nickel plated brass
- Body - PA, UL94V-0
- PCB - FR4, UL94V-0

**Performance**
- Current rating for power contacts: 2.1 Amps @ 70°C
- Voltage rating: 50V DC / 35V AC
- Temperature: -40°C to +120°C

**Example Part Number: PC4B0002-C-19N-1-C**

<table>
<thead>
<tr>
<th>PC4B0002</th>
<th>POLAMCO SERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>C =</td>
<td>RJ45 Style</td>
</tr>
<tr>
<td>A =</td>
<td>4 Way</td>
</tr>
<tr>
<td>B =</td>
<td>4 Way + 2 Power Contacts</td>
</tr>
<tr>
<td>C =</td>
<td>8 Way (Standard)</td>
</tr>
<tr>
<td>D =</td>
<td>8 Way + 2 Power Contacts</td>
</tr>
<tr>
<td>19 =</td>
<td>Shell Size</td>
</tr>
<tr>
<td>N =</td>
<td>Key Arrangement</td>
</tr>
<tr>
<td>1 =</td>
<td>Material (Aluminium Alloy) see Page 3</td>
</tr>
<tr>
<td>C =</td>
<td>Plating: see Pages 3 - 4</td>
</tr>
</tbody>
</table>

**PART NUMBER FOR UNGROUNDED VERSION:** PC4B0002-C-U-19N-1-C

---

**Seal - Silicone MS749ECR to BS6853 Cat 1**

**Insulator - PPS GL40 UL94**

**Potting - QSIL 550 UL94V-0**

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**Connector Modifications: See Page 19**
**RJ45 Cat5 Connectors**

**PC4F0002 - Feedthrough Jam Nut Receptacle**

Connector Modifications: See Page 19

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**NOTES**

GENERAL TO THE REQUIREMENTS OF MIL-DTL-38999

**MATERIALS**

RJ45

CONTACTS 30µ Au/Ni

SHIELDING - NICKEL PLATED BRASS

BODY - PA, UL94V-0

PCB - FR4, UL94V-0

SEAL - SILICONE MS749ECR TO BS6853 CAT 1

INSULATOR - PPS GL40 UL94

POTTING - QSIL 550 UL94V-0

PERFORMANCE

CURRENT RATING FOR POWER CONTACTS 2.1 AMPS @ 70°C

VOLTAGE RATING 50V DC / 35V AC

TEMPERATURE -40°C TO +120°C

---

**EXAMPLE PART NUMBER: PC4F0002-C-19N-1-C**

<table>
<thead>
<tr>
<th>PC4F0002</th>
<th>POLAMCO SERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>C =</td>
<td>RJ45 STYLE</td>
</tr>
<tr>
<td>A = 4 WAY</td>
<td></td>
</tr>
<tr>
<td>B = 4 WAY + 2 POWER CONTACTS</td>
<td></td>
</tr>
<tr>
<td>C = 8 WAY (STANDARD)</td>
<td></td>
</tr>
<tr>
<td>D = 8 WAY + 2 POWER CONTACTS</td>
<td></td>
</tr>
<tr>
<td>19 =</td>
<td>SHELL SIZE</td>
</tr>
<tr>
<td>N =</td>
<td>KEY ARRANGEMENT</td>
</tr>
<tr>
<td>1 =</td>
<td>MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3</td>
</tr>
<tr>
<td>C =</td>
<td>PLATING: SEE PAGES 3 - 4</td>
</tr>
</tbody>
</table>

PART NUMBER FOR UNGROUNDED VERSION: PC4F0002-C-U-19N-1-C
RJ45 Cat5 Connectors
PC4D0002 - Plug Connector Assembly

RJ45 Cat5 Tooling Options: See Page 17
Connector Modifications: See Page 19

NOTES
GENERALLY TO THE REQUIREMENTS OF MIL-DTL-38999

MATERIALS
RJ45
CONTACTS 30µ Au/Ni
SHIELDING - NICKEL PLATED BRASS
BODY - PA, UL94V-0

SEAL - SILICONE MS749ECR TO BS6853 CAT 1

PERFORMANCE
CURRENT RATING FOR POWER CONTACTS 2.1 AMPS @ 70°C
VOLTAGE RATING 50V DC / 35V AC
TEMPERATURE -40°C TO +120°C

EXAMPLE PART NUMBER: PC4D0002-C-19N-1-C

PC4D0002 = POLAMCO SERIES

C = RJ45 STYLE
    A = 4 WAY 4 x 24AWG
    B = 4 + 2 WAY 4 x 24AWG + 2 x 22AWG
    C = 8 WAY 8 x 26 AWG (STANDARD)
    D = 8 + 2 WAY 8 x 26AWG + 2 x 23AWG

