

MISSION-CRITICAL
INTERCONNECT
SOLUTIONS



Glenair
SIGNATURE SERIES

POWER
LOAD™

High-Power Aircraft Connectors and Cables

High-Voltage, High-Frequency, and High-Current Solutions

AUGUST 2022



POWER LOAD™ High-Power Aircraft Electrical Connectors

With high current carrying capacity Crown Ring contacts and flexible TurboFlex® cabling



The aircraft industry's most advanced power distribution interconnect

Electrical power generation technology in aircraft has evolved to meet modern requirements for higher power and lighter weight systems. Growing electrical power needs on commercial aircraft—and emerging eVTOL platforms—have caused major changes in power system architectures to accommodate peak-load stress factors in electrical wire interconnect (EWIS) cabling.

- **PowerLoad™**, the high-vibration, high-temperature interconnect optimized for higher-voltage, higher-altitude, and higher-frequency
- **TurboFlex®**, the Glenair signature high-flexibility power cable solution
- **Crown Ring** crimp, bus bar, and lug style contacts, optimized for high current carrying, high temperature performance.

A GLENAIR SIGNATURE SOLUTION: CONNECTORS, CONTACTS, CABLES, ACCESSORIES, AND ASSEMBLIES

- For applications up to 2000 VAC / 1500 Hz, and from 150 – 800 Amps.
- 230°C maximum operating temperature connectors (stainless steel bodies and shells)
- TurboFlex® rope lay power cables optimized for PowerLoad™ connectors, from 8 AWG to 4/0
- Ultra-flexible cable configurations with ruggedized Duralectric or FEP jacketing:
 - Single-wall hookup wire
 - Dual-wall jacketed interconnect cabling
- High-temperature Crown Ring contact technology
- Patented wire sealing grommet
- Heavy-duty accessory interface

Table of contents

THE POWERLOAD ECOSYSTEM

Solution overview and performance data



Fully tested and qualified, PowerLoad technical data includes:

- PowerLoad ecosystem solution performance overview
- Compression grommet series technical specifications
- **Crown Ring contact** current carrying capacity tables
- Series performance specifications and test reports
- Contact arrangements and polarization

POWERLOAD CONNECTORS

Crimp contact series with compression grommet for TurboFlex or tape-wrapped wire



- 972-101** Plug with banding backshell
972-102 Wall-mount receptacle with banding backshell
972-103 Jam-nut receptacle with banding backshell
972-203 Feed-thru receptacle, jam-nut mount
850-150 and **-151** Crown Ring contacts

POWERLOAD CONNECTORS

Bus bar / lug contact series with bonded grommet for use with TurboFlex extruded wire



- 972-011** Plug with banding platform
972-012 Wall-mount receptacle with banding platform
972-013 Jam-nut receptacle with banding platform
850-323 and **-324** bus bar/lug contacts

POWERLOAD ACCESSORIES

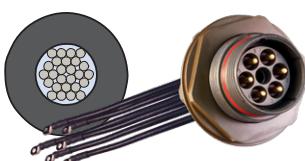
Heavy-duty for large power cables



- 390PX055** EMI/RFI Environmental Backshell, St., 45°, 90°
4470PXS1128 Compression Backshell with Band Platform
770-001S Environmental heat shrink boots
660-128 PowerLoad receptacle protective cover
660-129 PowerLoad plug protective cover
930-026 Gasket for flange-mount connectors
600-289 Connector holding tools
600-286 "Crow's Foot" plug-to-receptacle torquing wrench
600-288 "Crow's Foot" backshell torquing wrench

TURBOFLEX HOOKUP

Cabling with FEP and Duralectric insulation



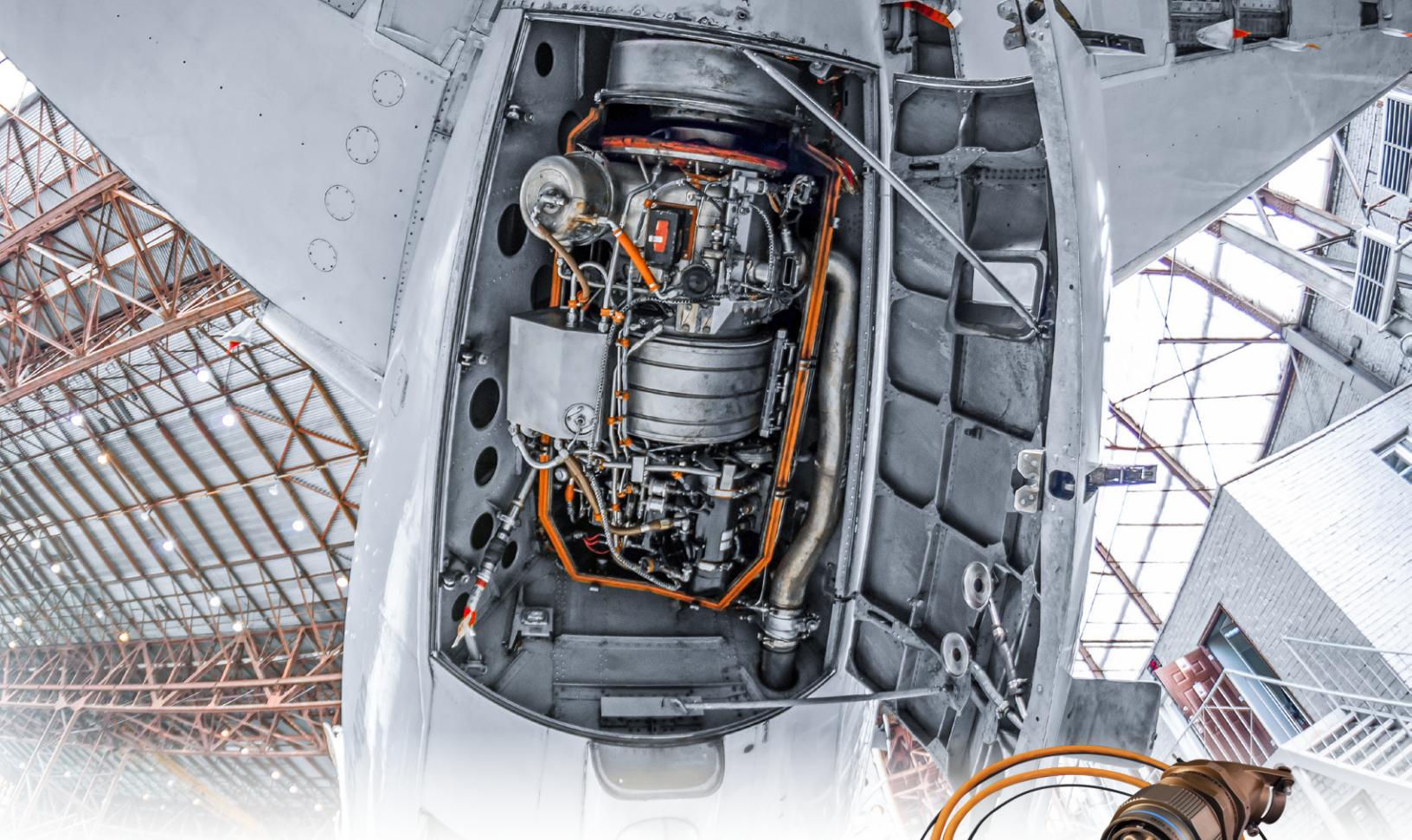
- 961-102-2000** FEP insulation, 2000 VAC
961-106-1500 Duralectric insulation, 1500 VAC
961-106-2000 Duralectric insulation, 2000 VAC
961-108-1500 Duralectric Light insulation, 1500 VAC
961-108-2000 Duralectric Light insulation, 2000 VAC

TURBOFLEX INTERCONNECT

Cabling with FEP and Duralectric insulation



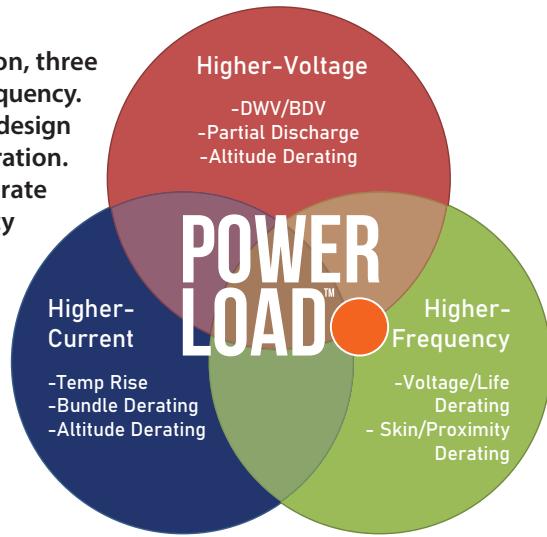
- 961-103-2000** FEP insulation, FEP outer jacket, 2000 VAC
961-104-2000 FEP insulation, Duralectric outer jacket, 2000 VAC
961-107-1500 Duralectric insulation, Duralectric outer jacket, 1500 VAC
961-107-2000 Duralectric insulation, Duralectric outer jacket, 2000 VAC
961-109-1500 Duralectric Light insulation and outer jacket, 1500 VAC
961-109-2000 Duralectric Light insulation and outer jacket, 2000 VAC



THE POWERLOAD ECOSYSTEM

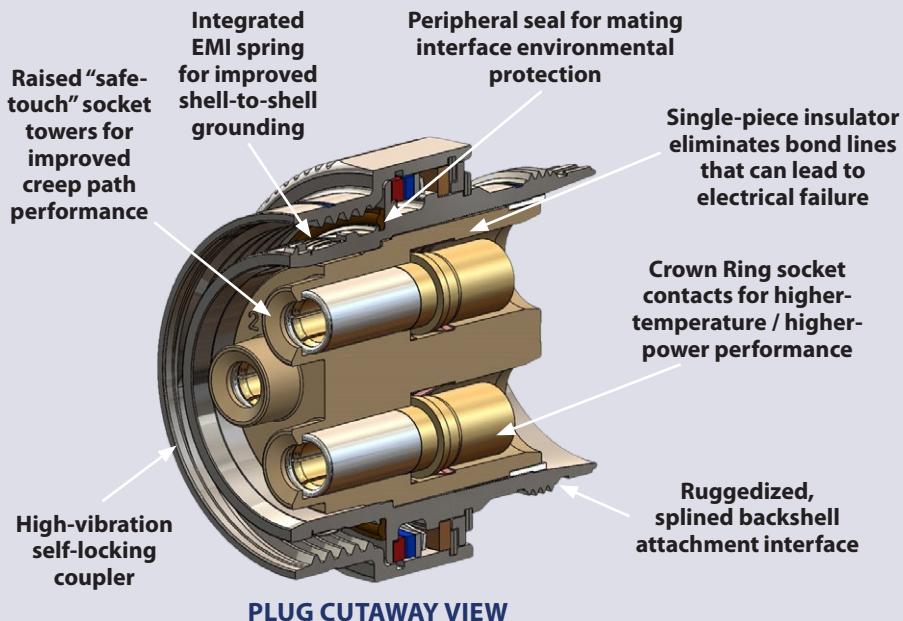
Optimized by Design for High-Voltage, High-Current, and High-Frequency

When specifying interconnect technology for aircraft power distribution, three main performance variables must be considered: voltage, current, and frequency. Higher voltage applications demand premium-quality insulation, careful design for partial discharge, and quality manufacturing to ensure reliable operation. Higher-current applications require detailed, peak-load analysis, accurate wire gauge selection, and high-temperature materials. Higher-frequency systems must be designed for accurate skin/proximity effect derating, incorporate comprehensive operating and peak voltage/current analyses, and perform in accordance with aircraft power generation and distribution electronics. Cable-to-contact termination must be exactingly performed to eliminate voids that can potentially initiate partial discharge events. The Glenair PowerLoad ecosystem, with its highly engineered connectors, cables, and Crown Ring contacts ensures peak performance for every specification requirement in high-current, high-voltage, and high-frequency applications.



Key performance attributes for Glenair Signature PowerLoad™ connectors, Crown Ring contacts, and TurboFlex® cable

POWERLOAD™: KEY CONNECTOR AND CONTACT DESIGN FEATURES



GLENAIR SIGNATURE CROWN RING CONTACTS



- Crimp, bus bar, and lug wire termination
- Precision-machined high conductivity copper alloy
- Up to 60% lower contact resistance than equivalent AS39029 contacts
- Higher operating temperature resistance compared to other specialized high-power contacts
- Gold-plated for enhanced high-vibration durability

TURBOFLEX® ULTRA FLEXIBLE / RUGGED POWER CABLES WITH DURALECTRIC OR FEP JACKETING

TurboFlex, Glenair high-flexibility power cabling has been optimized for use with PowerLoad connectors, and is supplied with either industry-standard FEP or Glenair signature Duralelectric jacketing material, which is optimized for fluid immersion, caustic chemical exposure, temperature extremes, and UV radiation. Both materials are available in a broad range of colors including safety orange.



Available with cable gauge selections from 8 AWG to 4/0, to provide suitable margins for DWV, frequency derating, and peak-load performance.

TURBOFLEX® WITH DURALECTRIC™ JACKETING: ENVIRONMENTAL PERFORMANCE

Temperature rating: -60°C to 200°C

Halogen free per IEC 60614-1

Accelerated weathering and simulated solar radiation at ground level per IEC 60068-2-5; 56

Days exposure, suitable for greater than 50 years of service in direct sunlight

Flame resistant per IEC 60614-1

Flame resistant per UL 1685, section 12 (FT4/IEEE120), vertical-tray fire-propagation and smoke release test

Flame resistant per FAR 25.853 (A) amendment 25-116, appendix F part I (A) (1), 60 second vertical burn test

Limiting oxygen index of 45 per ISO 4589-2:1999

Low smoke per NES 711, smoke density of 11.75

Smoke density class F1 per NF F 16-101 IAW DIN EN 60695-2-11:2011

Low smoke toxicity per NES 713, tested value of 1.9

Fungus rating of 0 per MIL-STD-810g method 508.5, Does not support fungal growth

ASTM D624, die B tear strength, 150 pounds per inch minimum on jacket material

Low outgassing per ASTM e595 after post curing, TML .06%, CVCM .006%, WVR .02%

Resistant to fluids per MIL-STD-810F, method 504

JP-8 per MIL-DTL-83133 (NATO type 34)

MIL-H-5606 hydraulic fluid

MIL-PRF-23699 lubricating oil

MIL-C-85570 cleaner

TT-I-735 Isopropyl alcohol

AMS 1432 potassium acetate deicing/anti-icing fluid

MIL-C-87252 coolant

Amerex AFF fire extinguishing foam

Connector and contact exploded views and performance overview

INTRODUCTION

POWERLOAD WITH REMOVABLE COMPRESSION GROMMET

The diagram illustrates the exploded view of the PowerLoad connector assembly. It includes the 972-101 Plug Connector, Wire Sealing Grommet, Accessory Interface, Wire Separator, and Compression Backshell with Banding Platform.

| High power capability | 230°C max. operating temperature (stainless steel) | High-temperature Crown Ring contact technology | Patented, removable wire sealing grommet (US Patent 9356387) | Heavy-duty accessory interface |
|--|---|---|--|--|
| <ul style="list-style-type: none"> Superior current carrying capacity 100% DWV tested at 5,000 VAC (all arrangements) Single-piece insulator eliminates internal bond-lines Extended creepage distances with tower/recess interface design | <ul style="list-style-type: none"> High-temperature PEEK thermoplastic insulators High-temperature silicone rubber for all seals Stainless Steel EMI spring provides excellent EMI shielding and shell-to-shell grounding at elevated temperatures | <ul style="list-style-type: none"> Body is precision-machined from high conductivity copper alloy Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire) Outstanding conductivity up to 260°C Gold plated for enhanced durability in high-vibration applications | <ul style="list-style-type: none"> Provides superior sealing on all wire, including tape-wrapped wire Allows for easy contact installation and removal Can also be used with extrusion insulated wire Connector fully sealed from moisture in submersed condition (altitude immersion) | <ul style="list-style-type: none"> Spline design ensures proper alignment of backshell during assembly Robust interface handles weight of large-gauge heavy wire |

HIGH-TEMPERATURE TOLERANT CROWN RING CONTACTS



Glenair Signature Crown Ring contact series

provides reduced contact resistance, superior conductivity, and higher temperature tolerance than conventional AS39029 contacts and specialized high-power contacts from other manufacturers

- Maximum operating temperature 260°C
- Superior conductivity performance compared to beryllium copper contacts, across full temperature range
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)
- Contact bodies made from high conductivity copper alloy (approximately 95% IACS)
- Stainless steel Crown Ring
 - Provides socket forces without stress relaxation at high temperatures
 - Moves socket spring function from socket body to ring, allowing use of high-conductivity copper
- Gold over nickel plating
 - Thicker plating than industry standards for reduced contact fretting and higher temperature endurance
 - Gold over nickel is "gold standard" for high-reliability aerospace contacts
- Crimp versions use standard industry tooling, including crimp die/locator and insertion/extraction tools (2AWG Crown Ring contacts require custom tooling)

Crown Ring high-voltage, high-current, and high-frequency contact resistance and temperature rise

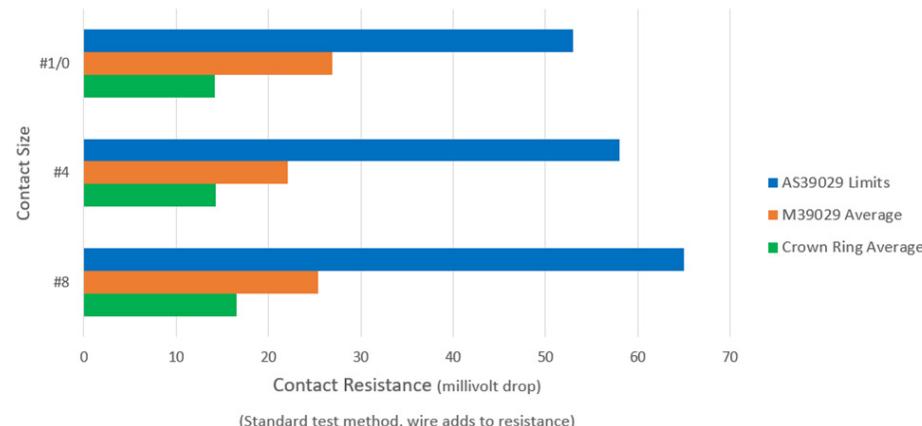
CROWN RING CONTACTS MAXIMIZE CURRENT CARRYING CAPACITY

Current carrying capacity can be defined as the maximum level of current that a connector can handle, while keeping all the components of the connector at or below their maximum operating temperatures. Temperature rise is caused by the heat generated from current flowing against the resistance of the conductive path. The two main sources of resistance in a cable system are the bulk resistance of the wire and the contact junction within a pair of connectors.

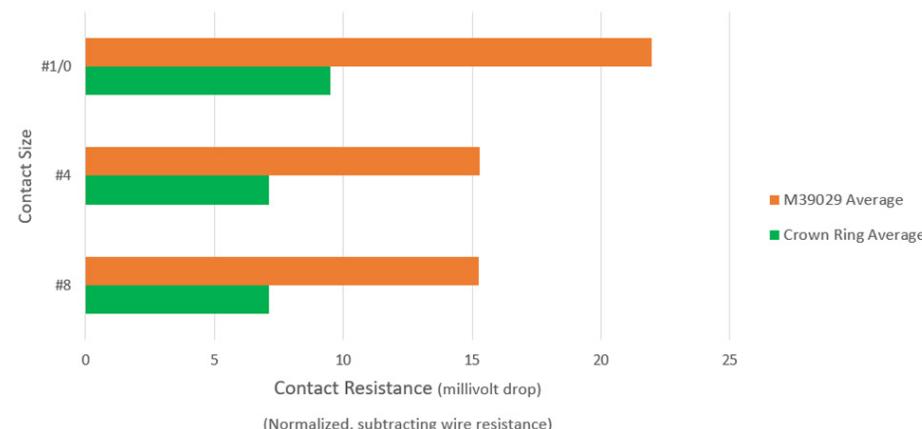
CROWN RING CONTACTS MINIMIZE CONTACT RESISTANCE

In order to keep the temperature rise to a minimum, Glenair has developed its signature Crown Ring contacts for use in PowerLoad connectors and other Glenair power products. Crown Ring contacts are designed to minimize contact resistance, with the use of high conductivity copper. The results are contact resistance values that are 1/4 of the maximum limits of AS39029 and as much as 60% less than average M39029 contacts (see graphs here). Crown Ring contacts, with extremely low contact resistance, also exhibit lower temperature rise, when compared to standard M39029 contacts and specialized high-power contacts from other manufacturers.

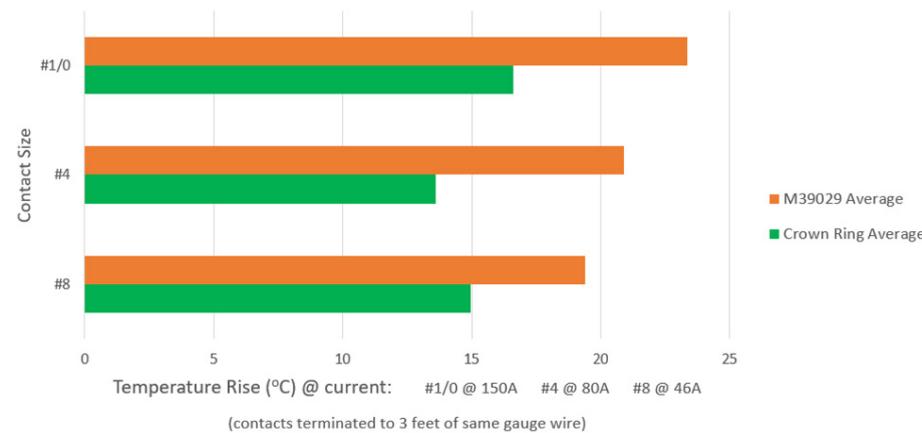
STANDARD CONTACT RESISTANCE (PER AS39029 TABLE 6)



CONTACT RESISTANCE AFTER SUBTRACTING RESISTANCE OF WIRE



TEMPERATURE RISE



High-voltage, high-current, and high-frequency current-carrying capacity: contacts and connectors

INTRODUCTION

POWERLOAD CONNECTOR MATERIALS AND DESIGN MAXIMIZE CURRENT CARRYING CAPACITY

PowerLoad connectors employ high performance, high-temperature materials throughout. This means that the interconnect system can withstand higher temperature rise than the typical Mil-Aero connector. In the case where the application can allow wire and connector temperatures to run at or near their rated temperatures (up to 230°C), PowerLoad connectors can handle even higher current levels than already afforded by the low-resistance Crown Ring contacts.

Current carrying capacity is an application-specific rating, requiring many system level inputs. Some of these inputs are: maximum ambient temperature(s), operating altitudes, physical environment (operating in enclosure or open air), cable construction/insulation and others.

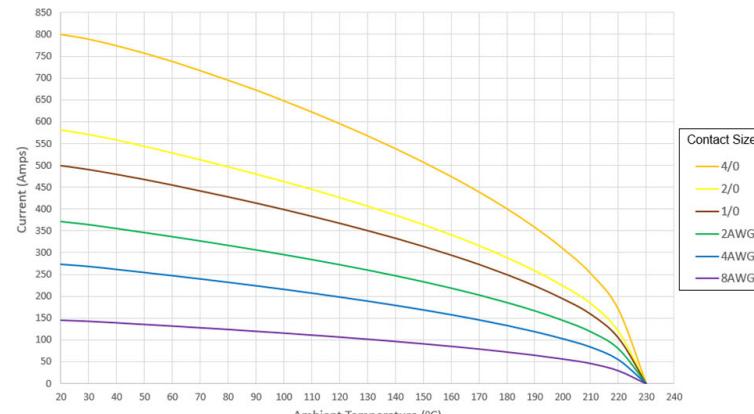
For most aerospace applications, Glenair suggests using SAE-AS50881 as a baseline for current carrying capacity for PowerLoad connectors. These baseline current levels are shown in the graphs here for single pin connectors. Glenair welcomes the opportunity to work with your team, to maximize the power delivered by PowerLoad connectors, for your specific application.

HIGH CURRENT-CARRYING CONTACTS: PARTIAL DISCHARGE, HOT-SIDE CONNECTORS, AND "SAFE-TOUCH" DESIGN

Glenair Series 972 PowerLoad connectors may be specified with pin or socket contact genders in plugs and receptacles. The raised socket contact towers serve to prevent partial discharge and arcing events. The design has the additional benefit of functioning as a "safe-touch" system on hot-side components, protecting the user when connectors are separated under load.

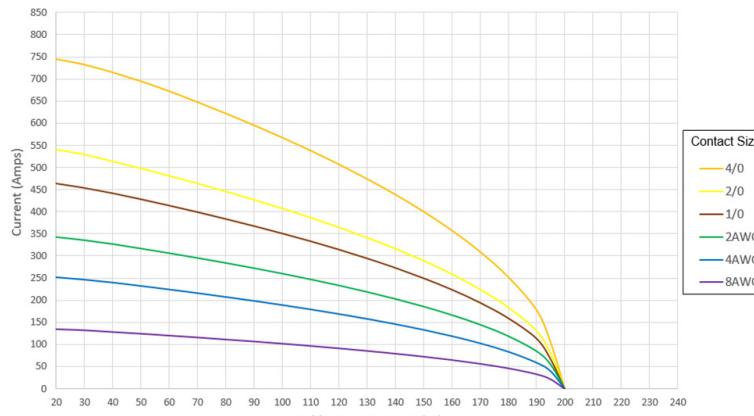


MAX CURRENT CARRYING CAPACITY VS. AMBIENT TEMPERATURE: CROWN RING CONTACTS IN 230°C RATED SST POWERLOAD CONNECTORS



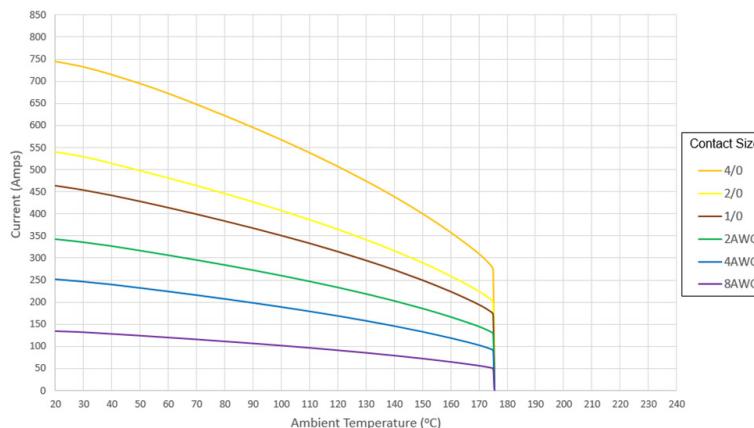
Data shown is for single contact at sea-level, in free air (ref AS50881)

MAX CURRENT CARRYING CAPACITY VS. AMBIENT TEMPERATURE: CROWN RING CONTACTS IN 200°C RATED AL POWERLOAD CONNECTORS



Data shown is for single contact at sea-level, in free air (ref AS50881)

MAX CURRENT CARRYING CAPACITY VS. AMBIENT TEMPERATURE: CROWN RING CONTACTS IN 175°C RATED AL POWERLOAD CONNECTORS



Data shown is for single contact at sea-level, in free air (ref AS50881)

Performance specifications summary

| POWERLOAD™ PERFORMANCE SPECIFICATION | | | | | | | | | | | | | | |
|---|---|----------------------|---------------------------|--|--|---------|------------------|-----------|-----------|--|-----------|-----------|--|--|
| Test Description | Requirement | | | Procedure | | | | | | | | | | |
| Dielectric withstanding voltage (DWV) | <table border="1"> <thead> <tr> <th>Insert Arrangement</th> <th>Altitude</th> <th>Voltage</th> </tr> </thead> <tbody> <tr> <td>All Shown Herein</td> <td>Sea level</td> <td>5,000 Vac</td> </tr> <tr> <td></td> <td>50,000 ft</td> <td>2,250 Vac</td> </tr> </tbody> </table> | | | Insert Arrangement | Altitude | Voltage | All Shown Herein | Sea level | 5,000 Vac | | 50,000 ft | 2,250 Vac | EIA-364-20 Method A 2 mA maximum leakage current Mated pairs | |
| Insert Arrangement | Altitude | Voltage | | | | | | | | | | | | |
| All Shown Herein | Sea level | 5,000 Vac | | | | | | | | | | | | |
| | 50,000 ft | 2,250 Vac | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Partial discharge, typical values | PDIV | Inception/Extinction | Altitude | Voltage | 5pc threshold (See GT-20-270 for full report) | | | | | | | | | |
| | | | Sea level | 4,500 Vac | | | | | | | | | | |
| | | | 15,000 ft | 3,800 Vac | | | | | | | | | | |
| | | | 35,000 ft | 3,000 Vac | | | | | | | | | | |
| | | | 50,000 ft | 2,000 Vac | | | | | | | | | | |
| | PDEV | | 70,000 ft | 1,000 Vac | | | | | | | | | | |
| | | | Sea level | 3,700 Vac | | | | | | | | | | |
| | | | 15,000 ft | 3,100 Vac | | | | | | | | | | |
| | | | 35,000 ft | 2,500 Vac | | | | | | | | | | |
| | | | 50,000 ft | 1,500 Vac | | | | | | | | | | |
| | | | 70,000 ft | 800 Vac | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Insulation resistance at ambient | 5000 megohms minimum | | | EIA-364-21, at 500 VDC | | | | | | | | | | |
| Insulation resistance at elevated temperature | 400 megohms minimum at max. rated temp. | | | EIA-364-21, at 500 VDC | | | | | | | | | | |
| Contact resistance at 25°C, crimp contacts | Contact / Wire Size | Test Current Amperes | Voltage Drop (millivolts) | | AS39029 Para. 3.5.4 (Table 6), EIA-364-06 | | | | | | | | | |
| | | | Initial Max | Crown Ring Typical | | | | | | | | | | |
| | | 0000 | 225 | 53 | | | | | | | | | | |
| | | 00 | 185 | 48 | | | | | | | | | | |
| | | 0 | 150 | 53 | | | | | | | | | | |
| | | 2 | 100 | 43 | | | | | | | | | | |
| | | 4 | 80 | 58 | | | | | | | | | | |
| | | 8 | 46 | 65 | | | | | | | | | | |
| Shell-to-shell conductivity | | Finish Code | Shell Mat'l/ Finish | Millivolt Drop (mV) | EIA-364-83 | | | | | | | | | |
| | | ME | Al / EN | 1.0 | | | | | | | | | | |
| | | MT | Al / Ni-PTFE | 2.5 | | | | | | | | | | |
| | | NF | Al / OD Cad | 2.5 | | | | | | | | | | |
| | | ZR | Al / Zn-Ni | 2.5 | | | | | | | | | | |
| | | Z1 | SST / pass. | 10.0 | | | | | | | | | | |
| | | ZL | SST / Ni | 1.0 | | | | | | | | | | |
| Contact engaging /separation force | Contact forces shall meet AS39029 Table 9 requirements | | | AS39029 Para. 3.5.5, EIA-364-37 | | | | | | | | | | |
| Temperature cycling (thermal shock) | No evidence of damage detrimental to the function of the connector | | | EIA-364-32, Method A, Duration A, Mated connectors, max/min temps in accordance with temperature rating of connector | | | | | | | | | | |
| Random vibration, 37.8 grms | No discontinuities of 1 microsecond or longer | | | EIA-364-28, Test Condition V, Letter J, Ambient, 8 Hrs, 2 Axis | | | | | | | | | | |
| Mechanical shock, 50g | No discontinuities of 1 microsecond or longer | | | EIA-364-27, Test Condition A | | | | | | | | | | |

Performance specifications and test summary

INTRODUCTION

| POWERLOAD™ PERFORMANCE SPECIFICATION | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|-------|--|--|---------------------|-------|----|---------|----|----|--------------|-----|----|-------------|-----|----|------------|-----|----|-------------|------|----|----------|------|---|--|
| Test Description | Requirement | | | Procedure | | | | | | | | | | | | | | | | | | | | | | |
| Fluid immersion | No damage to plastic, elastomeric or bonding materials detrimental to the function of the connector. Connector shall mate and unmate properly and meet coupling torque and DWV requirements after immersion. | | | EIA-364-10 Various aviation fluids, fuels and oils (See GT-21-155) | | | | | | | | | | | | | | | | | | | | | | |
| Altitude immersion | At the end of the third cycle, while still submersed, connectors shall meet dielectric withstanding voltage and 1,000 megohms insulation resistance. | | | EIA-364-03 50,000 feet | | | | | | | | | | | | | | | | | | | | | | |
| Salt spray, dynamic | <table border="1"> <thead> <tr> <th>Finish Code</th> <th>Shell Mat'l/ Finish</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>ME</td> <td>AI / EN</td> <td>96</td> </tr> <tr> <td>MT</td> <td>AI / Ni-PTFE</td> <td>500</td> </tr> <tr> <td>NF</td> <td>AI / OD Cad</td> <td>500</td> </tr> <tr> <td>ZR</td> <td>AI / Zn-Ni</td> <td>500</td> </tr> <tr> <td>Z1</td> <td>SST / pass.</td> <td>1000</td> </tr> <tr> <td>ZL</td> <td>SST / Ni</td> <td>1000</td> </tr> </tbody> </table> | | | Finish Code | Shell Mat'l/ Finish | Hours | ME | AI / EN | 96 | MT | AI / Ni-PTFE | 500 | NF | AI / OD Cad | 500 | ZR | AI / Zn-Ni | 500 | Z1 | SST / pass. | 1000 | ZL | SST / Ni | 1000 | MIL-DTL-38999 Para. 4.5.13.2 EIA-364-26 150 mating cycles total | |
| Finish Code | Shell Mat'l/ Finish | Hours | | | | | | | | | | | | | | | | | | | | | | | | |
| ME | AI / EN | 96 | | | | | | | | | | | | | | | | | | | | | | | | |
| MT | AI / Ni-PTFE | 500 | | | | | | | | | | | | | | | | | | | | | | | | |
| NF | AI / OD Cad | 500 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZR | AI / Zn-Ni | 500 | | | | | | | | | | | | | | | | | | | | | | | | |
| Z1 | SST / pass. | 1000 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZL | SST / Ni | 1000 | | | | | | | | | | | | | | | | | | | | | | | | |

| GT-20-277 POWERLOAD™ TEST SUMMARY | | | | | |
|--|--------------------|--------|--|--------------------|--------|
| Test Description | Test Specification | Result | Test Description | Test Specification | Result |
| Altitude Immersion | EIA-364-03 | Pass | Firewall ² | EIA-364-45 | Pass |
| Backshell & Connector Durability | EIA-364-83 | Pass | Insert Retention | EIA-364-35 | Pass |
| Backshell Coupling Strength | – | Pass | Insulation Resistance at Ambient Temperature | EIA-364-21 | Pass |
| Backshell-To-Connector Shell Conductivity | EIA-364-83 | Pass | Maintenance Aging | EIA-364-24 | Pass |
| Contact Engagement and Separation Forces | EIA-364-37 | Pass | Post Test Examination | – | Pass |
| Contact Insertion and Removal Force | EIA-364-05 | Pass | Shell-To-Shell Conductivity | EIA-364-83 | Pass |
| Contact Resistance | EIA-364-06 | Pass | Shock | EIA-364-27 | Pass |
| Contact Retention (100%) | EIA-364-29 | Pass | Temperature Cycling (thermal shock) | EIA-364-32 | Pass |
| Corrosion (Dynamic) | EIA-364-26 | Pass | Vibration, Random | EIA-364-28 | Pass |
| Coupling and Uncoupling Torque | EIA-364-114 | Pass | Vibration, Wing Tip | EIA-364-28 | Pass |
| Dielectric Withstanding Voltage at Sea Level | EIA-364-20 | Pass | Visual, Mechanical, and Workmanship Inspection | ASTM B 571 | Pass |

Unless otherwise noted, all testing performed on shell size 28 connectors with 6x size #8 contacts
Firewall testing performed separately on similar connectors, shell size 32 with 3x size 1/0 and 1x size #4 contacts

AIRCRAFT POWER INTERCONNECT TECHNOLOGY

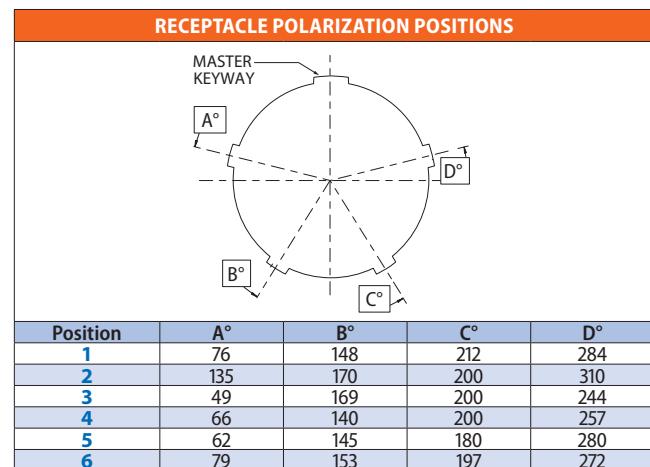
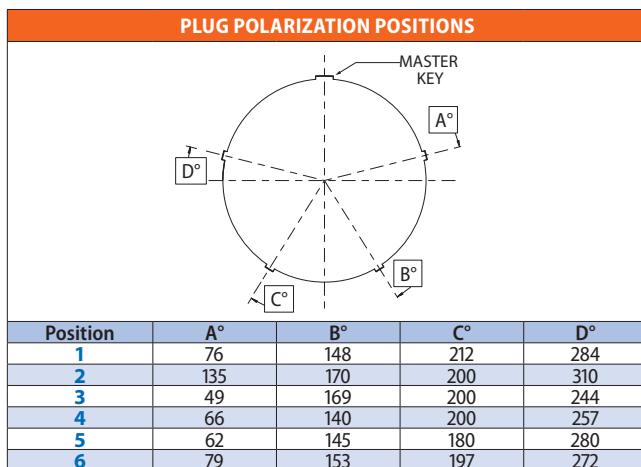
PowerLoad™ Connectors



Contact arrangements

INTRODUCTION

| SHELL SIZE / CONTACT ARRANGEMENTS (FACE OF PIN INSERT) | | | | | |
|--|--|--|--|--|---------------------------------|
| | | | | | |
| 16-A1 1X #8 | 16-1 1X #4 | 20-A1 1X #2 | 20-1 1X #1/0 | 22-1 1X #2/0 [consult factory] | 22-2 2X #8 |
| | | | | | |
| 22-3 3X #8 | 24-1 1X #4/0 [consult factory] | 24-2 2X #4 | 24-4 4X #8 | 28-2 2X #2 | 28-3 3X #2 |
| | | | | | |
| 28-4 4X #4 | 28-6 6X #8 | 32-2 2X #1/0 | 32-3 3X #1/0 | 32-4 4X #2 | 32-5 3X #1/0 & 2X #16 |
| | | | Contact Size Key | | |
| 36-2 2X #2/0 [consult factory] | 36-4 4X #1/0 | 40-3 3X #2/0 [consult factory] | #8 #4 #2 #1/0 #2/0 #4/0 | | |



972-101 Crimp-contact plug with banding platform and compression grommet accessory for TurboFlex or tape-wrapped wire



972-101 Plug

POWERLOAD CONNECTORS - CRIMP CONTACTS

CONNECTOR FEATURES

- Socket towers for improved creep path performance
 - Single-piece insulator eliminates bond lines that can lead to electrical failure
 - High-vibration self-locking coupler
 - High-temperature Crown Ring contact technology
 - Patented wire sealing grommet
 - Heavy-duty accessory interface

POWER SPECIFICATIONS

- For applications up to 2000 VAC/1500 Hz, and from 150 – 800 Amps.
 - 230°C maximum operating temperature (stainless steel bodies and shells)
 - 100% DWV tested at 5,000 VAC (all arrangements)
 - Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)

MATERIAL SPECIFICATIONS

Insulators - PEEK thermoplastic, glass reinforced

Seals - high-temperature silicone

Contact body - high-conductivity

copper alloy, gold plated
Socket contact hood, crown ring -
stainless steel, passivated

| How To Order | | | | | | | |
|----------------------------------|---|---------|----|------|---|---|-----|
| Sample Part Number | | 972-101 | NF | 32-3 | P | 1 | A |
| Basic Part Number | PowerLoad™ Plug with Banding Platform, Compression Grommet for Tape-Wrapped or TurboFlex Extrusion-Insulated Wire | | | | | | -LB |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (See Table) | | | | | | |
| Shell Size / Contact Arrangement | See PowerLoad contact arrangements table | | | | | | |
| Contact Gender | P = Pin S = Socket (supplied with contacts) A = Pin, less contacts B = Socket, less contacts (see table if ordering contacts separately) | | | | | | |
| Polarization | 1, 2, 3, 4, 5, or 6 (see Key Positions table) | | | | | | |
| Wire Diameter | See Wire Diameter table | | | | | | |
| Backshell | -LB = Less Backshell Omit to include (if ordering -LB less backshell, a separate backshell must be used) | | | | | | |

| SHELL SIZE / CONTACT ARRANGEMENTS (FACE OF PIN INSERT) | | | | | |
|--|-------------------------|-------------------------|---------------------------------------|-------------------------|--|
| | | | | | |
| 16-A1 1X #8 | 16-1 1X #4 | 20-A1 1X #2 | 20-1 1X #1/0 | 22-1* 1X #2/0 | 22-2 2X #8 |
| | | | | | |
| 22-3 3X #8 | 24-1* 1X #4/0 | 24-2 2X #4 | 24-4 4X #8 | 28-2 2X #2 | 28-3 3X #2 |
| | | | | | |
| 28-4 4X #4 | 28-6 6X #8 | 32-2 2X #1/0 | 32-3 3X #1/0 | 32-4 4X #2 | 32-5 3X #1/0 & 2X #16 |
| | | | | | #8 #4 #2 #1/0 #2/0 #4/0 |
| 36-2* 2X #2/0 | 36-4 4X #1/0 | 40-3* 3X #2/0 | Contact Size Key * Consult Factory | | |

| WIRE DIAMETER | | | | |
|---------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Gauge | Finished O.D. | | | |
| | A | B | C | D |
| 8 AWG | Ø .241/.277 (6.12/7.04) | Ø .213/.251 (5.41/6.38) | Ø .180/.457/.210 (5.33) | N/A |
| 4 AWG | Ø .362/.391 (9.19/9.93) | Ø .340/.370 (8.64/9.40) | Ø .312/.350 (7.92/8.89) | Ø .276/.320 (7.01/8.13) |
| 2 AWG | Ø .443/.477 (11.25/12.12) | Ø .405/.442 (10.29/11.23) | Ø .379/.421 (9.63/10.69) | Ø .344/.378 (8.74/9.60) |
| 1/0 | Ø .536/.572 (13.61/14.53) | Ø .491/.535 (12.47/13.59) | Ø .450/.501 (11.43/12.73) | Ø .420/.450 (10.67/11.43) |
| 2/0 | Ø .610/.661 (15.49/16.79) | Ø .555/.608 (14.10/15.44) | Ø .524/.576 (13.31/14.63) | Ø .475/.523 (12.07/13.28) |
| 4/0 | Ø .720/.753 (18.29/19.13) | Ø .690/.732 (17.53/18.59) | Ø .641/.691 (16.28/17.55) | Ø .590/.640 (14.99/16.26) |

972-101 Crimp-contact plug with banding platform and compression grommet accessory for TurboFlex or tape-wrapped wire

| CONNECTOR DIMENSIONS | | | | | | | | | | |
|---|-----------------------------|--------------------------------|------------------------------|---|---------------|-----------------|------------|---------|---------|---------|
| Shell Size | ØA Max | B Flat ±.006 | C Mating Thread | ØD ±.015 | ØE ±.015 | | | | | |
| 16 | 1.47 (37.34) | 1.375 (34.93) | 1.000-0.1P-0.3L-TS-2B | .812 (20.62) | .875 (22.23) | | | | | |
| 20 | 1.72 (43.69) | 1.625 (41.28) | 1.250-0.1P-0.3L-TS-2B | 1.062 (26.97) | 1.125 (28.58) | | | | | |
| 22 | 1.85 (46.99) | 1.750 (44.45) | 1.375-0.1P-0.3L-TS-2B | 1.187 (30.15) | 1.250 (31.75) | | | | | |
| 24 | 1.97 (50.04) | 1.875 (47.63) | 1.500-0.1P-0.3L-TS-2B | 1.312 (33.32) | 1.375 (34.92) | | | | | |
| 28 | 2.22 (56.39) | 2.140 (54.36) | 1.750-0.1P-0.3L-TS-2B | 1.562 (39.67) | 1.625 (41.28) | | | | | |
| 32 | 2.62 (66.55) | 2.500 (63.50) | 2.000-0.1P-0.3L-TS-2B | 1.812 (46.02) | 1.875 (47.63) | | | | | |
| 36 | 2.88 (73.15) | 2.750 (69.85) | 2.250-0.1P-0.3L-TS-2B | 2.062 (52.37) | 2.125 (53.97) | | | | | |
| 40 | 3.07 (77.98) | 2.938 (74.63) | 2.500-0.1P-0.3L-TS-2B | 2.187 (55.55) | 2.250 (57.15) | | | | | |
| MATERIAL / FINISH | | | | | | | | | | |
| Code | Material | Finish | Temp. Rating | HOW TO ORDER CONTACTS AND CONTACT TOOLING (SOLD SEPARATELY) | | | | | | |
| ME | Aluminum | Electroless Nickel | -54° +200°C | Contact Size | Contact P/N | Extraction Tool | Crimp Tool | Die Set | Locator | |
| MT | | Nickel-PTFE | -54° +200°C | 8 | 850-150-08 | 850-151-08 | 859-136-08 | 859-139 | 859-026 | 859-029 |
| NF | | Cadmium, OD | -54° +175°C | 4 | 850-150-04 | 850-151-04 | 859-136-04 | 859-138 | 859-027 | 859-030 |
| ZR | | Zinc-Ni, Black (Tri-Valent CR) | -54° +175°C | 2 | 850-150-02 | 850-151-02 | N/A | 859-171 | 859-169 | 859-170 |
| Z1 | Stainless Steel | Passivate | -54° +230°C | 1/0 | 850-150-0 | 850-151-0 | N/A | 859-137 | 859-028 | 859-031 |
| ZL | | Electrodeposited Nickel | -54° +230°C | 2/0 | 850-150-00 | 850-151-00 | N/A | 859-225 | 859-230 | 859-231 |
| EXAMPLE CONTACT ARRANGEMENT CURRENT RATINGS | | | | | | | | | | |
| Ins. Arr. | #8AWG 145 A ¹ | #4 AWG 270 A ¹ | #2 AWG 360 A ¹ | 1/0 490 A ¹ | | | | | | |
| 28-3 | | | 3X (156 A ²) | | | | | | | |
| 28-4 | | 4X (104 A ²) | | | | | | | | |
| 28-6 | 6X (49 A ²) | | | | | | | | | |
| 32-3 | | | 3X (210 A ²) | | | | | | | |