19 = SHELL SIZE

N = KEY ARRANGEMENT

1 = MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3

C = PLATING: SEE PAGES 3 - 4

PART NUMBER FOR UNGROUNDED VERSION: PC4D0002-C-U-19N-1-C

Connector Modifications: See Page 19
RJ45, CAT5 CABLE PLUG WITH INTEGRATED CABLE GUIDE, SHIELDING AND CABLE CRIMP GROUNDED TO OUTER SHELL
DATA TRANSFER RATE TESTED TO 1 GIGABIT
CONTACT SALES OFFICE FOR TEST RESULTS

PART MARK HERE

NOTES
GENERALLY TO THE REQUIREMENTS OF MIL-DTL-38999

MATERIALS
RJ45
CONTACTS 30µ Au/Ni
SHIELDING - NICKEL PLATED BRASS
BODY - PBT, UL94V-0

PERFORMANCE
CURRENT RATING FOR POWER CONTACTS 2.1 AMPS @ 70°C
VOLTAGE RATING 50V DC / 35V AC
TEMPERATURE -40°C TO +120°C

EXAMPLE PART NUMBER: PC4D000291-C-19N-1-C
PC4D000291 = POLAMCO SERIES
C = RJ45 STYLE
A = 4 DATA CONTACTS (4 x 24AWG)
B = 4 DATA + 2 POWER CONTACTS (4 x 24AWG + 2 x 22AWG)
C = 8 DATA CONTACTS (8 x 26 AWG + 2x23AWG)
D = 8 + 2 WAY 8 x 26AWG + 2 x 23AWG
19 = SHELL SIZE
N = KEY ARRANGEMENT
1 = MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3
C = PLATING: SEE PAGES 3 - 4

PART NUMBER FOR UNGROUNDED VERSION: PC4D000291-C-U-19N-1-C

Connector Modifications: See Page 19
RJ45 Cat5 Tooling Options: See Page 17
PC4D000291 = POLAMCO SERIES
C = RJ45 STYLE
A = 4 DATA CONTACTS (4 x 24AWG)
B = 4 DATA + 2 POWER CONTACTS (4 x 24AWG + 2 x 22AWG)
C = 8 DATA CONTACTS (8 x 26 AWG + 2x23AWG)
D = 8 + 2 WAY 8 x 26AWG + 2 x 23AWG
19 = SHELL SIZE
N = KEY ARRANGEMENT
1 = MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3
C = PLATING: SEE PAGES 3 - 4

PART NUMBER FOR UNGROUNDED VERSION: PC4D000291-C-U-19N-1-C

RJ45 Cat5 Connectors
PC4D000291
Plug Connector Assembly for Double Screened Applications

RJ45 Cat5 Tooling Options: See Page 17
Connector Modifications: See Page 19
**RJ45 Cat6 Connectors**

**PC4B0029 - Feedthrough Jam Nut Receptacle**

Connector Modifications: See Page 19

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**RJ45, CAT6 FEEDTHROUGH CONNECTOR GROUNDED TO OUTER SHELL**

DATA TRANSFER RATE TESTED TO 1 GIGABIT, CONTACT SALES OFFICE FOR TEST RESULTS

**PART/BATCH MARK HERE**

**OPTION X (STANDARD)**

**M28x1 - 6g**

TO SUIT ‘H’ INTERFACE BACKSHELL

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**NOTES**

GENERALLY TO THE REQUIREMENTS OF MIL-DTL-38999 MATES WITH AMPHENOL RJFTV FINISH

SEE PAGES 15 - 16

MATERIALS

RJ45 CONTACTS COPPER WITH

SELECTIVE GOLD PLATE

SHIELDING - NICKEL PLATED BRASS

BODY - PA, UL94V-0 PCB - FR4, UL94V-0

SEAL - SILICONE ELASTOMER

INSULATOR - PPS GL40 UL94, COLOUR BLACK

POTTING - QSIL 550 UL94V-0

**PERFORMANCE**

CURRENT RATING FOR POWER CONTACTS 2.1 AMPS @ 70°C

VOLTAGE RATING 50V DC / 35V AC

TEMPERATURE -40°C TO +120°C

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**EXAMPLE PART NUMBER: PC4B0029-19NX-1-C-005**