¹ Absolute maximum current rating per SAE AS50881: single conductor, sea level, 205° temp rise (25° ambient to 230° C max for "Z1" connectors)

² Derated current for typical applications per SAE AS50881: multiple conductors, 50,000 ft. altitude, 100°C temp rise

| PLUG KEY POSITIONS | | | | |
|--------------------|-----|-----|-----|-----|
| Position | A° | B° | C° | D° |
| 1 | 76 | 148 | 212 | 284 |
| 2 | 135 | 170 | 200 | 310 |
| 3 | 49 | 169 | 200 | 244 |
| 4 | 66 | 140 | 200 | 257 |
| 5 | 62 | 145 | 180 | 280 |
| 6 | 79 | 153 | 197 | 272 |

972-102 Crimp-contact wall-mount receptacle with banding platform and compression grommet for TurboFlex or tape-wrapped wire



972-102 Receptacle

CONNECTOR FEATURES

- Socket towers for improved creep path performance
- Single-piece insulator eliminates bond lines that can lead to electrical failure
- High-temperature Crown Ring contact technology
- Patented wire sealing grommet
- Heavy-duty accessory interface

POWER SPECIFICATIONS

- For applications up to 2000 VAC/1500 Hz, and from 150 – 800 Amps.
- 230°C maximum operating temperature (stainless steel bodies and shells)
- 100% DWV tested at 5,000 VAC (all arrangements)
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)

MATERIAL SPECIFICATIONS

Insulators - PEEK thermoplastic, glass reinforced

Seals - high-temperature silicone

Contact body - high-conductivity copper alloy, gold plated

Socket contact hood, crown ring - stainless steel, passivated

| HOW TO ORDER | | | | | | | |
|----------------------------------|---|----|------|---|---|---|-----|
| Sample Part Number | 972-102 | NF | 32-3 | P | 1 | A | -LB |
| Basic Part Number | PowerLoad™ Wall-mount receptacle with Banding Platform, Compression Grommet for TurboFlex or Tape-Wrapped wire | | | | | | |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (See Table) | | | | | | |
| Shell Size / Contact Arrangement | See PowerLoad contact arrangements table | | | | | | |
| Contact Gender | P = Pin S = Socket (supplied with contacts) A = Pin, less contacts B = Socket, less contacts (see table if ordering contacts separately) | | | | | | |
| Polarization | 1, 2, 3, 4, 5, or 6 (see Keyway Positions table) | | | | | | |
| Wire Diameter | See Wire Diameter table | | | | | | |
| Backshell | -LB = Less Backshell Omit to include (if ordering -LB less backshell, a separate backshell must be used) | | | | | | |

| SHELL SIZE / CONTACT ARRANGEMENTS (FACE OF PIN INSERT) | | | | | | | |
|--|------------------------|-------------------------|---------------------------------------|-------------------------|---------------------------------|------------------------|-------------------------|
| | | | | | | | |
| 16-A1 1X #8 | 16-1 1X #4 | 20-A1 1X #2 | 20-1 1X #1/0 | 22-1* 1X #2/0 | 22-2 2X #8 | 22-3 3X #8 | 24-1* 1X #4/0 |
| | | | | | | | |
| 24-2 2X #4 | 24-4 4X #8 | 28-2 2X #2 | 28-3 3X #2 | 28-4 4X #4 | 28-5 3X #1/0 & 2X #16 | 32-2 2X #1/0 | 32-3 3X #1/0 |
| | | | | | | | |
| 36-2* 2X #2/0 | 36-4 4X #1/0 | 40-3* 3X #2/0 | Contact Size Key * Consult Factory | | | | |

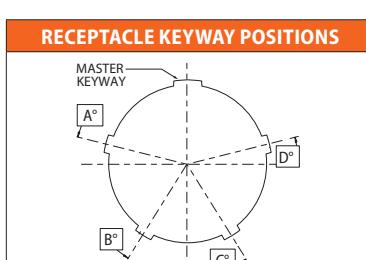
| Gauge | WIRE DIAMETER | | | |
|-------|---------------------------|---------------------------|---------------------------|---------------------------|
| | A | B | C | D |
| 8 AWG | Ø .241/.277 (6.12/7.04) | Ø .213/.251 (5.41/6.38) | Ø .180/(4.57/.210 (5.33) | N/A |
| 4 AWG | Ø .362/.391 (9.19/9.93) | Ø .340/.370 (8.64/9.40) | Ø .312/.350 (7.92/8.89) | Ø .276/.320 (7.01/8.13) |
| 2 AWG | Ø .443/.477 (11.25/12.12) | Ø .405/.442 (10.29/11.23) | Ø .379/.421 (9.63/10.69) | Ø .344/.378 (8.74/9.60) |
| 1/0 | Ø .536/.572 (13.61/14.53) | Ø .491/.535 (12.47/13.59) | Ø .450/.501 (11.43/12.73) | Ø .420/.450 (10.67/11.43) |
| 2/0 | Ø .610/.661 (15.49/16.79) | Ø .555/.608 (14.10/15.44) | Ø .524/.576 (13.31/14.63) | Ø .475/.523 (12.07/13.28) |
| 4/0 | Ø .720/.753 (18.29/19.13) | Ø .690/.732 (17.53/18.59) | Ø .641/.691 (16.28/17.55) | Ø .590/.640 (14.99/16.26) |

972-102 Crimp-contact wall-mount receptacle with banding platform and compression grommet for TurboFlex or tape-wrapped wire

| CONNECTOR DIMENSIONS | | | | | | | | | | |
|---|-----------------------------|--------------------------------|------------------------------|---|-------------|-----------------|---------------|---------------|---------|---------|
| | | | | | | | | | | |
| | | | | | | | | | | |
| Shell Size | A ±.031 | B Bsc | ØC Typ | D Mating Thread | | ØE ±.015 | ØF ±.015 | ØG ±.010 | | |
| 16 | 1.281 (32.54) | .969 (24.61) | .150 (3.81) | 1.000 -0.1P-0.3L-TS-2A | | .812 (20.62) | .875 (22.23) | 1.062 (26.97) | | |
| 20 | 1.500 (38.10) | 1.156 (29.36) | .177 (4.5) | 1.250 -0.1P-0.3L-TS-2A | | 1.062 (26.97) | 1.125 (28.58) | 1.312 (33.32) | | |
| 22 | 1.625 (41.28) | 1.250 (31.75) | .177 (4.5) | 1.375 -0.1P-0.3L-TS-2A | | 1.187 (30.15) | 1.250 (31.75) | 1.437 (36.50) | | |
| 24 | 1.750 (44.45) | 1.375 (34.92) | .177 (4.5) | 1.500 -0.1P-0.3L-TS-2A | | 1.312 (33.32) | 1.375 (34.92) | 1.562 (39.67) | | |
| 28 | 2.000 (50.80) | 1.562 (39.67) | .177 (4.5) | 1.750 -0.1P-0.3L-TS-2A | | 1.562 (39.67) | 1.625 (41.28) | 1.812 (46.02) | | |
| 32 | 2.250 (57.15) | 1.750 (44.45) | .209 (5.3) | 2.000 -0.1P-0.3L-TS-2A | | 1.812 (46.02) | 1.875 (47.63) | 2.062 (52.37) | | |
| 36 | 2.500 (63.50) | 1.938 (49.23) | .209 (5.3) | 2.250 -0.1P-0.3L-TS-2A | | 2.062 (52.37) | 2.125 (53.97) | 2.312 (58.72) | | |
| 40 | 2.750 (69.85) | 2.188 (55.58) | .209 (5.3) | 2.500 -0.1P-0.3L-TS-2A | | 2.187 (55.55) | 2.250 (57.15) | 2.562 (65.07) | | |
| MATERIAL / FINISH | | | | HOW TO ORDER CONTACTS AND CONTACT TOOLING (SOLD SEPARATELY) | | | | | | |
| Code | Material | Finish | Temp. Rating | Contact Size | Contact P/N | Extraction Tool | Crimp Tool | Die Set | Locator | |
| ME | Aluminum | Electroless Nickel | -54° – +200°C | 8 | 850-150-08 | 850-151-08 | 859-136-08 | 859-139 | 859-026 | 859-029 |
| MT | | Nickel-PTFE | -54° – +200°C | 4 | 850-150-04 | 850-151-04 | 859-136-04 | 859-138 | 859-027 | 859-030 |
| NF | | Cadmium, OD | -54° – +175°C | 2 | 850-150-02 | 850-151-02 | N/A | 859-171 | 859-169 | 859-170 |
| ZR | | Zinc-Ni, Black (Tri-Valent CR) | -54° – +175°C | 1/0 | 850-150-0 | 850-151-0 | N/A | 859-137 | 859-028 | 859-031 |
| Z1 | Stainless Steel | Passivate | -54° – +230°C | 2/0 | 850-150-00 | 850-151-00 | N/A | 859-225 | 859-230 | 859-231 |
| ZL | | Electrodeposited Nickel | -54° – +230°C | | | | | | | |
| EXAMPLE CONTACT ARRANGEMENT CURRENT RATINGS | | | | | | | | | | |
| Ins. Arr. | #8AWG 145 A ¹ | #4 AWG 270 A ¹ | #2 AWG 360 A ¹ | 1/0 490 A ¹ | | | | | | |
| 28-3 | | | 3X (156 A ²) | | | | | | | |
| 28-4 | | 4X (104 A ²) | | | | | | | | |
| 28-6 | 6X (49 A ²) | | | | | | | | | |
| 32-3 | | | | 3X (210 A ²) | | | | | | |

¹ Absolute maximum current rating per SAE AS50881: single conductor, sea level, 205° temp rise (25° ambient to 230° C max for "Z1" connectors)

² Derated current for typical applications per SAE AS50881: multiple conductors, 50,000 ft. altitude, 100°C temp rise



| Position | A° | B° | C° | D° |
|----------|-----|-----|-----|-----|
| 1 | 76 | 148 | 212 | 284 |
| 2 | 135 | 170 | 200 | 310 |
| 3 | 49 | 169 | 200 | 244 |
| 4 | 66 | 140 | 200 | 257 |
| 5 | 62 | 145 | 180 | 280 |
| 6 | 79 | 153 | 197 | 272 |

972-103 Crimp-contact jam-nut receptacle with banding platform and compression grommet for TurboFlex or tape-wrapped wire

POWERLOAD CONNECTORS - CRIMP CONTACTS



972-103 Jam-Nut Receptacle

CONNECTOR FEATURES

- Socket towers for improved creep path performance
- Single-piece insulator eliminates bond lines that can lead to electrical failure
- High-temperature Crown Ring contact technology
- Patented wire sealing grommet
- Heavy-duty accessory interface

POWER SPECIFICATIONS

- For applications up to 2000 VAC/ 1500 Hz, and from 150 – 800 Amps.
- 230°C maximum operating temperature (stainless steel bodies and shells)
- 100% DWV tested at 5,000 VAC (all arrangements)
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)

MATERIAL SPECIFICATIONS

Insulators - PEEK thermoplastic, glass reinforced

Seals and o-ring- high-temperature silicone/N.A.

Contact body - high-conductivity copper alloy, gold plated

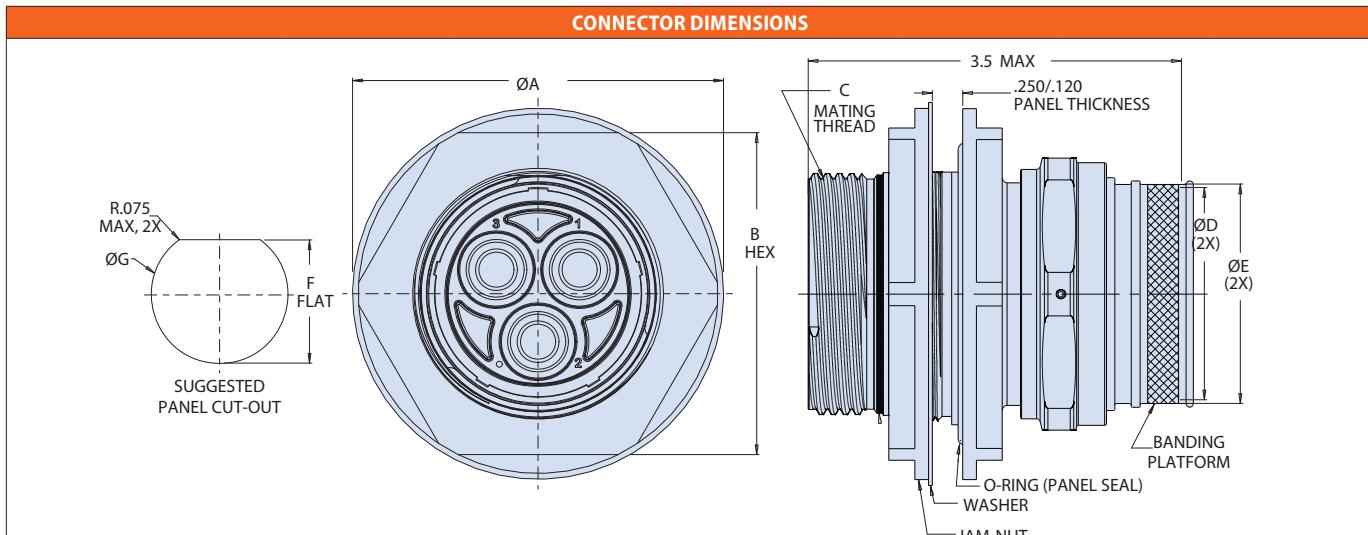
Socket contact hood, crown ring - stainless steel, passivated

| HOW TO ORDER | | | | | | | |
|----------------------------------|---|----|------|---|---|---|-----|
| Sample Part Number | 972-103 | NF | 32-3 | P | 1 | A | -LB |
| Basic Part Number | PowerLoad™ Jam-Nut receptacle with Banding Platform, Compression Grommet for TurboFlex or Tape-Wrapped wire | | | | | | |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (See Table) | | | | | | |
| Shell Size / Contact Arrangement | See PowerLoad contact arrangements table | | | | | | |
| Contact Gender | P = Pin S = Socket (supplied with contacts) A = Pin, less contacts B = Socket, less contacts (see table if ordering contacts separately) | | | | | | |
| Polarization | 1, 2, 3, 4, 5, or 6 (see Keyway Positions table) | | | | | | |
| Wire Diameter | See Wire Diameter table | | | | | | |
| Backshell | -LB = Less Backshell Omit to include (if ordering -LB less backshell, a separate backshell must be used) | | | | | | |

| SHELL SIZE / CONTACT ARRANGEMENTS (FACE OF PIN INSERT) | | | | | | | |
|--|------------------------|-------------------------|---------------------------------------|-------------------------|----------------------|----------------------|-------------------------|
| | | | | | | | |
| 16-A1 1X #8 | 16-1 1X #4 | 20-A1 1X #2 | 20-1 1X #1/0 | 22-1* 1X #2/0 | 22-2 2X #8 | 22-3 3X #8 | 24-1* 1X #4/0 |
| | | | | | | | |
| 24-2 2X #4 | 24-4 4X #8 | 28-2 2X #2 | 28-3 3X #2 | | | | |
| 28-4 4X #4 | 28-6 6X #8 | 32-2 2X #1/0 | 32-3 3X #1/0 | | | | |
| | | | | | | | |
| 36-2* 2X #2/0 | 36-4 4X #1/0 | 40-3* 3X #2/0 | Contact Size Key * Consult Factory | | | | |

| Gauge | WIRE DIAMETER | | | | |
|-------|---------------------------|---------------------------|---------------------------|---------------------------|-----|
| | A | B | C | D | |
| 8 AWG | Ø .241/.277 (6.12/7.04) | Ø .213/.251 (5.41/6.38) | Ø .180/(4.57/.210 (5.33) | | N/A |
| 4 AWG | Ø .362/.391 (9.19/9.93) | Ø .340/.370 (8.64/9.40) | Ø .312/.350 (7.92/8.89) | Ø .276/.320 (7.01/8.13) | |
| 2 AWG | Ø .443/.477 (11.25/12.12) | Ø .405/.442 (10.29/11.23) | Ø .379/.421 (9.63/10.69) | Ø .344/.378 (8.74/9.60) | |
| 1/0 | Ø .536/.572 (13.61/14.53) | Ø .491/.535 (12.47/13.59) | Ø .450/.501 (11.43/12.73) | Ø .420/.450 (10.67/11.43) | |
| 2/0 | Ø .610/.661 (15.49/16.79) | Ø .555/.608 (14.10/15.44) | Ø .524/.576 (13.31/14.63) | Ø .475/.523 (12.07/13.28) | |
| 4/0 | Ø .720/.753 (18.29/19.13) | Ø .690/.732 (17.53/18.59) | Ø .641/.691 (16.28/17.55) | Ø .590/.640 (14.99/16.26) | |

972-103 Crimp-contact jam-nut receptacle with banding platform and compression grommet for TurboFlex or tape-wrapped wire



| Shell Size | A ±.030 | B ±.010 | C Mating Thread | ØD ±.015 | ØE ±.015 | ØF ±.005 | ØG ±.005 |
|------------|---------------|---------------|-----------------------|---------------|---------------|---------------|---------------|
| 16 | 2.125 (53.98) | 1.750 (44.45) | 1.000-0.1P-0.3L-TS-2A | .812 (20.62) | .875 (22.23) | 1.103 (28.02) | 1.178 (29.92) |
| 20 | 2.375 (60.33) | 2.000 (50.80) | 1.250-0.1P-0.3L-TS-2A | 1.062 (26.97) | 1.125 (28.58) | 1.353 (34.37) | 1.428 (36.27) |
| 22 | 2.500 (63.50) | 2.125 (53.97) | 1.375-0.1P-0.3L-TS-2A | 1.187 (30.15) | 1.250 (31.75) | 1.478 (37.54) | 1.553 (39.45) |
| 24 | 2.625 (66.68) | 2.250 (57.15) | 1.500-0.1P-0.3L-TS-2A | 1.312 (33.32) | 1.375 (34.92) | 1.603 (40.72) | 1.675 (42.55) |
| 28 | 2.875 (73.02) | 2.500 (63.50) | 1.750-0.1P-0.3L-TS-2A | 1.562 (39.67) | 1.625 (41.28) | 1.853 (47.07) | 1.928 (48.97) |
| 32 | 3.200 (81.28) | 2.750 (69.85) | 2.000-0.1P-0.3L-TS-2A | 1.812 (46.02) | 1.875 (47.63) | 2.103 (53.42) | 2.178 (55.32) |
| 36 | 3.375 (85.73) | 3.000 (76.20) | 2.250-0.1P-0.3L-TS-2A | 2.062 (52.37) | 2.125 (53.97) | 2.353 (59.77) | 2.428 (61.67) |
| 40 | 3.625 (92.07) | 3.250 (82.55) | 2.500-0.1P-0.3L-TS-2A | 2.187 (55.55) | 2.250 (57.15) | 2.603 (66.12) | 2.678 (68.02) |

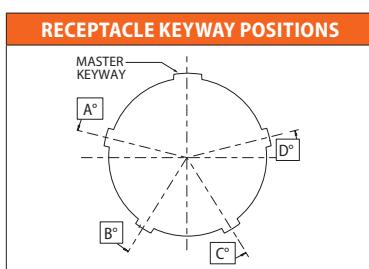
| MATERIAL / FINISH | | | |
|-------------------|-----------|--------------------------------|--------------|
| Code | Material | Finish | Temp. Rating |
| ME | Aluminum | Electroless Nickel | -54° +200°C |
| MT | | Nickel-PTFE | -54° +200°C |
| NF | | Cadmium, OD | -54° +175°C |
| ZR | | Zinc-Ni, Black (Tri-Valent CR) | -54° +175°C |
| Z1 | Stainless | Passivate | -54° +230°C |
| ZL | Steel | Electrodeposited Nickel | -54° +230°C |

| Contact Size | Contact P/N | | Extraction Tool | | Crimp Tool | Die Set | Locator |
|--------------|-------------|------------|-----------------|---------|------------|---------|---------|
| | Pin | Socket | Plastic | Metal | | | |
| 8 | 850-150-08 | 850-151-08 | 859-136-08 | 859-139 | 859-025 | 859-026 | 859-029 |
| | 850-150-04 | 850-151-04 | 859-136-04 | 859-138 | | 859-027 | 859-030 |
| | 850-150-02 | 850-151-02 | N/A | 859-171 | | 859-169 | 859-170 |
| | 850-150-0 | 850-151-0 | N/A | 859-137 | | 859-028 | 859-031 |
| | 850-150-00 | 850-151-00 | N/A | 859-225 | | 859-230 | 859-231 |

| EXAMPLE CONTACT ARRANGEMENT CURRENT RATINGS | | | | |
|---|--------------------------|---------------------------|---------------------------|--------------------------|
| Ins. Arr. | #8AWG 145 A ¹ | #4 AWG 270 A ¹ | #2 AWG 360 A ¹ | 1/0 490 A ¹ |
| 28-3 | | | 3X (156 A ²) | |
| 28-4 | | 4X (104 A ²) | | |
| 28-6 | 6X (49 A ²) | | | |
| 32-3 | | | | 3X (210 A ²) |

¹ Absolute maximum current rating per SAE AS50881: single conductor, sea level, 205° temp rise (25° ambient to 230° C max for "Z1" connectors)

² Derated current for typical applications per SAE AS50881: multiple conductors, 50,000 ft. altitude, 100°C temp rise



| Position | A° | B° | C° | D° |
|----------|-----|-----|-----|-----|
| 1 | 76 | 148 | 212 | 284 |
| 2 | 135 | 170 | 200 | 310 |
| 3 | 49 | 169 | 200 | 244 |
| 4 | 66 | 140 | 200 | 257 |
| 5 | 62 | 145 | 180 | 280 |
| 6 | 79 | 153 | 197 | 272 |

972-203 Feed-thru receptacle, jam-nut mount, fixed contacts, pin / socket configuration



**972-203 Feed-Thru
Receptacle**

| HOW TO ORDER | | | | | | |
|---|--|----|------|---|---|--|
| Sample Part Number | 972-203 | NF | 32-3 | P | 1 | |
| Basic Part Number | PowerLoad™ Feed-Thru Receptacle, Jam-Nut mount | | | | | |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (See Table) | | | | | |
| Shell Size / Contact Arrangement | See PowerLoad contact arrangements table | | | | | |
| Contact Gender | P = Pin on jam nut side S = Socket on jam nut side (opposite side of connector is opposite gender) | | | | | |
| Polarization | 1, 2, 3, 4, 5, or 6 (see Keyway Positions table) | | | | | |

CONNECTOR FEATURES

- Socket towers for improved creep path performance
- Single-piece insulator eliminates bond lines that can lead to electrical failure
- High-temperature Crown Ring contact technology

POWER SPECIFICATIONS

- For applications up to 2000 VAC/ 1500 Hz, and from 150 – 800 Amps.
- 230°C maximum operating temperature (stainless steel bodies and shells)
- 100% DWV tested at 5,000 VAC (all arrangements)
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)

MATERIAL SPECIFICATIONS

Insulators - PEEK thermoplastic, glass reinforced

Seals and o-ring- high-temperature silicone/N.A.

Contact body - high-conductivity copper alloy, gold plated

Socket contact hood, crown ring - stainless steel, passivated

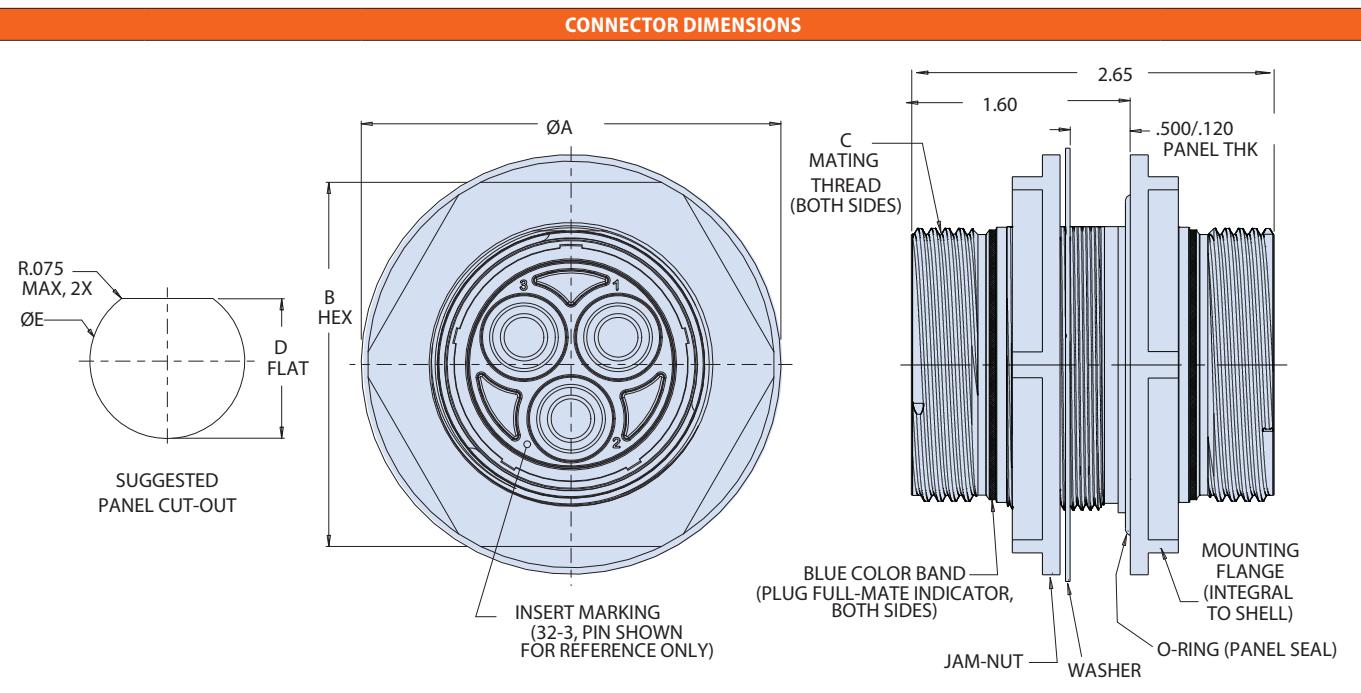
| SHELL SIZE / CONTACT ARRANGEMENTS (FACE OF PIN INSERT) | | | | | | |
|--|-------------------------|-------------------------|------------------------|---------------------------------------|---------------------------------|------|
| | | | | | | |
| 16-A1 1X #8 | 16-1 1X #4 | 20-A1 1X #2 | 20-1 1X #1/0 | 22-1* 1X #2/0 | 22-2 2X #8 | |
| | | | | | | |
| 22-3 3X #8 | 24-1* 1X #4/0 | 24-2 2X #4 | 24-4 4X #8 | 28-2 2X #2 | 28-3 3X #2 | |
| | | | | | | |
| 28-4 4X #4 | 28-6 6X #8 | 32-2 2X #1/0 | 32-3 3X #1/0 | 32-4 4X #2 | 32-5 3X #1/0 & 2X #16 | |
| | | | | | | |
| 36-2* 2X #2/0 | 36-4 4X #1/0 | 40-3* 3X #2/0 | | #8 | #4 | #2 |
| | | | | #1/0 | #2/0 | #4/0 |
| | | | | Contact Size Key * Consult Factory | | |

AIRCRAFT POWER INTERCONNECT TECHNOLOGY

PowerLoad™ Connectors



972-203 Feed-thru receptacle, jam-nut mount, fixed contacts, pin / socket configuration



| Shell Size | A ±.030 | B ±.010 | C Mating Thread | ØD ±.005 | ØE ±.005 |
|------------|---------------|---------------|-----------------------|---------------|---------------|
| 16 | 2.125 (53.98) | 1.750 (44.45) | 1.000-0.1P-0.3L-TS-2A | 1.103 (28.02) | 1.178 (29.92) |
| 20 | 2.375 (60.33) | 2.000 (50.80) | 1.250-0.1P-0.3L-TS-2A | 1.353 (34.37) | 1.428 (36.27) |
| 22 | 2.500 (63.50) | 2.125 (53.97) | 1.375-0.1P-0.3L-TS-2A | 1.478 (37.54) | 1.553 (39.45) |
| 24 | 2.625 (66.68) | 2.250 (57.15) | 1.500-0.1P-0.3L-TS-2A | 1.603 (40.72) | 1.675 (42.55) |
| 28 | 2.875 (73.02) | 2.500 (63.50) | 1.750-0.1P-0.3L-TS-2A | 1.853 (47.07) | 1.928 (48.97) |
| 32 | 3.200 (81.28) | 2.750 (69.85) | 2.000-0.1P-0.3L-TS-2A | 2.103 (53.42) | 2.178 (55.32) |
| 36 | 3.375 (85.73) | 3.000 (76.20) | 2.250-0.1P-0.3L-TS-2A | 2.353 (59.77) | 2.428 (61.67) |
| 40 | 3.625 (92.07) | 3.250 (82.55) | 2.500-0.1P-0.3L-TS-2A | 2.603 (66.12) | 2.678 (68.02) |

| MATERIAL / FINISH | | | |
|-------------------|-----------------|--------------------------------|---------------|
| Code | Material | Finish | Temp. Rating |
| ME | | Electroless Nickel | -54° – +200°C |
| | | Nickel-PTFE | -54° – +200°C |
| MT | Aluminum | Cadmium, OD | -54° – +175°C |
| | | Zinc-Ni, Black (Tri-Valent CR) | -54° – +175°C |
| Z1 | Stainless Steel | Passivate | -54° – +230°C |
| ZL | | Electrodeposited Nickel | -54° – +230°C |

| EXAMPLE CONTACT ARRANGEMENT CURRENT RATINGS | | | | |
|---|--------------------------|---------------------------|---------------------------|--------------------------|
| Ins. Arr. | #8AWG 145 A ¹ | #4 AWG 270 A ¹ | #2 AWG 360 A ¹ | 1/0 490 A ¹ |
| 28-3 | | | 3X (156 A ²) | |
| 28-4 | | 4X (104 A ²) | | |
| 28-6 | 6X (49 A ²) | | | |
| 32-3 | | | | 3X (210 A ²) |

¹ Absolute maximum current rating per SAE AS50881: single conductor, sea level, 205° temp rise (25° ambient to 230° C max for "Z1" connectors)

² Derated current for typical applications per SAE AS50881: multiple conductors, 50,000 ft. altitude, 100°C temp rise

| RECEPTACLE KEYWAY POSITIONS | | | | |
|-----------------------------|-----|-----|-----|-----|
| Position | A° | B° | C° | D° |
| 1 | 76 | 148 | 212 | 284 |
| 2 | 135 | 170 | 200 | 310 |
| 3 | 49 | 169 | 200 | 244 |
| 4 | 66 | 140 | 200 | 257 |
| 5 | 62 | 145 | 180 | 280 |
| 6 | 79 | 153 | 197 | 272 |

850-150 Crown Ring crimp pin contact 850-151 Crown Ring crimp socket contact

POWERLOAD CONNECTORS - CRIMP CONTACTS



Crown Ring pin contact (top) and socket (bottom, shown without hood)

FEATURES AND SPECIFICATIONS

- Temperature rating: 260°C
- Contact resistance 40% of typical AS39029 contacts when mated to PowerLoad socket contacts
- Double-thick gold-plated on contact mating surfaces versus AS39029
- Passivated Stainless steel spring member on socket contact provides contact spring force and is resistant to stress relaxation up to 260°

| HOW TO ORDER | |
|--------------------|---|
| Sample Part Number | 850-150 -0 |
| Basic Part Number | 850-150 Crown Ring pin contact 850-151 Crown Ring socket contact |
| Contact Size | 8, 4, 2, 0 |

| CRIMP PIN CONTACT DIMENSIONS | | | | | | |
|------------------------------|--------------|------|-----|---------|--------|------|
| Part Number | Contact Size | ØA | ØB | ØC Min. | D Min. | E |
| 850-150-8 | 8AWG | .142 | .30 | .178 | .485 | 1.36 |
| 850-150-4 | 4AWG | .225 | .42 | .278 | .485 | 1.36 |
| 850-150-2 | 2AWG | .283 | .50 | .356 | .535 | 1.42 |
| 850-150-0 | 1/0AWG | .357 | .61 | .450 | .580 | 1.49 |

| CRIMP SOCKET CONTACT DIMENSIONS | | | | | | |
|---------------------------------|--------------|------|-----|---------|--------|------|
| Part Number | Contact Size | ØA | ØB | ØC Min. | D Min. | E |
| 850-151-8 | 8AWG | .250 | .30 | .178 | .485 | 1.34 |
| 850-151-4 | 4AWG | .327 | .42 | .278 | .485 | 1.34 |
| 850-151-2 | 2AWG | .420 | .50 | .356 | .535 | 1.40 |
| 850-151-0 | 1/0AWG | .515 | .61 | .450 | .580 | 1.47 |

Crown Ring crimp contact tooling

PNEUMATIC CRIMP TOOL FOR #8, #4 AND #1/0 CONTACTS



C

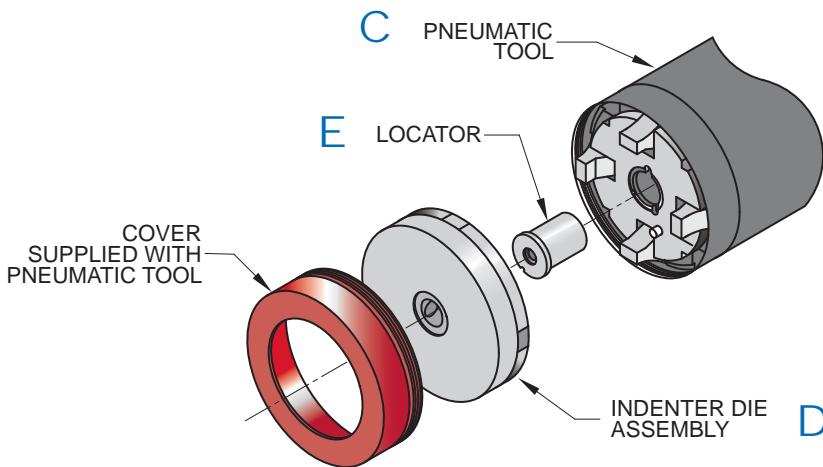
C Bench mount pneumatic crimp tool. Heavy duty, four-indent crimp termination. Attach to air supply with quick-disconnect fitting or install 1/4 NPT fitting into tapped port. 90-120 psi air supply. Requires die assemblies and locators, sold separately. Hand actuate with push-button valve trigger on handle. Steel with black wrinkle enamel coating. 13 inches overall length, 9.2 inches tall, 17 pounds (7.7 Kg).



D



E



| CROWN RING CRIMP CONTACT TOOLING | | | | | | | |
|----------------------------------|---------------------|------------------|-------------------------------------|----------------|------------|----------------|----------------|
| Contact Size | Contact Part Number | | Extraction Tool | | Crimp Tool | Die Set | Locator |
| | Pin | Socket | Plastic | Metal | | | |
| 8AWG | 850-150-8 | 850-151-8 | 859-136-8 or M81969/29-02 | 859-139 | 859-025 | 859-026 | 859-029 |
| 4AWG | 850-150-4 | 850-151-4 | 859-136-4 or M81969/29-03 | 859-138 | | 859-027 | 859-030 |
| 2AWG | 850-150-2 | 850-151-2 | N/A | 859-171 | | 859-169 | 859-170 |
| 1/0AWG | 850-150-0 | 850-151-0 | M81969/14-08 or M81969/29-04 | 859-137 | | 859-028 | 859-031 |

972-011 Plug with banding porch, bus bar and lug contacts, bonded grommet for TurboFlex or tape-wrapped wire

POWERLOAD CONNECTORS - BUS BAR / LUG CONTACTS



972-011 Plug

CONNECTOR FEATURES

- Socket towers for improved creep path performance
- Single-piece insulator eliminates bond lines that can lead to electrical failure
- High-vibration self-locking coupler
- High-temperature bus bar and lug type Crown Ring contacts

POWER SPECIFICATIONS

- For applications up to 2000 VAC/ 1500 Hz, and from 150 – 800 Amps.
- 230°C maximum operating temperature (stainless steel bodies and shells)
- 100% DWV tested at 5,000 VAC (all arrangements)
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)

MATERIAL SPECIFICATIONS

Insulators - PEEK thermoplastic, glass reinforced
 Seals - high-temperature silicone
 Contact body - high-conductivity copper alloy, gold plated
 Socket contact hood, crown ring - stainless steel, passivated

| HOW TO ORDER | | | | | | |
|----------------------------------|---|----|------|---|---|---|
| Sample Part Number | 972-011 | NF | 32-3 | P | 1 | A |
| Basic Part Number | PowerLoad™ Plug with Banding Platform, Bonded Grommet for TurboFlex or Tape-Wrapped wire | | | | | |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (see Table) | | | | | |
| Shell Size / Contact Arrangement | See PowerLoad contact arrangements table | | | | | |
| Contact Gender | P = Pin A = Pin, less contacts S = Socket B = Socket, less contacts (see table for available contacts) | | | | | |
| Polarization | 1, 2, 3, 4, 5, or 6 | | | | | |
| Wire Diameter | A = standard wire, See Table III. Use code B for small-diameter wires, consult factory. Use Code Z for connector less wire sealing grommet. | | | | | |

| SHELL SIZE / CONTACT ARRANGEMENTS (FACE OF PIN INSERT) | | | | | | |
|--|-------------------------|-------------------------|------------------------|---------------------------------------|---------------------------------|--|
| | | | | | | |
| 16-A1 1X #8 | 16-1 1X #4 | 20-A1 1X #2 | 20-1 1X #1/0 | 22-1* 1X #2/0 | 22-2 2X #8 | |
| | | | | | | |
| 22-3 3X #8 | 24-1* 1X #4/0 | 24-2 2X #4 | 24-4 4X #8 | 28-2 2X #2 | 28-3 3X #2 | |
| | | | | | | |
| 28-4 4X #4 | 28-6 6X #8 | 32-2 2X #1/0 | 32-3 3X #1/0 | 32-4 4X #2 | 32-5 3X #1/0 & 2X #16 | |
| | | | | | | |
| 36-2* 2X #2/0 | 36-4 4X #1/0 | 40-3* 3X #2/0 | | Contact Size Key * Consult Factory | | |

| TURBOFLEX WIRE DIAMETER | | |
|-------------------------|---------------------------|---------------------------|
| Gauge | Finished O.D. | |
| | A | B |
| 8 AWG | Ø .210/.277 (5.33/7.04) | Ø .175/.225 (4.44/5.72) |
| 4 AWG | Ø .325/.391 (8.25/9.93) | Ø .275/.350 (6.99/8.89) |
| 2 AWG | Ø .400/.477 (10.16/12.12) | Ø .344/.421 (8.74/10.69) |
| 1/0 | Ø .490/.572 (12.45/14.53) | Ø .420/.505 (10.67/12.83) |
| 2/0 | Ø .540/.661 (13.72/16.79) | Ø .475/.576 (12.07/14.63) |
| 4/0 | Ø .665/.753 (16.89/19.13) | Ø .590/.680 (14.99/17.27) |

AIRCRAFT POWER INTERCONNECT TECHNOLOGY

PowerLoad™ Connectors



972-011 Plug with banding porch, bus bar and lug contacts, bonded grommet for TurboFlex or tape-wrapped wire

| CONNECTOR DIMENSIONS | | | | | |
|----------------------|--------------|---------------|-----------------------|---------------|---------------|
| | | | | | |
| Shell Size | ØA Max | B Flat ±.006 | C Mating Thread | ØD ±.015 | ØE ±.015 |
| 16 | 1.47 (37.34) | 1.375 (34.93) | 1.000-0.1P-0.3L-TS-2B | .812 (20.62) | .875 (22.23) |
| 20 | 1.72 (43.69) | 1.625 (41.28) | 1.250-0.1P-0.3L-TS-2B | 1.062 (26.97) | 1.125 (28.58) |
| 22 | 1.85 (46.99) | 1.750 (44.45) | 1.375-0.1P-0.3L-TS-2B | 1.187 (30.15) | 1.250 (31.75) |
| 24 | 1.97 (50.04) | 1.875 (47.63) | 1.500-0.1P-0.3L-TS-2B | 1.312 (33.32) | 1.375 (34.92) |
| 28 | 2.22 (56.39) | 2.140 (54.36) | 1.750-0.1P-0.3L-TS-2B | 1.562 (39.67) | 1.625 (41.28) |
| 32 | 2.62 (66.55) | 2.500 (63.50) | 2.000-0.1P-0.3L-TS-2B | 1.812 (46.02) | 1.875 (47.63) |
| 36 | 2.88 (73.15) | 2.750 (69.85) | 2.250-0.1P-0.3L-TS-2B | 2.062 (52.37) | 2.125 (53.97) |
| 40 | 3.07 (77.98) | 2.938 (74.63) | 2.500-0.1P-0.3L-TS-2B | 2.187 (55.55) | 2.250 (57.15) |

| MATERIAL / FINISH | | | |
|-------------------|-----------------|--------------------------------|--------------|
| Code | Material | Finish | Temp. Rating |
| ME | Aluminum | Electroless Nickel | -54° +200°C |
| MT | | Nickel-PTFE | -54° +200°C |
| NF | | Cadmium, OD | -54° +175°C |
| ZR | | Zinc-Ni, Black (Tri-Valent CR) | -54° +175°C |
| Z1 | Stainless Steel | Passivate | -54° +230°C |
| ZL | | Electrodeposited Nickel | -54° +230°C |

| EXAMPLE CONTACT ARRANGEMENT CURRENT RATINGS | | | | |
|---|--------------------------|---------------------------|---------------------------|------------------------|
| Ins. Arr. | #8AWG 145 A ¹ | #4 AWG 270 A ¹ | #2 AWG 360 A ¹ | 1/0 490 A ¹ |
| 28-3 | | | 3X (156 A ²) | |
| 28-4 | | 4X (104 A ²) | | |
| 28-6 | 6X (49 A ²) | | | |
| 32-3 | | | 3X (210 A ²) | |

¹ Absolute maximum current rating per SAE AS50881: single conductor, sea level, 205° temp rise (25° ambient to 230° C max for "Z1" connectors)

² Derated current for typical applications per SAE AS50881: multiple conductors, 50,000 ft. altitude, 100°C temp rise

| AVAILABLE PIN CONTACTS | | | AVAILABLE SOCKET CONTACTS | | |
|------------------------|--------------|-------------------------|---------------------------|--------------|-------------------------|
| Part Number | Contact Size | Termination Style | Part Number | Contact Size | Termination Style |
| 850-323-0-A | 0 | Internal Thread Style A | 850-324-0-A | 0 | Internal Thread Style A |
| 850-323-2-A | 2 | | 850-324-2-A | 2 | |
| 850-323-4-A | 4 | | 850-324-4-A | 4 | |
| 850-323-8-A | 8 | | 850-324-8-A | 8 | |
| 850-323-0-C | 0 | Lug Style C | 850-324-0-C | 0 | Lug Style C |
| 850-323-2-C | 2 | | 850-324-2-C | 2 | |
| 850-323-4-C | 4 | | 850-324-4-C | 4 | |
| 850-323-8-C | 8 | | 850-324-8-C | 8 | |

POWERLOAD CONNECTORS - BUS BAR / LUG CONTACTS

972-012 Wall-mount receptacle with banding platform, bus bar and lug contacts, bonded grommet for TurboFlex or tape-wrapped wire

POWERLOAD CONNECTORS - BUS BAR / LUG CONTACTS



972-012 Receptacle

CONNECTOR FEATURES

- Socket towers for improved creep path performance
- Single-piece insulator eliminates bond lines that can lead to electrical failure
- High-vibration self-locking coupler
- High-temperature bus bar and lug type Crown Ring contacts

POWER SPECIFICATIONS

- For applications up to 2000 VAC/ 1500 Hz, and from 150 – 800 Amps.
- 230°C maximum operating temperature (stainless steel bodies and shells)
- 100% DWV tested at 5,000 VAC (all arrangements)
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)