<table>
<thead>
<tr>
<th>PC4B0029</th>
<th>POLAMCO SERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>SHELL SIZE</td>
</tr>
<tr>
<td>N</td>
<td>ALTERNATE KEYING</td>
</tr>
<tr>
<td>X</td>
<td>INSERT ROTATION (w, x, y, z)</td>
</tr>
<tr>
<td>1</td>
<td>MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3</td>
</tr>
<tr>
<td>C</td>
<td>PLATING: SEE PAGES 3 - 4</td>
</tr>
<tr>
<td>005</td>
<td>CABLE SEALING BACKSHELL</td>
</tr>
</tbody>
</table>

PART NUMBER FOR UNGROUNDED VERSION: PC4B0029-19NX-1-C-U

PART NUMBER AND BATCH CODE WILL BE MARKED ON THE ASSEMBLY UNLESS OTHERWISE SPECIFIED
RJ45 Cat6 Connectors
PC4F0020 - Feedthrough Jam Nut Receptacle

Connector Modifications: See Page 19

INTERCONNECT SOLUTIONS WORLDWIDE

NOTES
GENERALLY TO THE REQUIREMENTS OF MIL-DTL-38999 MATES WITH AMPHENOL RJFTV FINISH
SEE PAGES 15 - 16
MATERIALS
RJ45 CONTACTS COPPER WITH SELECTIVE GOLD PLATE
SHIELDING - NICKEL PLATED BRASS
BODY - PA, UL94V-0
PCB - FR4, UL94V-0

SEAL - SILICONE ELASTOMER
INSULATOR - PPS GL40 UL94, COLOUR BLACK
POTTING - QSIL 550 UL94V-0

PERFORMANCE
VOLTAGE RATING 50V DC / 35V AC
TEMPERATURE -40°C TO +120°C

EXAMPLE PART NUMBER: PC4F0020-19NX-1-C
PC4F0020 = POLAMCO SERIES
19 = SHELL SIZE
N= ALTERNATE KEYING
X= INSERT ROTATION (w, x, y, z)
1 = MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3
C = PLATING: SEE PAGES 3 - 4

PART NUMBER FOR UNGROUNDED VERSION: PC4F0020-19NX-1-C-U

PART NUMBER AND BATCH CODE WILL BE MARKED ON THE ASSEMBLY UNLESS OTHERWISE SPECIFIED
RJ45 Cat6 Connectors
PC4D0024 - Plug Connector Assembly

Connector Modifications: See Page 19

RJ45, CAT6 CABLE PLUG WITH INTEGRATED CABLE GUIDE, SHIELDING AND CABLE CRIMP GROUNDED TO OUTER SHELL FOR USE WITH AWG24/26 CABLE
DATA TRANSFER RATE TESTED TO 1 GIGABIT

RJ45 PLUG SUPPLIED WITH CONNECTOR ASSEMBLY
OPTIONAL HIGH INTEGRITY GROUNDING RING
O RING SEAL
O RING SEAL
CABLE SHOWN FOR CLARITY ONLY
A-A

CABLE SEALING RANGE 6.70 ± 0.50

PART MARK HERE
43.00 MAX

OPTION X (STANDARD)

OPTION W

OPTION Y

OPTION Z

NOTES
GENERALLY TO THE REQUIREMENTS OF MIL-DTL-38999 MATES WITH AMPHENOL RJFTV FINISH
SEE PAGES 15 - 16
MATERIALS
RJ45
CONTACTS COPPER WITH SELECTIVE GOLD PLATE SHIELDING - NICKEL PLATED BRASS BODY - PA, UL94V-0 SEAL - SILICONE ELASTOMER

PERFORMANCE
VOLTAGE RATING 50V DC / 35V AC TEMPERATURE -40°C TO +120°C

EXAMPLE PART NUMBER: PC4D0024-19NX-1-C-H
PC4D0024 = POLAMCO SERIES
19 = SHELL SIZE
N = ALTERNATE KEYING
X = INSERT ROTATION (w, x, y, z)
1 = MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3
C = PLATING; SEE PAGES 3 - 4
H = HIGH INTEGRITY GROUNDING (OMIT FOR STANDARD)