MATERIAL SPECIFICATIONS

Insulators - PEEK thermoplastic, glass reinforced

Seals - high-temperature silicone

Contact body - high-conductivity copper alloy, gold plated

Socket contact hood, crown ring - stainless steel, passivated

| HOW TO ORDER | | | | | | | |
|----------------------------------|---|----|------|---|---|---|--|
| Sample Part Number | 972-012 | NF | 32-3 | P | 1 | A | |
| Basic Part Number | PowerLoad™ Wall-Mount Receptacle with Banding Platform, Bonded Grommet for TurboFlex or Tape-Wrapped wire | | | | | | |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (see Table) | | | | | | |
| Shell Size / Contact Arrangement | See PowerLoad contact arrangements table | | | | | | |
| Contact Gender | P = Pin A = Pin, less contacts S = Socket B = Socket, less contacts (see table for available contacts) | | | | | | |
| Polarization | 1, 2, 3, 4, 5, or 6 | | | | | | |
| Wire Diameter | A = standard wire, See Table III. Use code B for small-diameter wires, consult factory. Use Code Z for connector less wire sealing grommet. | | | | | | |

| SHELL SIZE / CONTACT ARRANGEMENTS (FACE OF PIN INSERT) | | | | | | | |
|--|--------------------------|------------------|-----------------|------------------|---------------|---------------------------------------|------------------|
| 16-A1 1X #8 | 16-1 1X #4 | 20-A1 1X #2 | 20-1 1X #1/0 | 22-1* 1X #2/0 | 22-2 2X #8 | 22-3 3X #8 | 24-1* 1X #4/0 |
| 24-2 2X #4 | 24-4 4X #8 | 28-2 2X #2 | 28-3 3X #2 | 28-4 4X #4 | 28-6 6X #8 | 32-2 2X #1/0 | 32-3 3X #1/0 |
| 32-4 4X #2 | 32-5 3X #1/0 & 2X #16 | 36-2* 2X #2/0 | 36-4 4X #1/0 | 40-3* 3X #2/0 | | Contact Size Key * Consult Factory | |
| | | | | | | | |

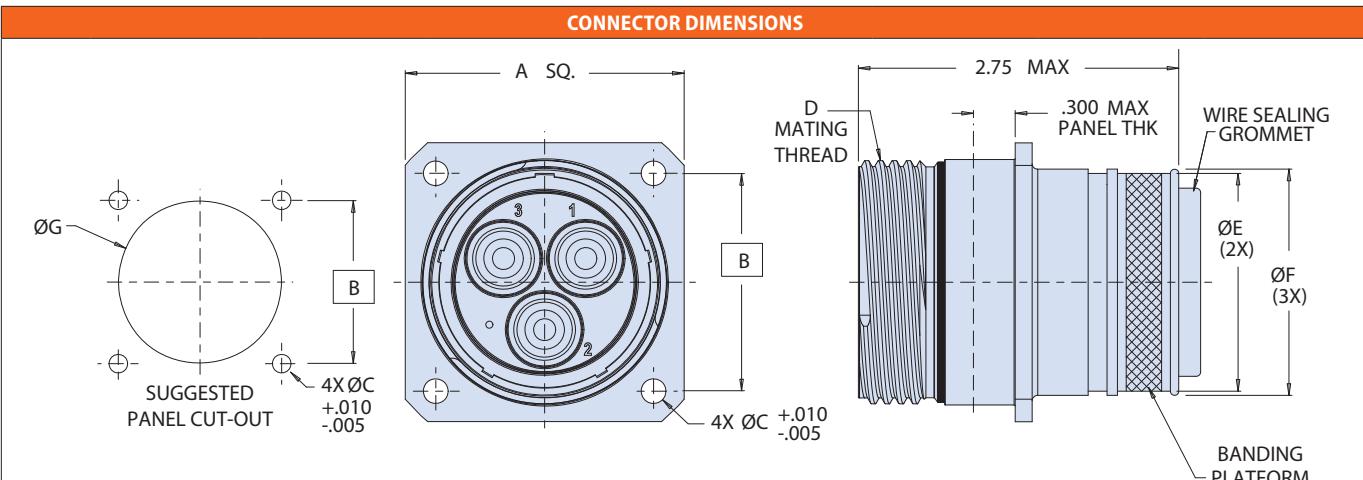
| Gauge | Finished O.D. | |
|-------|---------------------------|---------------------------|
| | A | B |
| 8 AWG | Ø .210/.277 (5.33/7.04) | Ø .175/.225 (4.44/5.72) |
| 4 AWG | Ø .325/.391 (8.25/9.93) | Ø .275/.350 (6.99/8.89) |
| 2 AWG | Ø .400/.477 (10.16/12.12) | Ø .344/.421 (8.74/10.69) |
| 1/0 | Ø .490/.572 (12.45/14.53) | Ø .420/.505 (10.67/12.83) |
| 2/0 | Ø .540/.661 (13.72/16.79) | Ø .475/.576 (12.07/14.63) |
| 4/0 | Ø .665/.753 (16.89/19.13) | Ø .590/.680 (14.99/17.27) |

AIRCRAFT POWER INTERCONNECT TECHNOLOGY

PowerLoad™ Connectors



972-012 Wall-mount receptacle with banding platform, bus bar and lug contacts, bonded grommet for TurboFlex or tape-wrapped wire



| Shell Size | A ±.031 | B Bsc | ØC Typ | D Mating Thread | ØE ±.015 | ØF ±.015 | ØG ±.010 |
|------------|---------------|---------------|-------------|------------------------|---------------|---------------|---------------|
| 16 | 1.281 (32.54) | .969 (24.61) | .150 (3.81) | 1.000-0.1P-0.3L-TS-2A | .812 (20.62) | .875 (22.23) | 1.062 (26.97) |
| 20 | 1.500 (38.10) | 1.156 (29.36) | .177 (4.5) | 1.250 -0.1P-0.3L-TS-2A | 1.062 (26.97) | 1.125 (28.58) | 1.312 (33.32) |
| 22 | 1.625 (41.28) | 1.250 (31.75) | .177 (4.5) | 1.375 -0.1P-0.3L-TS-2A | 1.187 (30.15) | 1.250 (31.75) | 1.437 (36.50) |
| 24 | 1.750 (44.45) | 1.375 (34.92) | .177 (4.5) | 1.500 -0.1P-0.3L-TS-2A | 1.312 (33.32) | 1.375 (34.92) | 1.562 (39.67) |
| 28 | 2.000 (50.80) | 1.562 (39.67) | .177 (4.5) | 1.750 -0.1P-0.3L-TS-2A | 1.562 (39.67) | 1.625 (41.28) | 1.812 (46.02) |
| 32 | 2.250 (57.15) | 1.750 (44.45) | .209 (5.3) | 2.000 -0.1P-0.3L-TS-2A | 1.812 (46.02) | 1.875 (47.63) | 2.062 (52.37) |
| 36 | 2.500 (63.50) | 1.938 (49.23) | .209 (5.3) | 2.250 -0.1P-0.3L-TS-2A | 2.062 (52.37) | 2.125 (53.97) | 2.312 (58.72) |
| 40 | 2.750 (69.85) | 2.188 (55.58) | .209 (5.31) | 2.500 -0.1P-0.3L-TS-2A | 2.187 (55.55) | 2.250 (57.15) | 2.562 (65.07) |

| MATERIAL / FINISH | | | | EXAMPLE CONTACT ARRANGEMENT CURRENT RATINGS | | | | |
|-------------------|-----------------|--------------------------------|--------------|---|--------------------------|---------------------------|---------------------------|--------------------------|
| Code | Material | Finish | Temp. Rating | Ins. Arr. | #8AWG 145 A ¹ | #4 AWG 270 A ¹ | #2 AWG 360 A ¹ | 1/0 490 A ¹ |
| ME | | Electroless Nickel | -54° +200°C | 28-3 | | | 3X (156 A ²) | |
| | | Nickel-PTFE | -54° +200°C | 28-4 | | 4X (104 A ²) | | |
| MT | Aluminum | Cadmium, OD | -54° +175°C | 28-6 | 6X (49 A ²) | | | |
| | | Zinc-Ni, Black (Tri-Valent CR) | -54° +175°C | 32-3 | | | | 3X (210 A ²) |
| Z1 | Stainless Steel | Passivate | -54° +230°C | | | | | |
| ZL | Steel | Electrodeposited Nickel | -54° +230°C | | | | | |

¹ Absolute maximum current rating per SAE AS50881: single conductor, sea level, 205° temp rise (25° ambient to 230° C max for "Z1" connectors)

² Derated current for typical applications per SAE AS50881: multiple conductors, 50,000 ft. altitude, 100°C temp rise

| AVAILABLE PIN CONTACTS | | | AVAILABLE SOCKET CONTACTS | | |
|------------------------|--------------|--------------------------------|---------------------------|--------------|--------------------------------|
| Part Number | Contact Size | Termination Style | Part Number | Contact Size | Termination Style |
| 850-323-0-A | 0 | Internal Thread Style A | 850-324-0-A | 0 | Internal Thread Style A |
| 850-323-2-A | 2 | | 850-324-2-A | 2 | |
| 850-323-4-A | 4 | | 850-324-4-A | 4 | |
| 850-323-8-A | 8 | | 850-324-8-A | 8 | |
| 850-323-0-C | 0 | Lug Style C | 850-324-0-C | 0 | Lug Style C |
| 850-323-2-C | 2 | | 850-324-2-C | 2 | |
| 850-323-4-C | 4 | | 850-324-4-C | 4 | |
| 850-323-8-C | 8 | | 850-324-8-C | 8 | |

POWERLOAD CONNECTORS - BUS BAR / LUG CONTACTS

972-013 Jam-nut receptacle with banding platform, bus bar and lug contacts, bonded grommet for TurboFlex or tape-wrapped wire

POWERLOAD CONNECTORS - BUS BAR / LUG CONTACTS



972-013 Jam-Nut Receptacle

CONNECTOR FEATURES

- Socket towers for improved creep path performance
- Single-piece insulator eliminates bond lines that can lead to electrical failure
- High-vibration self-locking coupler
- High-temperature bus bar and lug type Crown Ring contacts

POWER SPECIFICATIONS

- For applications up to 2000 VAC/ 1500 Hz, and from 150 – 800 Amps.
- 230°C maximum operating temperature (stainless steel bodies and shells)
- 100% DWV tested at 5,000 VAC (all arrangements)
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)

MATERIAL SPECIFICATIONS

Insulators - PEEK thermoplastic, glass reinforced

Seals and o-ring- high-temperature silicone/N.A.

Contact body - high-conductivity copper alloy, gold plated

Socket contact hood, crown ring - stainless steel, passivated

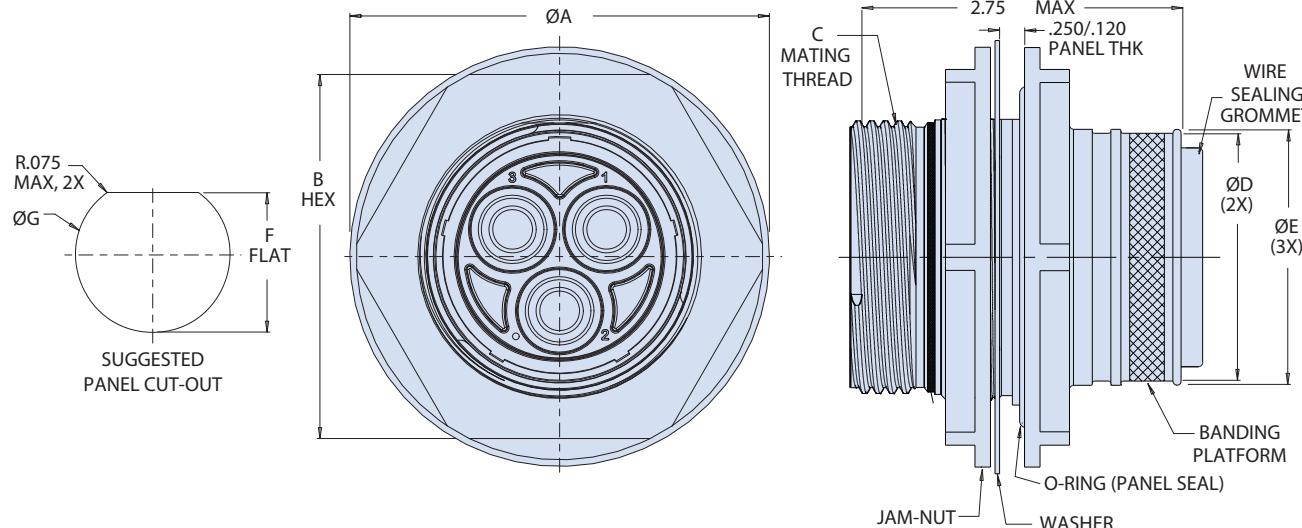
| HOW TO ORDER | | 972-013 | NF | 32-3 | P | 1 | A |
|----------------------------------|---|---------|----|------|---|---|---|
| Sample Part Number | | | | | | | |
| Basic Part Number | PowerLoad™ Jam-Nut Receptacle with Banding Platform, Bonded Grommet for TurboFlex or Tape-Wrapped wire | | | | | | |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (see Table) | | | | | | |
| Shell Size / Contact Arrangement | See PowerLoad contact arrangements table | | | | | | |
| Contact Gender | P = Pin A = Pin, less contacts S = Socket B = Socket, less contacts (see table for available contacts) | | | | | | |
| Polarization | 1, 2, 3, 4, 5, or 6 | | | | | | |
| Wire Diameter | A = standard wire, See Table III. Use code B for small-diameter wires, consult factory. Use Code Z for connector less wire sealing grommet. | | | | | | |

| SHELL SIZE / CONTACT ARRANGEMENTS (FACE OF PIN INSERT) | | | | | | | |
|--|-----------------|------------------|-----------------|--|--------------------------|-----------------|---------------------------------------|
| | | | | | | | |
| 16-A1 1X #8 | 16-1 1X #4 | 20-A1 1X #2 | 20-1 1X #1/0 | 22-1* 1X #2/0 | 22-2 2X #8 | 22-3 3X #8 | 24-1* 1X #4/0 |
| | | | | | | | |
| 24-2 2X #4 | 24-4 4X #8 | 28-2 2X #2 | 28-3 3X #2 | 28-4 4X #4 | 28-5 3X #1/0 & 2X #16 | 32-2 2X #1/0 | 32-3 3X #1/0 |
| | | | | | | | Contact Size Key * Consult Factory |
| 36-2* 2X #2/0 | 36-4 4X #1/0 | 40-3* 3X #2/0 | | #8 #4 #2 #1/0 #2/0 #4/0 | | | |

| Gauge | TURBOFLEX WIRE DIAMETER | |
|-------|---------------------------|---------------------------|
| | A | B |
| 8 AWG | Ø .210/.277 (5.33/7.04) | Ø .175/.225 (4.44/5.72) |
| 4 AWG | Ø .325/.391 (8.25/9.93) | Ø .275/.350 (6.99/8.89) |
| 2 AWG | Ø .400/.477 (10.16/12.12) | Ø .344/.421 (8.74/10.69) |
| 1/0 | Ø .490/.572 (12.45/14.53) | Ø .420/.505 (10.67/12.83) |
| 2/0 | Ø .540/.661 (13.72/16.79) | Ø .475/.576 (12.07/14.63) |
| 4/0 | Ø .665/.753 (16.89/19.13) | Ø .590/.680 (14.99/17.27) |

972-013 Jam-nut receptacle with banding platform, bus bar and lug contacts, bonded grommet for TurboFlex or tape-wrapped wire

CONNECTOR DIMENSIONS



| Shell Size | A ±.030 | B ±.010 | C Mating Thread | ØD ±.015 | ØE ±.015 | ØF ±.005 | ØG ±.005 |
|------------|---------------|---------------|-----------------------|---------------|---------------|---------------|---------------|
| 16 | 2.125 (53.98) | 1.750 (44.45) | 1.000-0.1P-0.3L-TS-2A | .812 (20.62) | .875 (22.23) | 1.103 (28.02) | 1.178 (29.92) |
| 20 | 2.375 (60.33) | 2.000 (50.80) | 1.250-0.1P-0.3L-TS-2A | 1.062 (26.97) | 1.125 (28.58) | 1.353 (34.37) | 1.428 (36.27) |
| 22 | 2.500 (63.50) | 2.125 (53.97) | 1.375-0.1P-0.3L-TS-2A | 1.187 (30.15) | 1.250 (31.75) | 1.478 (37.54) | 1.553 (39.45) |
| 24 | 2.625 (66.68) | 2.250 (57.15) | 1.500-0.1P-0.3L-TS-2A | 1.312 (33.32) | 1.375 (34.92) | 1.603 (40.72) | 1.675 (42.55) |
| 28 | 2.875 (73.02) | 2.500 (63.50) | 1.750-0.1P-0.3L-TS-2A | 1.562 (39.67) | 1.625 (41.28) | 1.853 (47.07) | 1.928 (48.97) |
| 32 | 3.200 (81.28) | 2.750 (69.85) | 2.000-0.1P-0.3L-TS-2A | 1.812 (46.02) | 1.875 (47.63) | 2.103 (53.42) | 2.178 (55.32) |
| 36 | 3.375 (85.73) | 3.000 (76.20) | 2.250-0.1P-0.3L-TS-2A | 2.062 (52.37) | 2.125 (53.97) | 2.353 (59.77) | 2.428 (61.67) |
| 40 | 3.625 (92.07) | 3.250 (82.55) | 2.500-0.1P-0.3L-TS-2A | 2.187 (55.55) | 2.250 (57.15) | 2.603 (66.12) | 2.678 (68.02) |

| MATERIAL / FINISH | | | |
|-------------------|-----------------|--------------------------------|--------------|
| Code | Material | Finish | Temp. Rating |
| ME | | Electroless Nickel | -54°–+200°C |
| | | Nickel-PTFE | -54°–+200°C |
| MT | Aluminum | Cadmium, OD | -54°–+175°C |
| | | Zinc-Ni, Black (Tri-Valent CR) | -54°–+175°C |
| Z1 | Stainless Steel | Passivate | -54°–+230°C |
| ZL | | Electrodeposited Nickel | -54°–+230°C |

| EXAMPLE CONTACT ARRANGEMENT CURRENT RATINGS | | | |
|---|--------------------------|---------------------------|---------------------------|
| Ins. Arr. | #8AWG 145 A ¹ | #4 AWG 270 A ¹ | #2 AWG 360 A ¹ |
| 28-3 | | | 3X (156 A ²) |
| 28-4 | | 4X (104 A ²) | |
| 28-6 | 6X (49 A ²) | | |
| 32-3 | | | 3X (210 A ²) |

¹ Absolute maximum current rating per SAE AS50881: single conductor, sea level, 205° temp rise (25° ambient to 230° C max for "Z1" connectors)

² Derated current for typical applications per SAE AS50881: multiple conductors, 50,000 ft. altitude, 100°C temp rise

| AVAILABLE PIN CONTACTS | | | AVAILABLE SOCKET CONTACTS | | |
|------------------------|--------------|--------------------------------|---------------------------|--------------|--------------------------------|
| Part Number | Contact Size | Termination Style | Part Number | Contact Size | Termination Style |
| 850-323-0-A | 0 | Internal Thread Style A | 850-324-0-A | 0 | Internal Thread Style A |
| 850-323-2-A | 2 | | 850-324-2-A | 2 | |
| 850-323-4-A | 4 | | 850-324-4-A | 4 | |
| 850-323-8-A | 8 | | 850-324-8-A | 8 | |
| 850-323-0-C | 0 | Lug Style C | 850-324-0-C | 0 | Lug Style C |
| 850-323-2-C | 2 | | 850-324-2-C | 2 | |
| 850-323-4-C | 4 | | 850-324-4-C | 4 | |
| 850-323-8-C | 8 | | 850-324-8-C | 8 | |

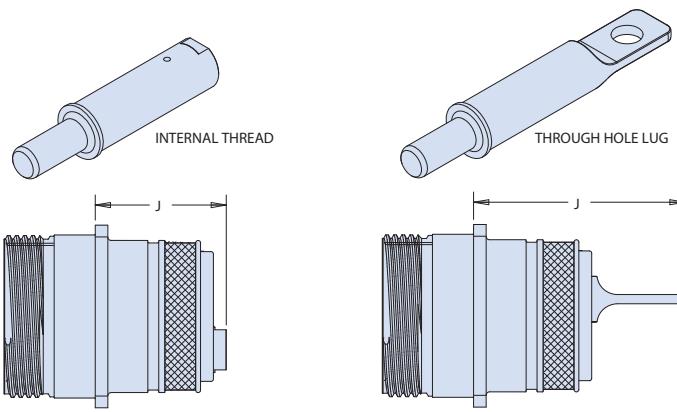
850-323 bus bar/lug pin contacts

| HOW TO ORDER | | | |
|--------------------|--|----|----|
| Sample Part Number | 850-323 | -0 | -A |
| Basic Part Number | Bus bar/lug pin contacts for PowerLoad connector | | |
| Contact Size | 8, 4, 2, 0 | | |
| Termination Style | A = Internal thread C = Lug | | |

| SOCKET CONTACT DIMENSIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------|--------------------------------|-----------------|-----------------|-------------|---------------|---------------|----------------|--------------|--------------------|--------------|-------------------|-----------------|-----------------|-------------|-------------|---------------|----------|-------------|--------------------|--------------|---|--------------------------------|-------------|--------------|-------------|---------------|--------------|----------------|--------------|---------------|-------------|---|-------------|--------------|---------------|-------------|---------------|--------------|-------------|---|-------------|--------------|---------------|-------------|--------------|--------------|-------------|---|-------------|-------------|---------------|-------------|-------------|--------------|-------------|---|--------------------|-------------|--------------|-------------|---------------|-----|-----|-----|---------------|-------------|---|-------------|--------------|---------------|---------------|-------------|---|-------------|--------------|---------------|---------------|-------------|---|-------------|-------------|---------------|---------------|
| <p>INTERNAL THREAD CONFIGURATION (TERMINATION STYLE A)</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>LUG CONFIGURATION (TERMINATION STYLE C)</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Contact Size</th><th>K</th><th>ØL</th><th>M Flat</th></tr> </thead> <tbody> <tr> <td>0</td><td>.115 (2.92)</td><td>.330 (8.38)</td><td>.836 (21.23)</td></tr> <tr> <td>2</td><td>.115 (2.92)</td><td>.269 (6.83)</td><td>.836 (21.23)</td></tr> <tr> <td>4</td><td>.085 (2.16)</td><td>.198 (5.03)</td><td>.552 (14.02)</td></tr> <tr> <td>8</td><td>.075 (1.90)</td><td>.173 (4.39)</td><td>.468 (11.89)</td></tr> </tbody> </table> | | | | | | | | | | Contact Size | K | ØL | M Flat | 0 | .115 (2.92) | .330 (8.38) | .836 (21.23) | 2 | .115 (2.92) | .269 (6.83) | .836 (21.23) | 4 | .085 (2.16) | .198 (5.03) | .552 (14.02) | 8 | .075 (1.90) | .173 (4.39) | .468 (11.89) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contact Size | K | ØL | M Flat | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | .115 (2.92) | .330 (8.38) | .836 (21.23) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | .115 (2.92) | .269 (6.83) | .836 (21.23) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | .085 (2.16) | .198 (5.03) | .552 (14.02) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | .075 (1.90) | .173 (4.39) | .468 (11.89) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Part Number</th><th>Contact Size</th><th>Termination Style</th><th>ØA ±.005 (.127)</th><th>ØB ±.005 (.127)</th><th>C</th><th>D</th><th>E Flat (ref.)</th><th>F Thread</th><th>G</th><th>J ±.025 Sq. Flange</th></tr> </thead> <tbody> <tr> <td>850-323-0-A</td><td>0</td><td rowspan="4">Internal Thread Style A</td><td>.357 (9.07)</td><td>.613 (15.57)</td><td rowspan="4">.046 (1.17)</td><td>1.753 (44.53)</td><td>.495 (12.57)</td><td>5/16-24 UNF 2B</td><td>.539 (13.69)</td><td rowspan="4">1.620 (41.15)</td></tr> <tr> <td>850-323-2-A</td><td>2</td><td>.283 (7.19)</td><td>.505 (12.83)</td><td>1.747 (44.37)</td><td>.370 (9.40)</td><td>1/4-28 UNF 2B</td><td>.453 (11.51)</td></tr> <tr> <td>850-323-4-A</td><td>4</td><td>.225 (5.72)</td><td>.415 (10.54)</td><td>1.628 (41.35)</td><td>.307 (7.80)</td><td>10-32 UNF 2B</td><td>.460 (11.68)</td></tr> <tr> <td>850-323-8-A</td><td>8</td><td>.142 (3.61)</td><td>.305 (7.75)</td><td>1.747 (44.37)</td><td>.245 (6.22)</td><td>8-36 UNF 2B</td><td>.407 (10.34)</td></tr> <tr> <td>850-323-0-C</td><td>0</td><td rowspan="4">Lug Style C</td><td>.357 (9.07)</td><td>.613 (15.57)</td><td rowspan="4">.046 (1.17)</td><td>2.738 (69.55)</td><td rowspan="4">N/A</td><td rowspan="4">N/A</td><td rowspan="4">N/A</td><td>2.605 (66.17)</td></tr> <tr> <td>850-323-2-C</td><td>2</td><td>.283 (7.19)</td><td>.505 (12.83)</td><td>2.723 (69.16)</td><td>2.596 (65.94)</td></tr> <tr> <td>850-323-4-C</td><td>4</td><td>.225 (5.72)</td><td>.415 (10.54)</td><td>2.309 (58.65)</td><td>2.176 (55.27)</td></tr> <tr> <td>850-323-8-C</td><td>8</td><td>.142 (3.61)</td><td>.305 (7.75)</td><td>2.288 (58.12)</td><td>2.161 (54.89)</td></tr> </tbody> </table> | | | | | | | | | | Part Number | Contact Size | Termination Style | ØA ±.005 (.127) | ØB ±.005 (.127) | C | D | E Flat (ref.) | F Thread | G | J ±.025 Sq. Flange | 850-323-0-A | 0 | Internal Thread Style A | .357 (9.07) | .613 (15.57) | .046 (1.17) | 1.753 (44.53) | .495 (12.57) | 5/16-24 UNF 2B | .539 (13.69) | 1.620 (41.15) | 850-323-2-A | 2 | .283 (7.19) | .505 (12.83) | 1.747 (44.37) | .370 (9.40) | 1/4-28 UNF 2B | .453 (11.51) | 850-323-4-A | 4 | .225 (5.72) | .415 (10.54) | 1.628 (41.35) | .307 (7.80) | 10-32 UNF 2B | .460 (11.68) | 850-323-8-A | 8 | .142 (3.61) | .305 (7.75) | 1.747 (44.37) | .245 (6.22) | 8-36 UNF 2B | .407 (10.34) | 850-323-0-C | 0 | Lug Style C | .357 (9.07) | .613 (15.57) | .046 (1.17) | 2.738 (69.55) | N/A | N/A | N/A | 2.605 (66.17) | 850-323-2-C | 2 | .283 (7.19) | .505 (12.83) | 2.723 (69.16) | 2.596 (65.94) | 850-323-4-C | 4 | .225 (5.72) | .415 (10.54) | 2.309 (58.65) | 2.176 (55.27) | 850-323-8-C | 8 | .142 (3.61) | .305 (7.75) | 2.288 (58.12) | 2.161 (54.89) |
| Part Number | Contact Size | Termination Style | ØA ±.005 (.127) | ØB ±.005 (.127) | C | D | E Flat (ref.) | F Thread | G | J ±.025 Sq. Flange | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 850-323-0-A | 0 | Internal Thread Style A | .357 (9.07) | .613 (15.57) | .046 (1.17) | 1.753 (44.53) | .495 (12.57) | 5/16-24 UNF 2B | .539 (13.69) | 1.620 (41.15) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 850-323-2-A | 2 | | .283 (7.19) | .505 (12.83) | | 1.747 (44.37) | .370 (9.40) | 1/4-28 UNF 2B | .453 (11.51) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 850-323-4-A | 4 | | .225 (5.72) | .415 (10.54) | | 1.628 (41.35) | .307 (7.80) | 10-32 UNF 2B | .460 (11.68) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 850-323-8-A | 8 | | .142 (3.61) | .305 (7.75) | | 1.747 (44.37) | .245 (6.22) | 8-36 UNF 2B | .407 (10.34) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 850-323-0-C | 0 | Lug Style C | .357 (9.07) | .613 (15.57) | .046 (1.17) | 2.738 (69.55) | N/A | N/A | N/A | 2.605 (66.17) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 850-323-2-C | 2 | | .283 (7.19) | .505 (12.83) | | 2.723 (69.16) | | | | 2.596 (65.94) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 850-323-4-C | 4 | | .225 (5.72) | .415 (10.54) | | 2.309 (58.65) | | | | 2.176 (55.27) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 850-323-8-C | 8 | | .142 (3.61) | .305 (7.75) | | 2.288 (58.12) | | | | 2.161 (54.89) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| SUGGESTED HARDWARE TORQUE (Termination style A) | |
|--|-----------------|
| Thread Size | Torque (In-lb.) |
| 5/16-24 UNF | 90–140 |
| 1/4-28 UNF | 60–70 |
| 10-32 UNF | 20–29 |
| 8-36 UNF | 11–19 |

| CONNECTOR HOLDING TOOL | |
|------------------------|----------|
| Contact size | Tool P/N |
| #0 | |
| #2 | |
| #4 | |
| #8 | |



Contact extension from front of shell flange. 972-012 square flange banding porch housing shown for reference.
Orientation of contacts shown for reference. Contacts are not keyed into the insert.

AIRCRAFT POWER INTERCONNECT TECHNOLOGY

PowerLoad™ Connectors



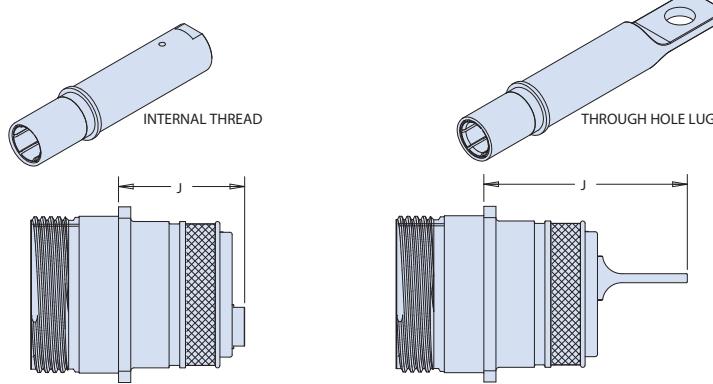
850-324 bus bar/lug socket contacts

POWERLOAD CONNECTORS - BUS BAR / LUG CONTACTS

| HOW TO ORDER | | | |
|--------------------|---|----|----|
| Sample Part Number | 850-324 | -0 | -A |
| Basic Part Number | Bus bar/lug socket contacts for PowerLoad connector | | |
| Contact Size | 8, 4, 2, 0 | | |
| Termination Style | A = Internal thread C = Lug | | |

| SOCKET CONTACT DIMENSIONS | | | | | | | | | | | |
|---------------------------|--------------|--------------------------------|---|--------------------|-------------|---------------|---------------|----------------|--------------|--------|-------------------|
| Part Number | Contact Size | Termination Style | INTERNAL THREAD CONFIGURATION (TERMINATION STYLE A) | | C | D | E Flat (ref.) | F Thread | G | H Max. | J±.025 Sq. Flange |
| | | | ØA ±.005 (.127) | ØB ±.005 (.127) | | | | | | | |
| 850-324-0-A | 0 | Internal Thread Style A | .516 (13.11) | .613 (15.57) | .046 (1.17) | 1.753 (44.53) | .495 (12.57) | 5/16-24 UNF 2B | .539 (13.69) | N/A | 1.620 (41.15) |
| 850-324-2-A | 2 | | .420 (10.67) | .505 (12.83) | | 1.747 (44.37) | .370 (9.40) | 1/4-28 UNF 2B | .453 (11.51) | | 1.495 (37.97) |
| 850-324-4-A | 4 | | .328 (8.33) | .415 (10.54) | | 1.628 (41.35) | .307 (7.80) | 10-32 UNF 2B | .460 (11.68) | | 1.620 (41.15) |
| 850-324-8-A | 8 | | .250 (6.35) | .305 (7.75) | | 1.747 (44.37) | .245 (6.22) | 8-36 UNF 2B | .407 (10.34) | | 2.605 (66.17) |
| 850-324-0-C | 0 | Lug Style C | .516 (13.11) | .613 (15.57) | .046 (1.17) | 2.738 (69.55) | N/A | N/A | N/A | N/A | 2.596 (65.94) |
| 850-324-2-C | 2 | | .420 (10.67) | .505 (12.83) | | 2.723 (69.16) | | | | | 2.176 (55.27) |
| 850-324-4-C | 4 | | .328 (8.33) | .415 (10.54) | | 2.309 (58.65) | | | | | 2.161 (54.89) |
| 850-324-8-C | 8 | | .250 (6.35) | .305 (7.75) | | 2.288 (58.12) | | | | | |

| SUGGESTED HARDWARE TORQUE (Termination style A and B) | |
|--|-----------------|
| Thread Size | Torque (In-lb.) |
| 5/16-24 UNF | 90-140 |
| 1/4-28 UNF | 60-70 |
| 10-32 UNF | 20-29 |
| 8-36 UNF | 11-19 |



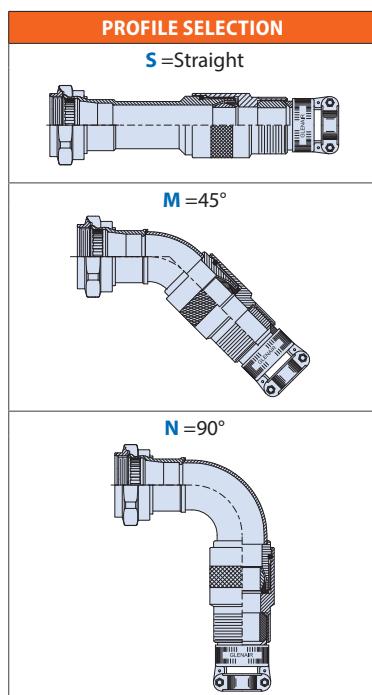
Contact extension from front of shell flange. 972-012 square flange banding porch housing shown for reference.
Orientation of contacts shown for reference. Contacts are not keyed into the insert.

| CONNECTOR HOLDING TOOL | |
|------------------------|----------|
| Contact size | Tool P/N |
| #0 | |
| #2 | |
| #4 | |
| #8 | |

390PX055 EMI/RFI environmental backshell Straight, 45°, 90° configurations • three strain relief options

POWERLOAD BACKSHELLS AND ACCESSORIES

| MATERIAL / FINISH | | |
|-------------------|-----------|--------------------------------|
| Code | Material | Finish |
| ME | Aluminum | Electroless Nickel |
| MT | | Nickel-PTFE |
| NF | | Cadmium, OD |
| ZR | | Zinc-Ni, Black (Tri-Valent CR) |
| Z1 | Stainless | Passivate |
| ZL | Steel | Electrodeposited Nickel |



| HOW TO ORDER | | | | | | | |
|-----------------------------------|--|---------------------|-------------------|-------------------|-------------------|-----------------|-------------------|
| Sample Part Number | | 390PXS055 | MT | 24 | 12H | 8 | |
| Base Part Number | 390PXM055 = 45° (bent tube elbow) 390PXB055 = 90° (bent tube elbow) 390PXS055 = straight | | | | | | |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (See Table) | | | | | | |
| Shell Size | 16, 20, 22, 24, 28, 32, 36 | | | | | | |
| Entry Size and Strain Relief Code | | | | | | | |
| | | SADDLE CLAMP | NUT | CABLE GRIP | | | |
| | | Max. Cable Dia. | Shell Size Range* | Max. Cable Dia. | Shell Size Range* | Max. Cable Dia. | Shell Size Range* |
| | | Entry Code | | Entry Code | | Entry Code | |
| | | 04H | .312 | 16-36 | 04D | .312 | 16-36 |
| | | 06H | .437 | 16-36 | 06D | .438 | 16-36 |
| | | 08H | .562 | 16-36 | 08D | .562 | 16-36 |
| | | 10H | .625 | 20-36 | 10D | .625 | 20-36 |
| | | 12H | .750 | 20-36 | 12D | .750 | 20-36 |
| | | 16H | .937 | 22-36 | 16D | .938 | 22-36 |
| | | 20H | 1.250 | 24-36 | 20D | 1.250 | 24-36 |
| | | 24H | 1.375 | 28-36 | 24D | 1.375 | 28-36 |
| | | 28H | 1.625 | 32-36 | 28D | 1.625 | 32-36 |
| | | 32H | 1.875 | 36 | 32D | 1.875 | 36 |
| | | 36H | 2.125 | - | 36D | - | - |
| | | 40H | 2.375 | - | 40D | 2.375 | - |
| Length | | | | | | | |
| | | | | | | | |

* If selected entry size exceeds Shell Size Range, a Style 2 transition adapter will be included. See "MAXIMUM ENTRY SIZE AND SHELL SIZE RANGE" table for details.

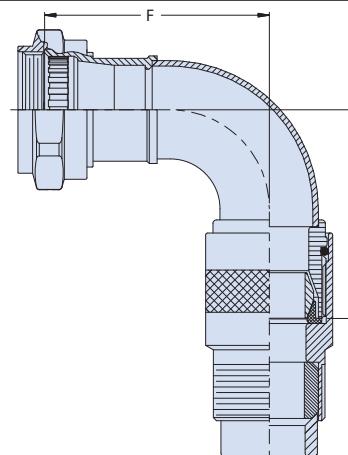
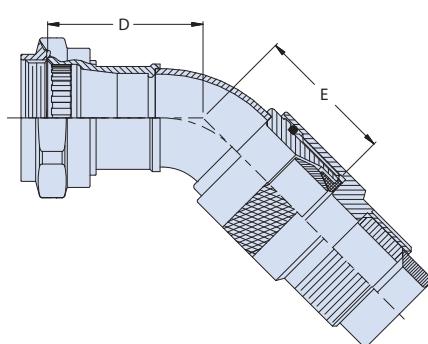
Applies to profile **S** straight only.

6 = 3 inches (minimum for shell size 16 to 22)
8 = 4 inches (minimum for shell sizes 24 to 36)
10 = 5 inches (minimum when Entry Size is greater than "Maximum Entry Size")
12 = 6 inches
16 = 8 inches

| 390PXS055 STRAIGHT BACKSHELL DIMENSIONS | | | | | | | |
|---|----------------|----------------|----------------|-----------------|-----------------|--|--|
| Shell Size | A Thread | C Hex Flats | ØB Max | ØX Min | Max. Entry Size | | |
| 16 | 15/16-20 UNEF | 1.25 (31.8) | 1.43 (36.3) | .592 (15.0) | 08 | | |
| 20 | 113/16-18 UNEF | 1.50 (38.1) | 1.71 (43.4) | .832 (21.1) | 12 | | |
| 22 | 15/6-18 UNEF | 1.63 (41.4) | 1.84 (46.7) | .952 (24.2) | 16 | | |
| 24 | 17/16-18 UNEF | 1.75 (44.5) | 1.95 (49.5) | 1.071 (27.2) | 20 | | |
| 28 | 111/16-18 UNEF | 2.00 (50.8) | 2.21 (56.1) | 1.310 (33.3) | 24 | | |
| 32 | 115/16-20 UN | 2.25 (57.2) | 2.45 (62.2) | 1.549 (39.3) | 28 | | |
| 36 | 23/16-16 UNS | 2.50 (63.5) | 2.68 (68.1) | 1.788 (45.4) | 32 | | |

390PX055 EMI/RFI environmental backshell Straight, 45°, 90° configurations • three strain relief options

| 390PXM055 AND 390PZN055 45° AND 90° BACKSHELL DIMENSIONS | | | | | |
|--|--------------|--------------|--------------|--------------|-----------------|
| Shell Size | D Max | E Max | F Max | G Max | Max. Entry Size |
| 16 | 1.536 (39.0) | 1.050 (26.7) | 1.966 (49.9) | 1.480 (37.6) | 08 |
| 20 | 1.646 (41.8) | 1.145 (29.1) | 2.221 (56.4) | 1.720 (43.7) | 12 |
| 22 | 1.698 (43.1) | 1.255 (31.9) | 2.343 (59.5) | 1.900 (48.3) | 16 |
| 24 | 1.756 (44.6) | 1.300 (33.0) | 2.476 (62.9) | 2.020 (51.3) | 20 |
| 28 | 1.862 (47.3) | 1.400 (35.6) | 2.732 (69.4) | 2.270 (57.7) | 24 |
| 32 | 1.972 (50.1) | 1.545 (39.2) | 2.987 (75.9) | 2.560 (65.0) | 28 |
| 36 | 2.083 (52.9) | 1.720 (43.7) | 3.248 (82.5) | 2.885 (73.3) | 32 |



| SADDLE CLAMP DIMENSIONS | | | | |
|-------------------------|--------------|--------------|--------------|--------------|
| Entry Size | T Max | V Max | Cable Range | |
| | | | min | max |
| 04 | .780 (19.8) | .957 (24.3) | .125 (3.3) | .312 (7.9) |
| 06 | .780 (19.8) | 1.145 (29.1) | .250 (6.4) | .437 (11.1) |
| 08 | .780 (19.8) | 1.332 (33.8) | .387 (9.8) | .562 (14.3) |
| 10 | .780 (19.8) | 1.332 (33.8) | .350 (8.9) | .625 (15.9) |
| 12 | .811 (20.6) | 1.551 (39.4) | .500 (12.7) | .750 (19.1) |
| 16 | .905 (23.0) | 1.770 (45.0) | .625 (15.9) | .937 (23.8) |
| 20 | 1.092 (27.7) | 2.113 (53.7) | .875 (22.2) | 1.250 (31.8) |
| 24 | 1.124 (28.5) | 2.363 (60.0) | 1.000 (25.4) | 1.375 (34.9) |
| 28 | 1.399 (35.5) | 2.770 (70.4) | 1.250 (31.8) | 1.625 (41.3) |
| 32 | 1.399 (35.5) | 3.020 (76.7) | 1.437 (36.5) | 1.875 (47.6) |
| 36 | 1.750 (44.5) | 3.250 (82.6) | 1.625 (41.3) | 2.125 (54.0) |
| 40 | 1.750 (44.5) | 3.500 (88.9) | 1.875 (47.6) | 2.375 (60.3) |

| NUT DIMENSIONS | | |
|----------------|--------------|--------------|
| Entry Size | Y Max | Cable Range |
| | | max |
| 04 | .755 (19.2) | .312 (7.9) |
| 06 | .942 (23.9) | .438 (11.1) |
| 08 | 1.067 (27.1) | .562 (14.3) |
| 10 | 1.192 (30.3) | .625 (15.9) |
| 12 | 1.380 (35.1) | .750 (19.1) |
| 16 | 1.535 (39.0) | .938 (23.8) |
| 20 | 1.848 (46.9) | 1.250 (31.8) |
| 24 | 2.255 (57.3) | 1.375 (34.9) |
| 28 | 2.505 (63.6) | 1.625 (41.3) |
| 32 | 2.755 (70.0) | 1.875 (47.6) |
| 36 | 3.255 (82.7) | 2.375 (60.3) |
| 40 | 3.255 (82.7) | 2.375 (60.3) |

| Entry Size | L Max | M Ref | Grip Range Ø | |
|------------|--------------|--------------|--------------|---------------|
| | | | min | max |
| 03 | .625 (15.9) | 2.12 (53.8) | .180 (4.6) | .210 (5.3) |
| 04 | .755 (19.2) | 2.75 (69.9) | .210 (5.3) | .310 (7.9) |
| 06 | .942 (23.9) | 4.00 (101.6) | .310 (7.9) | .438 (11.1) |
| 08 | 1.067 (27.1) | 4.12 (104.7) | .438 (11.1) | .500 (12.7) |
| 10 | 1.192 (30.3) | 4.37 (111.0) | .500 (12.7) | .625 (15.9) |
| 12 | 1.380 (35.1) | 5.00 (127.0) | .625 (15.9) | .750 (19.1) |
| 14 | 1.563 (39.7) | 6.00 (152.4) | .750 (19.1) | .875 (22.2) |
| 16 | 1.563 (39.7) | 6.25 (158.8) | .875 (22.2) | 1.000 (25.4) |
| 20 | 1.875 (47.6) | 7.25 (184.2) | 1.000 (25.4) | 1.250 (31.75) |
| 24 | 2.225 (56.5) | 8.00 (203.2) | 1.125 (28.6) | 1.375 (34.9) |
| 28 | 2.505 (63.6) | 8.50 (215.9) | 1.375 (34.9) | 1.625 (41.3) |
| 32 | 2.755 (70.0) | 9.00 (228.6) | 1.625 (41.3) | 1.875 (47.6) |
| 36 | 3.255 (82.7) | 9.50 (241.3) | 2.125 (54.0) | 2.375 (60.3) |

| MAXIMUM ENTRY SIZE AND SHELL SIZE RANGE | | | | | | | |
|--|--|--------------------|--|--|--|--|--|
| If the selected entry size exceeds the maximum size in this table, the backshell will have a front adapter. This is called a Style 2 backshell. | | | | | | | |
| Shell Size | | Maximum Entry Size | | | | | |
| 16 | | 08 | | | | | |
| 20 | | 12 | | | | | |
| 22 | | 16 | | | | | |
| 24 | | 20 | | | | | |
| 28 | | 24 | | | | | |
| 32 | | 28 | | | | | |
| 36 | | 32 | | | | | |
| Style 2 Straight Backshell | | | | | | | |
| | | | | | | | |
| Style 2 minimum length code is 10 (5 inches) for profile S straight backshells | | | | | | | |
| Style 2 45° and 90° Backshells | | | | | | | |
| | | | | | | | |
| For profile M and N 45° and 90° backshells, the length increases by 1.25 inches | | | | | | | |