PART NUMBER FOR UNGROUNDED VERSION: PC4D0024-19NX-1-C-U
PART NUMBER AND BATCH CODE WILL BE MARKED ON THE ASSEMBLY UNLESS OTHERWISE SPECIFIED

NOTE
MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3
PLATING: SEE PAGES 3 - 4
HIGH INTEGRITY GROUNDING (OMIT FOR STANDARD)

Tel: +44 (0)845 017 1545

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RJ45 Cat6a Connectors
PC4B0022 - Feedthrough Receptacle Assembly

Connector Modifications: See Page 19

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NOTES
GENERALLY TO THE REQUIREMENTS OF MIL-DTL-38999

MATERIALS
RJ45 CONTACTS COPPER WITH SELECTIVE GOLD PLATE
SHIELDING - NICKEL PLATED BRASS
BODY - PBT, UL94V-0
PCB - FR4, UL94V-0

SEAL - SILICONE ELASTOMER
INSULATOR - PPS GL40 UL94, COLOUR BLACK
POTTING - QSIL 550 UL94V-0

PERFORMANCE
VOLTAGE RATING 50V DC / 35V AC
TEMPERATURE -40°C TO +120°C

EXAMPLE PART NUMBER: PC4B0022-19N-1-C

PC4B0022 = POLAMCO SERIES
19 = SHELL SIZE
N = KEY ARRANGEMENT
1 = MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3
C = PLATING: SEE PAGES 3 - 4

PART NUMBER FOR UNGROUNDED VERSION: PC4B0022-19N-1-C-U

PART NUMBER AND BATCH CODE WILL BE MARKED ON THE ASSEMBLY UNLESS OTHERWISE SPECIFIED

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RJ45 Cat6a Connectors
PC4F0014 - Feedthrough Jam Nut Receptacle

Connector Modifications: See Page 19

NOTES
GENERALLY TO THE REQUIREMENTS OF MIL-DTL-38999

MATERIALS
RJ45
CONTACTS COPPER WITH SELECTIVE GOLD PLATE
SHIELDING - NICKEL PLATED BRASS
BODY - PBT, UL94V-0
PCB - FR4, UL94V-0

SEAL - SILICONE ELASTOMER
INSULATOR - PPS GL40 UL94, COLOUR BLACK
POTTING - QSIL 550 UL94V-0

PERFORMANCE
VOLTAGE RATING 50V DC / 35V AC
TEMPERATURE -40°C TO +120°C

EXAMPLE PART NUMBER: PC4F0014-19N-1-C
PC4F0014 = POLAMCO SERIES
19 = SHELL SIZE
N = KEY ARRANGEMENT
1 = MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3
C = PLATING: SEE PAGES 3 - 4

PART NUMBER FOR UNGROUNDED VERSION: PC4F0014-19N-1-C-U

PART NUMBER AND BATCH CODE WILL BE MARKED ON THE ASSEMBLY UNLESS OTHERWISE SPECIFIED

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**RJ45 Cat6a Connectors**

**PC4D0018 - Plug Connector Assembly**

**RJ45 Cat6 & Cat6a Tooling Options:** See Page 18  
**Connector Modifications:** See Page 19

---

**NOTES**

GENERALLY TO THE REQUIREMENTS OF MIL-DTL-38999

**MATERIALS**

- **RJ45**
  - CONTACTS COPPER WITH SELECTIVE GOLD PLATE
  - SHIELDING - NICKEL PLATED BRASS
  - BODY - PBT, UL94V-0
  - SEAL - SILICONE