4470PXS1128 Compression backshell with banding platform

POWERLOAD BACKSHELLS AND ACCESSORIES

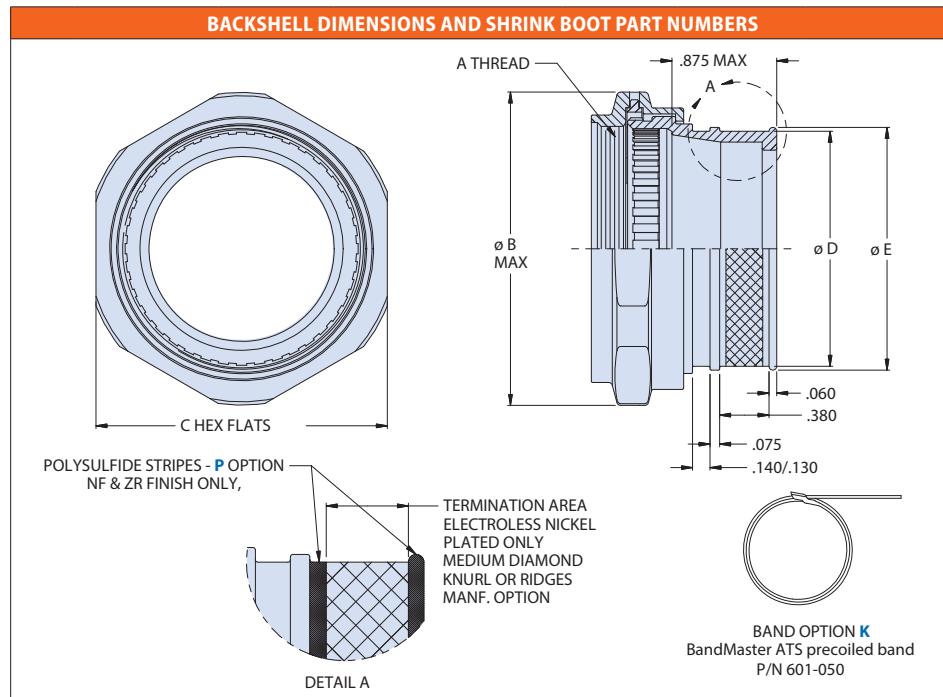


**4470PXS1128 compression
backshell with
banding platform**

| HOW TO ORDER | | | | | | | | |
|--------------------|--|---|------|----|----|---|---|---|
| Sample Part Number | 4470PX | S | 1128 | Z1 | 28 | K | P | T |
| Part Series | PowerLoad™ compression backshell with EMI band termination platform | | | | | | | |
| Angle | S = Straight | | | | | | | |
| Basic Number | 1128 | | | | | | | |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (See Table) | | | | | | | |
| Shell Size | 16, 20, 22, 24, 28, 32, 36 | | | | | | | |
| Band Option | K = standard band 601-050 Omit for no band | | | | | | | |
| Polysulfide Option | P = for polysulfide barrier stripes, NF and ZR finishes only (see drawing detail A). Omit if not required | | | | | | | |
| Shrink Boot Option | T = Standard shrink boot (see table, *=1) T1 = Std. shrink boot with pre-coated W1 hot-melt adhesive (see table, *=1) H = Zero-halogen shrink boot (see table, *=2) H1 Zero-halogen shrink boot with pre-coated W1 hot-melt adhesive (see table, *=2) Omit = no boot | | | | | | | |

NOTES AND MATERIAL SPECIFICATIONS

- Backshell is supplied standard with PowerLoad connectors unless otherwise specified
- Choose Band Option "K" for backshell supplied with BandMaster ATS precoiled band (P/N 601-050)
- Choose option P for polysulfide barrier stripes on NF and ZR finished backshells (see drawing detail A)
- Band - CRES / passivated
- Anti-decoupling device - corrosion-resistant material



| MATERIAL / FINISH | | | |
|-------------------|-----------------|--------------------------------|--------------|
| Code | Material | Finish | Temp. Rating |
| ME | Aluminum | Electroless Nickel | -54° +200°C |
| | | Nickel-PTFE | -54° +200°C |
| | | Cadmium, OD | -54° +175°C |
| | | Zinc-Ni, Black (Tri-Valent CR) | -54° +175°C |
| Z1 | Stainless Steel | Passivate | -54° +230°C |
| | | Electrodeposited Nickel | -54° +230°C |

| Shell Size | A Thread Class-2B | ØB Max | C Hex | ØD | ØE | Standard Shrink Boot code T or H | Shrink Boot with Adhesive code T1 or H1 |
|------------|-------------------|-------------|-------------|---------------|---------------|----------------------------------|---|
| 16 | 15/16-20 UNEF | 1.43 (36.3) | 1.25 (31.8) | .812 (20.62) | .875 (22.23) | 770-001S*04 | 770-001S*04W1 |
| 20 | 13/16-18 UNEF | 1.71 (43.4) | 1.50 (38.1) | 1.062 (26.97) | 1.125 (28.58) | 770-001S*05 | 770-001S*05W1 |
| 22 | 15/16-18 UNEF | 1.84 (46.7) | 1.63 (41.4) | 1.187 (30.15) | 1.250 (31.75) | 770-001S*06 | 770-001S*06W1 |
| 24 | 17/16-18 UNEF | 1.95 (49.5) | 1.75 (44.5) | 1.312 (33.32) | 1.375 (34.92) | 770-001S*07 | 770-001S*07W1 |
| 28 | 111/16-18 UNEF | 2.21 (56.1) | 2.00 (50.8) | 1.562 (39.67) | 1.625 (41.28) | 770-001S*07 | 770-001S*07W1 |
| 32 | 115/16-20 UN | 2.45 (62.2) | 2.25 (57.2) | 1.812 (46.02) | 1.875 (47.63) | 770-001S*08 | 770-001S*08W1 |
| 36 | 213/16-16 UNS | 2.68 (68.1) | 2.50 (63.5) | 2.062 (52.37) | 2.125 (53.97) | 770-001S*09 | 770-001S*09W1 |

770-001S Environmental heat-shrink boots supplied with 4470PXS1128 backshell



| HOW TO ORDER | | | | | |
|--------------------|---|---|---|----|----|
| Sample Part Number | 770-001 | S | 1 | 06 | W1 |
| Part Series | Series 77 Environmental heat-shrink boot, lipped, with eyelet | | | | |
| Angle | S = Straight | | | | |
| Material/Finish | 1 = High-performance semi-rigid elastomer (2025) 2 = Zero-halogen semi-rigid polyolefin (2010) | | | | |
| Boot size | 04, 05, 06, 07, 08, 09 | | | | |
| Adhesive-Lined | W1 = with high-temperature hot-melt adhesive (-55° to 125°C) | | | | |

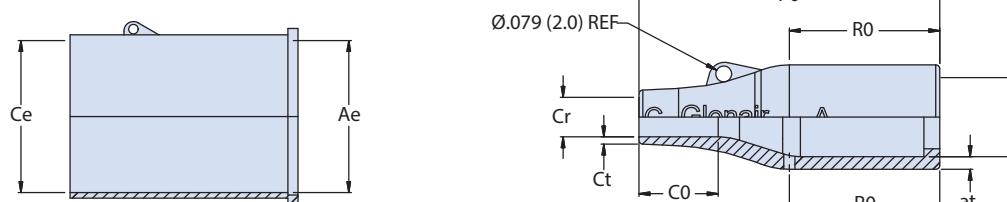
ENVIRONMENTAL HEAT-SHRINK BOOTS

- Lipped, straight shrink boots provide mechanical and environmental protection from damage and debris.
- Shrink boots are water-tight when equipped with factory installed or user-installed adhesive.
- Lipped boots lock into the boot groove on PowerLoad compression backshells
- Boots come standard with eyelet for attachment of protective covers.

| HEAT SHRINK BOOT MATERIAL | | | | | | | |
|---------------------------|-------------------------------------|---------------|----------------------------|---------------------------|----------------------------|-----------------------------|----------------------------|
| Code | Material Description (Compound No.) | Flexibility | Continuous Operating Temp. | Resistance to Fuels, Oils | Flammability | Low-Temperature Flexibility | Low Toxicity, Zero-Halogen |
| 1 | High-Performance Elastomer (2025) | Semi-rigid | -75 °C to +150 °C | Excellent | Self-Extinguishing <15 Sec | -75 °C | No |
| 2 | Zero Halogen Polyolefin (2010) | Semi-flexible | -40 °C to +130 °C | Very Good | Self-Extinguishing <15 Sec | -40 °C | Yes |

| HEAT SHRINK BOOT MARKING AND RAISED LETTERING | | | | | | | |
|---|-----------|--|--|--|--|--|--|
| EXPANDED | RECOVERED | | | | | | |
| | | | | | | | |

DIMENSIONS TABLE



AS SUPPLIED

| Boot Size | Glenair US Part Marking | PowerLoad Shell Size | Ae Dia Min | Ce Dia Min (nominal for material type 2) | Ar Dia Max | at ±30% | Cr Dia Max | Ct ±20% | C0 Ref | P0 ±10% | R0 Ref |
|-----------|-------------------------|----------------------|--------------|--|--------------|------------|-------------|------------|--------------|---------------|--------------|
| 04 | S04 | 16 | 1.181 (30.0) | 1.181 (30.0) | .551 (14.0) | .071 (1.8) | .236 (6.0) | .039 (1.0) | .630 (16.0) | 2.165 (55.0) | 1.181 (30.0) |
| 05 | S05 | 20 | 1.260 (32.0) | 1.260 (32.0) | .709 (18.0) | .071 (1.8) | .276 (7.0) | .047 (1.2) | .748 (19.0) | 2.638 (67.0) | 1.299 (33.0) |
| 06 | S06 | 22 | 1.417 (36.0) | 1.417 (36.0) | .866 (22.0) | .079 (2.0) | .335 (8.5) | .047 (1.2) | .787 (20.0) | 3.150 (80.0) | 1.575 (40.0) |
| 07 | S07 | 24, 28 | 1.693 (43.0) | 1.693 (43.0) | 1.102 (28.0) | .087 (2.2) | .394 (10.0) | .051 (1.3) | 1.142 (29.0) | 3.898 (99.0) | 2.165 (55.0) |
| 08 | S08 | 32 | 2.362 (60.0) | 2.362 (60.0) | 1.378 (35.0) | .130 (3.3) | .591 (15.0) | .063 (1.6) | 1.575 (40.0) | 5.118 (130.0) | 1.969 (50.0) |
| 09 | S09 | 36 | 2.599 (66.0) | 2.599 (66.0) | 1.752 (44.5) | .150 (3.8) | .661 (16.8) | .079 (2.0) | 2.283 (58.0) | 6.693 (170.0) | 3.543 (90.0) |

660-128 Receptacle protective cover

POWERLOAD BACKSHELLS AND ACCESSORIES



**PowerLoad
Receptacle
Cover**

| MATERIAL / FINISH | | |
|-------------------|-----------|--------------------------------|
| Code | Material | Finish |
| ME | Aluminum | Electroless Nickel |
| MT | | Nickel-PTFE |
| NF | | Cadmium, OD |
| ZR | | Zinc-Ni, Black (Tri-Valent CR) |
| Z1 | Stainless | Passivate |
| ZL | Steel | Electrodeposited Nickel |

| ATTACHMENT TYPE | | |
|-----------------|--|--|
| D | | SST Bead Chain .125 (3.2) dia., size 6, -65 to +200°C |
| F | | Wire Rope, Blue Nylon Jacket 6/6 nylon over stainless steel rope, fair flexibility, good abrasion resistance, -55 to +100°C |
| G | | Black Nylon Rope Very flexible, good abrasion and fuel resistance, .094 (2.4) dia., -55 to +100°C |
| H | | Wire Rope, Clear FEP Jacket Clear FEP jacket over SST rope, fair flexibility, good abrasion resistance, .100 diameter, -65 to +200°C |
| S | | Sash Chain #8 sash chain, stainless steel. Length tolerance is \pm one link .280 (7.1) |
| SK | | Nylon Rope with Slip Knot Very flexible, good abrasion and fuel resistance, .094 (2.4) diameter. Length includes .5 (13) dia. loop, -55 to +100°C |
| T | | SST Wire Rope, No Jacket Good flexibility, good abrasion resistance, .047 (1.2) diameter, passivated, -65 to +200°C |
| U | | Wire Rope, Black Polyurethane Stainless steel rope, black polyurethane coating, flexible, excellent abrasion and fuel resistance, .080" (2mm) dia., -55 to +125°C |

| HOW TO ORDER | | | | | | | | |
|--------------------------|--|--|---------|----|----|---|---|-----|
| Sample Part Number | | | 660-128 | ME | 16 | R | 5 | -04 |
| Basic Part Number | PowerLoad™ Receptacle Protective Cover | | | | | | | |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (See Table) | | | | | | | |
| Shell Size | 16, 20, 22, 24, 28, 32, 36 | | | | | | | |
| Attachment Type | See table. N = No Attachment | | | | | | | |
| Attachment Length | Length in inches. Omit for Attachment Type N | | | | | | | |
| Attachment Ring | See table. -00 = No Ring. Omit for Attachment Types N and SK | | | | | | | |

| COVER DIMENSIONS | | |
|------------------|------------|-----------------------|
| | Shell Size | E Thread |
| | 16 | 1.000-0.1P-0.3L-TS-2A |
| | 20 | 1.250-0.1P-0.3L-TS-2A |
| | 22 | 1.375-0.1P-0.3L-TS-2A |
| | 24 | 1.500-0.1P-0.3L-TS-2A |
| | 28 | 1.750-0.1P-0.3L-TS-2A |
| | 32 | 2.000-0.1P-0.3L-TS-2A |
| | 36 | 2.250-0.1P-0.3L-TS-2A |
| | | ØF Max |
| | | 1.26 (32.0) |
| | | 1.51 (38.4) |
| | | 1.63 (41.4) |
| | | 1.76 (44.7) |
| | | 2.01 (51.1) |
| | | 2.26 (57.4) |
| | | 2.51 (63.8) |

| ATTACHMENT RING | | | | | | | |
|--|---------------------------------|--------------|-------------------------------|--------------|-------------------------------|------------|-------------------------------|
| EYELET | | STYLE A RING | | STYLE B RING | | SPLIT RING | |
| Code | Eyelet I.D. $\pm .010$ (0.3) | Code | Ring I.D. $\pm .015$ (0.4) | Code | Ring I.D. $\pm .015$ (0.4) | Code | Ring I.D. $\pm .015$ (0.4) |
| -01 | .140 (3.6) | -095 | .312 (7.9) | -10 | .593 (15.1) | -50 | .425 (10.8) |
| -02 | .182 (4.6) | -100 | .391 (9.9) | -12 | .718 (18.2) | -52 | .485 (12.3) |
| -03 | .191 (4.9) | -101 | .516 (13.1) | -13 | .765 (19.4) | -54 | .640 (16.3) |
| -04 | .197 (5.0) | -103 | .641 (16.3) | -14 | .844 (21.4) | -56 | .750 (19.1) |
| -05 | .167 (4.2) | -104 | .708 (18.0) | -15 | .890 (22.6) | -58 | .890 (22.6) |
| -06 | .125 (3.2) | -105 | .766 (19.5) | -17 | 1.015 (25.8) | -60 | 1.015 (25.8) |
| -07 | .218 (5.5) | -106 | .896 (22.8) | -19 | 1.140 (29.0) | -62 | 1.095 (27.8) |
| -09 | .156 (4.0) | -107 | 1.016 (25.8) | -20 | 1.203 (30.6) | -64 | 1.130 (28.7) |
| CABLE TIE | | -108 | 1.141 (29.0) | -21 | 1.265 (32.1) | -66 | 1.250 (31.8) |
| -WS | | -208 | 1.203 (30.6) | -22 | 1.343 (34.1) | -68 | 1.350 (34.3) |
| Black 6/6 nylon cable tie 1.77 (45.0) max. wire bundle dia. | | -109 | 1.266 (32.2) | -24 | 1.484 (37.7) | -70 | 1.375 (34.9) |
| | | -110 | 1.391 (35.3) | -27 | 1.640 (41.7) | -72 | 1.485 (37.7) |
| | | -111 | 1.521 (38.6) | -29 | 1.765 (44.8) | -74 | 1.625 (41.3) |
| | | -112 | 1.641 (41.7) | -30 | 1.890 (48.0) | -76 | 1.750 (44.5) |
| | | -113 | 1.766 (44.9) | -31 | 1.953 (49.6) | -80 | 1.980 (50.3) |
| | | -114 | 1.891 (48.0) | -33 | 2.077 (52.8) | -84 | 2.235 (56.8) |
| | | -115 | 2.078 (52.8) | -36 | 2.187 (55.5) | -86 | 2.310 (58.7) |

660-129 Plug protective cover

PowerLoad
Plug Cover

| MATERIAL / FINISH | | |
|-------------------|-----------|--------------------------------|
| Code | Material | Finish |
| ME | Aluminum | Electroless Nickel |
| | | Nickel-PTFE |
| | | Cadmium, OD |
| | | Zinc-Ni, Black (Tri-Valent CR) |
| Z1 | Stainless | Passivate |
| ZL | Steel | Electrodeposited Nickel |

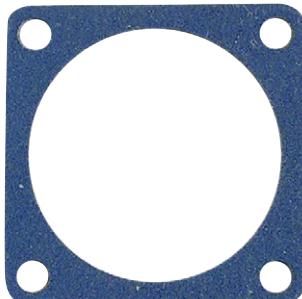
| ATTACHMENT TYPE | | |
|-----------------|-------------------------------|---|
| D | SST Bead Chain | .125 (3.2) dia., size 6, -65 to +200°C |
| F | Wire Rope, Blue Nylon Jacket | 6/6 nylon over stainless steel rope, fair flexibility, good abrasion resistance, -55 to +100°C |
| G | Black Nylon Rope | Very flexible, good abrasion and fuel resistance, .094 (2.4) dia., -55 to +100°C |
| H | Wire Rope, Clear FEP Jacket | Clear FEP jacket over SST rope, fair flexibility, good abrasion resistance, .100 diameter, -65 to +200°C |
| S | Sash Chain | #8 sash chain, stainless steel. Length tolerance is \pm one link .280 (7.1) |
| SK | Nylon Rope with Slip Knot | Very flexible, good abrasion and fuel resistance, .094 (2.4) diameter. Length includes .5 (13) dia. loop, -55 to +100°C |
| T | SST Wire Rope, No Jacket | Good flexibility, good abrasion resistance, .047 (1.2) diameter, passivated, -65 to +200°C |
| U | Wire Rope, Black Polyurethane | Stainless steel rope, black polyurethane coating, flexible, excellent abrasion and fuel resistance, .080" (2mm) dia., -55 to +125°C |

| HOW TO ORDER | | | | | | |
|--------------------|--|----|----|---|---|-----|
| Sample Part Number | 660-129 | ME | 16 | R | 5 | -04 |
| Basic Part Number | PowerLoad™ Plug Protective Cover | | | | | |
| Material/Finish | ME, MT, NF, ZR, Z1, ZL (See Table) | | | | | |
| Shell Size | 16, 20, 22, 24, 28, 32, 36 | | | | | |
| Attachment Type | See table. N = No Attachment | | | | | |
| Attachment Length | Length in inches. Omit for Attachment Type N | | | | | |
| Attachment Ring | See table. -00 = No Ring. Omit for Attachment Types N and SK | | | | | |

| COVER DIMENSIONS | | |
|------------------|-----------------------|-------------|
| Shell Size | E Thread | ØF Max |
| 16 | 1.000-0.1P-0.3L-TS-2A | 1.25 (31.8) |
| 20 | 1.250-0.1P-0.3L-TS-2A | 1.50 (38.1) |
| 22 | 1.375-0.1P-0.3L-TS-2A | 1.63 (41.4) |
| 24 | 1.500-0.1P-0.3L-TS-2A | 1.75 (44.5) |
| 28 | 1.750-0.1P-0.3L-TS-2A | 2.00 (50.8) |
| 32 | 2.000-0.1P-0.3L-TS-2A | 2.25 (57.2) |
| 36 | 2.250-0.1P-0.3L-TS-2A | 2.50 (63.5) |

| ATTACHMENT RING | | | | | | | |
|-----------------|--|--------------|------------------------------|--------------|------------------------------|------------|------------------------------|
| EYELET | | STYLE A RING | | STYLE B RING | | SPLIT RING | |
| Code | Eyelet I.D. $\pm .10$ (.03) | Code | Ring I.D. $\pm .01$ (.04) | Code | Ring I.D. $\pm .01$ (.04) | Code | Ring I.D. $\pm .01$ (.04) |
| -01 | .140 (3.6) | -095 | .312 (7.9) | -10 | .593 (15.1) | -50 | .425 (10.8) |
| -02 | .182 (4.6) | -100 | .391 (9.9) | -12 | .718 (18.2) | -52 | .485 (12.3) |
| -03 | .191 (4.9) | -101 | .516 (13.1) | -13 | .765 (19.4) | -54 | .640 (16.3) |
| -04 | .197 (5.0) | -103 | .641 (16.3) | -14 | .844 (21.4) | -56 | .750 (19.1) |
| -05 | .167 (4.2) | -104 | .708 (18.0) | -15 | .890 (22.6) | -58 | .890 (22.6) |
| -06 | .125 (3.2) | -105 | .766 (19.5) | -17 | 1.015 (25.8) | -60 | 1.015 (25.8) |
| -07 | .218 (5.5) | -106 | .896 (22.8) | -19 | 1.140 (29.0) | -62 | 1.095 (27.8) |
| -09 | .156 (4.0) | -107 | 1.016 (25.8) | -20 | 1.203 (30.6) | -64 | 1.130 (28.7) |
| CABLE TIE | | | | | | | |
| | | | | | | | |
| -WS | Black 6/6 nylon cable tie 1.77 (45.0) max. wire bundle dia. | | | | | | |

930-026 Gasket for flange-mount connectors



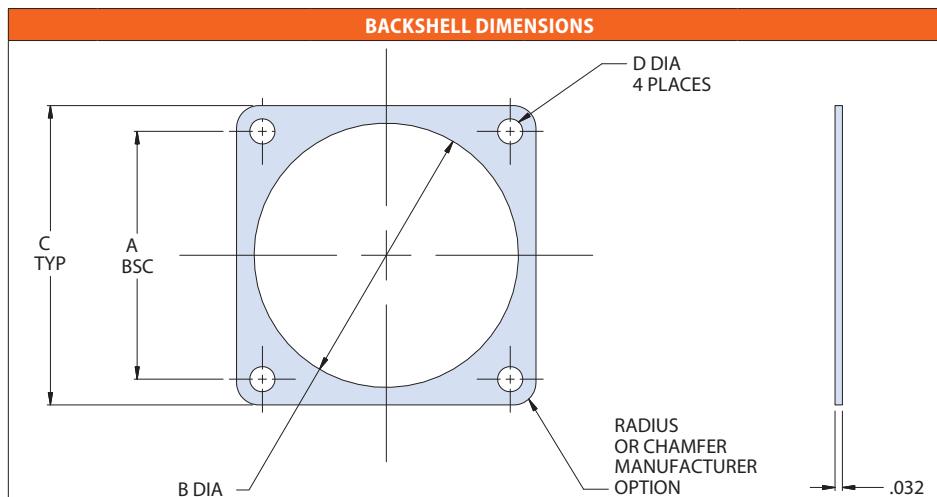
930-026 panel-sealing gasket for flange-mount PowerLoad connectors