**PERFORMANCE**

- **VOLTAGE RATING** 50V DC / 35V AC
- **TEMPERATURE** -40°C TO +120°C

---

**EXAMPLE PART NUMBER: PC4D0018-19N-1-C-H**

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<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tr>
<td>PC4D0018</td>
<td>POLAMCO SERIES</td>
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<tr>
<td>19</td>
<td>SHELL SIZE</td>
</tr>
<tr>
<td>N</td>
<td>KEY ARRANGEMENT</td>
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<tr>
<td>1</td>
<td>MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3</td>
</tr>
<tr>
<td>C</td>
<td>PLATING: SEE PAGES 3 - 4</td>
</tr>
<tr>
<td>H</td>
<td>HIGH INTEGRITY GROUNDING (OMIT FOR STANDARD)</td>
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**PART NUMBER FOR UNGROUNDED VERSION:** PC4D0018-19N-1-C-U
RJ45 Cat6a Connectors
PC4D0018**
Plug Connector Assembly for Double Screened Applications
RJ45 Cat6 & Cat6a Tooling Options: See Page 18
Connector Modifications: See Page 19

NOTES
GENERALLY TO THE REQUIREMENTS OF MIL-DTL-38999
PLATING: SEE PAGES 15 - 16
MATERIALS: SEE PAGE 15

RJ45 CONTACTS SELECTIVE GOLD PLATING
SHIELDING - NICKEL PLATED BRASS
BODY - PBT, UL94V-0
SEAL - SILICONE

PERFORMANCE
VOLTAGE RATING 50V DC / 35V AC
TEMPERATURE -40°C TO +120°C

EXAMPLE PART NUMBER PC4D0018BT-19N-1-C-H
PC4D0018 POLAMCO SERIES
BT = BT - SUPPLIED WITH BAND, 91 SUPPLIED WITH SPRING
19 = SHELL SIZE
N = KEY ARRANGEMENT, OPTIONS N, A, B, C, D, E
1 = MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3
C = PLATING: SEE PAGES 3 - 4
H = HIGH INTEGRITY GROUNDING (OMIT FOR STANDARD)
RJ45 Cat6a Connectors
PC4D0023 - Field Plug Connector Assembly (No Tooling Required)

Connector Modifications: See Page 19

NOTE
GENERALLY TO THE REQUIREMENTS OF
MIL-DTL-38999

FINISH
SEE PAGES 15 - 16

MATERIALS
RJ45 PLUG
CONTACTS COPPER WITH
SELECTIVE GOLD PLATING
HOUSING - ZINC DIECAST
SEAL - SILICONE

PERFORMANCE
TEMPERATURE -40°C TO +70°C

EXAMPLE PART NUMBER PC4D0023-19N-1-C

<table>
<thead>
<tr>
<th>PART NUMBER</th>
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<td>PC4D0023</td>
<td>POLAMCO SERIES</td>
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<tr>
<td>19</td>
<td>SHELL SIZE</td>
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<td>10</td>
<td>CABLE DIAMETER IN MM +/-0.5 OPTIONS 06, 08 AND 10</td>
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<td>N</td>
<td>KEY ARRANGEMENT, OPTIONS N, A, B, C, D, E</td>
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<tr>
<td>1</td>
<td>MATERIAL (ALUMINIUM ALLOY) SEE PAGE 3</td>
</tr>
<tr>
<td>C</td>
<td>PLATING: SEE PAGES 3 - 4</td>
</tr>
</tbody>
</table>

PART NUMBER FOR UNGROUNDED VERSION: PC4D0023-19N-1-C-U
**Crimp Tool**

**Features**
1-step crimp tool crimps all contacts and fixes the square crimp in one action

**Part Number**
Y-ConTool-11

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**Cable Stripping Tool**

**Features**
Cable stripping tool with adjustable blades

**Part Number**
Y-ConTool-20

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**Cable-to-Plug Assembly Tool**

**Features**
Enables easy assembly when inserting the cable and insert into the plug

**Part Number**
Y-ConTool-30
2980070-01 & 2980075-01
Professional Handtool for the assembly of shielded Cat 6 plugs.
This is a real One-Step tool: contacts and shield is crimped at the same time.
Flange Mount Options for PC420 Series

001 = $\varnothing$ 3.2
002 = Countersunk
003 = Tapped M3

Optional Panel Thickness for PC424 Series

Jam nut thread length increased to suit various panels wall section.

$*1.58 \cdot 3.20$ STANDARD PANEL THICKNESS
L = OPTIONAL PANEL THICKNESS

Torque Differential Option for PC426 Series

The plug coupling nut incorporates a 2:1 torque differential for high vibration applications.

Integral Backshells For PC420 / 24 / 26

Integral backshell options utilised where there is insufficient room to install a separate backshell options include, 91 & BT series.