GASKET FEATURES

- Fluorosilicone and Viton versions provide environmental protection to panel-mounted PowerLoad connectors.
- Conductive silver-plated aluminum-filled fluorosilicone versions provide additional EMI protection

| GASKET MATERIAL | | |
|-----------------|--|---|
| Code | Sealing Property | Description |
| X | Conductive for EMI protection and environmental seal | Silver-plated aluminum-filled fluorosilicone IAW MIL-G-83528 Type D |
| F | Non-conductive for environmental sealing | FVMQ non-conductive fluorosilicone |
| V | | FKM Viton |

| HOW TO ORDER | |
|--------------------|--|
| Sample Part Number | 930-026 |
| Part Series | Panel-sealing gasket for flange-mount PowerLoad connectors |
| Material/Finish | X, F, V (See Table) |
| Shell Size | 16, 20, 22, 24, 28, 32, 36 |



| Shell Size | A Bsc. | ØB | C Typ. | ØD |
|------------|---------------|---------------|---------------|-------------|
| 16 | .969 (24.61) | 1.110 (28.19) | 1.280 (32.51) | .150 (3.81) |
| 20 | 1.156 (29.36) | 1.360 (34.54) | 1.500 (38.10) | .177 (4.50) |
| 22 | 1.250 (31.75) | 1.490 (37.85) | 1.630 (41.40) | .177 (4.50) |
| 24 | 1.375 (34.93) | 1.630 (41.40) | 1.750 (44.45) | .177 (4.50) |
| 28 | 1.562 (39.67) | 1.880 (47.75) | 2.000 (50.80) | .177 (4.50) |
| 32 | 1.750 (44.45) | 2.130 (54.10) | 2.250 (57.15) | .213 (5.41) |
| 36 | 1.938 (49.23) | 2.380 (60.45) | 2.500 (63.50) | .213 (5.41) |

600-289 connector holding tools

600-286 / 600-288 "crow's foot" torquing wrenches



**PowerLoad
Connector
Holding
Tool (plug
holder
pictured)**

NOTES AND MATERIAL SPECIFICATIONS

- Heat-treated steel alloy / nickel finish
- Use with 3/8" drive torque wrench or proper adapter

| POWERLOAD CONNECTOR HOLDING TOOLS | | | | |
|-----------------------------------|---------------------------------------|----|---|-----|
| Sample Part Number | 600-289 | 28 | R | -04 |
| Basic Part Number | PowerLoad™ Plug Protective Cover | | | |
| Connector Shell Size | 16, 20, 22, 24, 28, 32, 36 | | | |
| Tool Type | P = Plug Holder R = Receptacle Holder | | | |
| Polarization | 1, 2, 3, 4, 5, 6 | | | |

| COVER DIMENSIONS | | |
|------------------|------------|-------------|
| | Shell Size | ØA |
| | 16 | 0.91 (23.1) |
| | 20 | 1.16 (29.5) |
| | 22 | 1.28 (32.5) |
| | 24 | 1.41 (35.8) |
| | 28 | 1.66 (42.2) |
| | 32 | 1.91 (48.5) |
| | 36 | 2.16 (54.9) |
| | ØB | 0.75 (19.1) |
| | 24 | 1.25 (31.8) |
| | 28 | 1.50 (38.1) |
| | 32 | 1.75 (44.5) |
| | 36 | 2.00 (50.8) |

| POWERLOAD "CROW'S FOOT" TORQUING HEX WRENCH | | | |
|---|---|------|----|
| Sample Part Number | 600 | -286 | 28 |
| Basic Part Number | "Crow's Foot" torquing hex wrench | | |
| Wrench Type | -286 = for PowerLoad plug connector -288 = for PowerLoad backshell | | |
| Shell Size | 16, 20, 22, 24, 28, 32, 36 | | |

| Shell Size | 600-286 | | 600-288 | |
|------------|------------------|-------------|------------------|-------------|
| | Connector Wrench | | Backshell Wrench | |
| | A Hex | B Offset | A Hex | B Offset |
| 16 | 1.375 (34.9) | 1.61 (40.9) | 1.25 (31.8) | 1.54 (39.1) |
| 20 | 1.625 (41.3) | 1.75 (44.5) | 1.50 (38.1) | 1.68 (42.7) |
| 22 | 1.750 (44.5) | 1.83 (46.5) | 1.63 (41.4) | 1.75 (44.5) |
| 24 | 1.875 (47.6) | 1.90 (48.3) | 1.75 (44.5) | 1.83 (46.5) |
| 28 | 2.140 (54.4) | 2.05 (52.1) | 2.00 (50.8) | 1.97 (50.0) |
| 32 | 2.500 (63.5) | 2.26 (57.4) | 2.25 (57.2) | 2.11 (53.6) |
| 36 | 2.750 (69.9) | 2.40 (61.0) | 2.50 (63.5) | 2.26 (57.4) |

NOTES AND MATERIAL SPECIFICATIONS

- Passivated 300 series stainless steel
- Connector wrench for use with PowerLoad plug connectors
- Backshell wrench for use with standard PowerLoad backshell (P/N 4470PXS1128)
- Use with 3/8" drive torque wrench or proper adapter
- For proper hex clearance, torque wrench head must not exceed Ø 1.50"

Ultra flexible and rugged power distribution cables with FEP and Duralelectric™ jacketing



Power distribution cables present a unique challenge to electrical wire interconnect system engineers. Typically fabricated from stiff, non-flexible conductors with extremely large bend radii, such cables are heavy, hard to route, and prone to jacket damage from weathering and abrasion. TurboFlex® power distribution cables are constructed from high strand-count rope-lay inner conductors made with tin-, nickel-, and silver-plated copper. These highly-flexible conductors, insulated with FEP or Glenair signature Duralelectric jacketing result in cables ideally suited for applications where flexibility, durability, and weight reduction are required.

Amazingly durable—especially in cold weather—TurboFlex cable with Duralelectric insulation provides outstanding resistance to temperature extremes, ozone exposure, caustic chemicals including jet fuel, gamma radiation, and other forms of environmental and mechanical damage. Long life and performance are critical in power distribution applications. TurboFlex, with its flexible conductors and durable insulation delivers both. Consult factory for lightweight aluminum version.

- Ultra-flexible rope lay power cable construction
- Wire gauges and insulation optimized for PowerLoad™ connectors
- Four TurboFlex configurations with ruggedized FEP or Duralelectric jacketing:
 - Standard single-wall
 - Lightweight thin-wall
 - “Tell-Tale” dual-wall
 - Shielded high-voltage



TurboFlex bend radius (Duralelectric jacketing) is 3X the outer diameter



Power cable assembly with Duralelectric™ D jacketing / overmolding in OSHA safety orange



Wide range of available sizes—from 8AWG to 4/0

Pairing compression grommet series PowerLoad connectors with TurboFlex wire

| TURBOFLEX AND POWERLOAD CONNECTOR, CONTACT, AND CABLE ECOSYSTEM | | | | | | | | |
|---|--------------------------|---|--|--|---|--|-------------------------------------|--------------------------------|
| Cable Type | | TurboFlex M with M22759 cable construction | | | | TurboFlex R with Rope-Lay cable construction | | |
| Part No. | | Single-Wall TurboFlex M Cable | Dual-Wall Turboflex M Shielded Cable | Single-Wall TurboFlex M, Shield + Fabric Overbraid | Single-Wall TurboFlex M Cable | Dual-Wall Turboflex M Shielded Cable | Single-Wall TurboFlex R Cable | Dual-Wall TurboFlex R Cable |
| Insulation / Jacket / Shield Type | Duralectric D Insulation | Duralectric D Insulation / Jacket, EMI Shield | Duralectric D Insulation EMI Shield Fabric Overbraid | Duralectric L Insulation | Duralectric L Insulation / Jacket, EMI Shield | Duralectric D Insulation | Duralectric D Insulation / Jacket | Duralectric L Insulation |
| VAC Rating | 725–2875 | 725–2875 | 725–2875 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Gauge AWG | Typical Current (A) | ✓ = Available Gauges | | | | ✓ = Available Gauges | | |
| 24 | 6–14 | ✓ | ✓ | ✓ | | | | |
| 22 | 8–18 | ✓ | ✓ | ✓ | | | | |
| 20 | 10–25 | ✓ | ✓ | ✓ | | | | |
| 18 | 15–30 | ✓ | ✓ | ✓ | | | | |
| 16 | 15–35 | ✓ | ✓ | ✓ | | | | |
| 12 | 30–70 | ✓ | ✓ | ✓ | | | | |
| 10 | 40–90 | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 8 | 55–135 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 4 | 105–250 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2 | 145–345 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1 | 170–400 | ✓ | ✓ | ✓ | | | | |
| 0 | 195–465 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 00 | 255–540 | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| 000 | 260–640 | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| 0000 | 310–755 | ✓ | ✓ | ✓ | | | | |

| Crown Ring Contact Size | Contact P/N | |
|-------------------------|-------------|-----------|
| | Pin | Socket |
| 8 | 850-150-8 | 850-151-8 |
| 4 | 850-150-4 | 850-151-4 |
| 2 | 850-150-2 | 850-151-2 |
| 1/0 | 850-150-0 | 850-151-0 |

| GENERAL DURALECTRIC D PERFORMANCE SUMMARY | |
|---|--|
| • Service Temperature Range: -65°C to 200°C | |
| • Fire Resistant and Low Smoke-Zero Halogen (LSZH) | |
| • RoHS materials | |
| • Resistant to common aerospace, military and industrial fluids | |
| • UV resistant | |

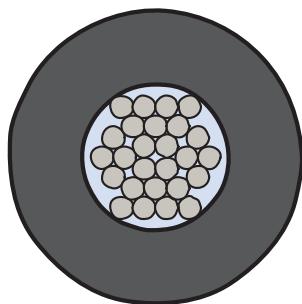
| DURALECTRIC™ D PHYSICAL PROPERTIES | | |
|--|----------------|---------------|
| Property | Typical Result | Test Method |
| Hardness, Shore A | 60 | ASTM D2240 |
| Tensile Strength, psi | 1100 | ASTM D412 |
| Elongation, % | 500 | ASTM D412 |
| Tear Strength, Die B, ppi | 150 | ASTM D624 |
| Low Temperature Impact at -65°C | Pass/No Cracks | ASTM D2137 |
| Accelerated UV/Sunlight Resistance, 53 yr. Equiv. Exposure | Pass/Excellent | IEC 60068-2-5 |
| Ozone Resistance | Pass/No Cracks | ASTM D1149 |
| Zero Halogen | Pass | IEC 754-1 |

| DURALECTRIC™ D ELECTRICAL PROPERTIES | | |
|--------------------------------------|----------------|-------------|
| Property | Typical Result | Test Method |
| Dielectric Strength, kV/mm | 19 | ASTM D419 |
| Comparative Tracking Index, VAC | > 600 | ASTM D3638 |

| DURALECTRIC™ D FIRE RESISTANCE PROPERTIES | | | |
|---|----------------|----------------------------|----------------------|
| Property | Typical Result | Property | Typical Result |
| Flammability | | | Smoke Density |
| Oxygen Index, % | 45 | BSS7238 | Pass |
| FAR 25.853, 12 Second Vertical | Pass | NES 711 | Pass |
| FAR 25.853, 60 Degree | Pass | EN 60695-2-11 | Pass |
| FAR 27.1365 b,c | Pass | UL1685 FT4/IEEE1202 | Pass |
| BSS7230 Method F2 | Pass | Combustion Toxicity | |
| IEC60614-1 | Pass | BSS7239 | Pass |
| EN60695-2-12, 850°C Glow-Wire | Pass | NES 713 | Pass |
| UL1685 FT4/IEEE1202 | Pass | SMP800 C | Pass |



961-106-1500 Single-wall hookup wire Duralectric™ insulation, 1500 VAC



961-106-1500 with single-wall Duralectric insulation

| HOW TO ORDER | | | | | | |
|---------------------------------|---|------|-------|----|----|----|
| Sample Part Number | 961 | -106 | -1500 | -0 | -N | -0 |
| Basic No. | TurboFlex single-wall hookup wire | | | | | |
| Insulation Material | -106 = Duralectric | | | | | |
| Voltage Rating | -1500 = 1500 VAC | | | | | |
| Wire Size Code (See Table I) | -8, -4, -2, -0 | | | | | |
| Conductor Material | -N = Nickel/Copper (-60° – 260°C) -S = Silver/Copper (-60° – 200°C) -T = Tin/Copper (-60° – 150°C) | | | | | |
| Insulation Color | See Insulation Color table | | | | | |

| POWERLOAD COMPATIBILITY | |
|---|------------------------|
| SINGLE-WALL HOOKUP WIRE | |
| 961-106-1500 | |
| PowerLoad Contact / Cavity Gauge (AWG) | Duralectric Insulation |
| 8 | ✓ |
| 4 | ✓ |
| 2 | ✓ |
| 0 | ✓ |
| 00 | Ø |
| 0000 | Ø |
| ✓ = fully compatible Ø = not available | |

| TURBOFLEX WIRE SIZE, DIMENSIONS, DC RESISTANCE AND AMPACITY RATINGS | | | | | | | |
|---|-----|----------------------|---------------|----------------------------|--------------|--------------|--|
| | | | | | | | Duralectric® Insulation |
| | | | | | | | Ø B (Conductor Dia.) |
| Wire Size Code | AWG | Strand / Count / AWG | Cir Mil (nom) | Weight lbs/1000 ft. (nom.) | Ø A ±.025 | Ø B Ref. | DC Resistance @ 20°C (Ohms / 1000 ft.) |
| 8 | 8 | 7X 95/36 | 16625 | .66.17 | .233 (5.92) | .159 (4.04) | .7188 .6755 .7252 |
| 4 | 4 | 7X 7X 34/36 | 41650 | .158.59 | .347 (8.81) | .271 (6.88) | .2979 .2800 .3006 |
| 2 | 2 | 7X 7X 54/36 | 66150 | .244.23 | .419 (10.64) | .342 (8.69) | .1876 .1763 .1893 |
| 0 | 1/0 | 7X 7X 86/36 | 105350 | .380.32 | .511 (12.98) | .431 (10.95) | .1178 .1107 .1188 |

TURBOFLEX FEATURES

- Ultra-flexible rope lay power cable construction
- Wire gauges and insulation optimized for PowerLoad™ connectors
- Equipped with ruggedized Duralectric insulation

NOTES

- Bend radius is 4X – 12X the outer diameter (ØA) depending on application requirements
- Cable marked with "GLENAIR TURBOFLEX", wire gauge, part number, CAGE 06324.



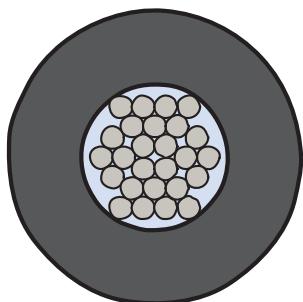
DURAELCTRIC D PERFORMANCE SUMMARY

- Service temperature range: -65°C to +260°C
- Fire-resistant and Low Smoke-Zero Halogen (LSZH)
- Resistant to common aerospace, military and industrial fluids
- UV resistant

| INSULATION COLOR PER MIL-STD-681 | |
|----------------------------------|--------|
| 0 | Black |
| 1 | Brown |
| 2 | Red |
| 3 | Orange |
| 4 | Yellow |
| 5 | Green |
| 6 | Blue |
| 7 | Violet |
| 8 | Gray |
| 9 | White |

961-106-2000 Single-wall hookup wire Duralectric™ insulation, 2000 VAC

TURBOFLEX CABLE



961-106-2000 with single-wall Duralectric insulation

| HOW TO ORDER | | | | | | |
|---------------------------------|---|------|-------|-----|----|----|
| Sample Part Number | 961 | -106 | -2000 | -00 | -N | -0 |
| Basic No. | TurboFlex single-wall hookup wire | | | | | |
| Insulation Material | -106 = Duralectric | | | | | |
| Voltage Rating | -2000 = 2000 VAC | | | | | |
| Wire Size Code (See Table I) | -8, -4, -2, -0, -00, -0000 | | | | | |
| Conductor Material | -N = Nickel/Copper (-60° – 260°C) -S = Silver/Copper (-60° – 200°C) -T = Tin/Copper (-60° – 150°C) | | | | | |
| Insulation Color | See Insulation Color table | | | | | |

| POWERLOAD COMPATIBILITY | | SINGLE-WALL HOOKUP WIRE | 961-106-2000 |
|--|------------------------|-------------------------|--------------|
| PowerLoad Contact / Cavity Gauge (AWG) | Duralectric Insulation | N/A | |
| | 2000 VAC | 260° | |
| | 8 | ✓ | |
| | 4 | ✓ | |
| | 2 | ✓ | |
| | 0 | ✓ | |
| 00 | | ✓ | |
| 0000 | | ✓ | |
| ✓ = fully compatible | | | |

TURBOFLEX FEATURES

- Ultra-flexible rope lay power cable construction
- Wire gauges and insulation optimized for PowerLoad™ connectors
- Equipped with ruggedized Duralectric insulation

NOTES

- Bend radius is 4X – 12X the outer diameter ($\varnothing A$) depending on application requirements
- Cable marked with "GLENAIR TURBOFLEX", wire gauge, part number, CAGE 06324.

| TURBOFLEX WIRE SIZE, DIMENSIONS, DC RESISTANCE AND AMPACITY RATINGS | | | | | | | | | |
|---|-----|----------------------|---------------|----------------------------|-----------------------|----------------------|--|---------------|------------|
| Wire Size Code | AWG | Strand / Count / AWG | Cir Mil (nom) | Weight lbs/1000 ft. (nom.) | $\varnothing A$ ±.025 | $\varnothing B$ Ref. | DC Resistance @ 20°C (Ohms / 1000 ft.) | | |
| | | | | | | | Nickel Copper | Silver Copper | Tin Copper |
| 8 | 8 | 7X 95/36 | 16625 | 74.91 | .270 (6.86) | .159 (4.04) | .7188 | .6755 | .7252 |
| 4 | 4 | 7X 7X 34/36 | 41650 | 171.48 | .384 (9.75) | .271 (6.88) | .2979 | .2800 | .3006 |
| 2 | 2 | 7X 7X 54/36 | 66150 | 259.67 | .456 (11.58) | .342 (8.69) | .1876 | .1763 | .1893 |
| 0 | 1/0 | 7X 7 X 86/36 | 105350 | 399.00 | .548 (13.92) | .431 (10.95) | .1178 | .1107 | .1188 |
| 00 | 2/0 | 7X 7 X 108/36 | 132300 | 493.47 | .601 (15.27) | .483 (12.27) | .0938 | .0882 | .0946 |
| 0000 | 4/0 | 19 X 7 X 64/36 | 212800 | 779.79 | .734 (18.64) | .613 (15.57) | .0588 | .0553 | .0594 |

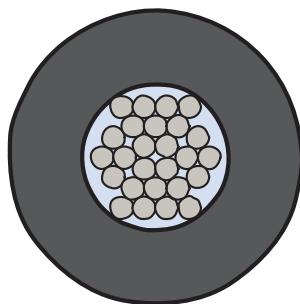


| DURALECTRIC D PERFORMANCE SUMMARY | |
|---|-----------------|
| • Service temperature range: | -65°C to +260°C |
| • Fire-resistant and Low Smoke-Zero Halogen (LSZH) | |
| • Resistant to common aerospace, military and industrial fluids | |
| • UV resistant | |

| INSULATION COLOR PER MIL-STD-681 | |
|----------------------------------|--------|
| 0 | Black |
| 1 | Brown |
| 2 | Red |
| 3 | Orange |
| 4 | Yellow |
| 5 | Green |
| 6 | Blue |
| 7 | Violet |
| 8 | Gray |
| 9 | White |



961-108-1500 Single-wall hookup wire Duralectric™ Light insulation, 1500 VAC



961-108-1500 with single-wall Duralectric Light insulation

| HOW TO ORDER | | 961 | -108 | -1500 | -0 | -N | -0 |
|-------------------------------------|--|-----|------|-------|----|----|----|
| Sample Part Number | TurboFlex single-wall hookup wire | | | | | | |
| Basic No. | TurboFlex single-wall hookup wire | | | | | | |
| Insulation Material | -108 = Duralectric Light | | | | | | |
| Voltage Rating | -1500 = 1500 VAC | | | | | | |
| Wire Size Code (See Table I) | -8, -4, -2, -0 | | | | | | |
| Conductor Material | -N = Nickel/Copper (-60° – 260°C) -S = Silver/Copper (-60° – 200°C) -T = Tin/Copper (-60° – 150°C) | | | | | | |
| Insulation Color | See Insulation Color table | | | | | | |

| POWERLOAD COMPATIBILITY | | SINGLE-WALL HOOKUP WIRE | |
|--|---|------------------------------|--|
| | | 961-108-1500 | |
| PowerLoad Contact / Cavity Gauge (AWG) | | Duralectric Light Insulation | |
| | | N/A | |
| | | 1500 VAC | |
| | | 200° | |
| 8 | ✓ | | |
| 4 | ✓ | | |
| 2 | ✓ | | |
| 0 | ✓ | | |
| 00 | Ø | | |
| 0000 | Ø | | |
| ✓ = fully compatible | | | |
| Ø = not available | | | |

TURBOFLEX FEATURES

- Ultra-flexible rope lay power cable construction
- Wire gauges and insulation optimized for PowerLoad™ connectors
- Equipped with weight-saving Duralectric Light insulation

NOTES

- Bend radius is 4X – 12X the outer diameter ($\varnothing A$) depending on application requirements
- Cable marked with "GLENAIR TURBOFLEX", wire gauge, part number, CAGE 06324.

| TURBOFLEX WIRE SIZE, DIMENSIONS, DC RESISTANCE AND AMPACITY RATINGS | | | | | | | |
|---|-----|----------------------|---------------|----------------------------|--------------------------|----------------------|--|
| Wire Size Code | AWG | Strand / Count / AWG | Cir Mil (nom) | Weight lbs/1000 ft. (nom.) | $\varnothing A \pm .025$ | $\varnothing B$ Ref. | DC Resistance @ 20°C (Ohms / 1000 ft.) |
| | | | | | | | Nickel Copper Silver Copper Tin Copper |
| 8 | 8 | 7X 95/36 | 16625 | .59.90 | .220 (5.59) | .159 (4.04) | .7188 .6755 .7252 |
| 4 | 4 | 7X 7X 34/36 | 41650 | .148.66 | .334 (8.48) | .271 (6.88) | .2979 .2800 .3006 |
| 2 | 2 | 7X 7X 54/36 | 66150 | .231.95 | .406 (10.31) | .342 (8.69) | .1876 .1763 .1893 |
| 0 | 1/0 | 7X 7X 86/36 | 105350 | .364.75 | .498 (12.65) | .431 (10.95) | .1178 .1107 .1188 |



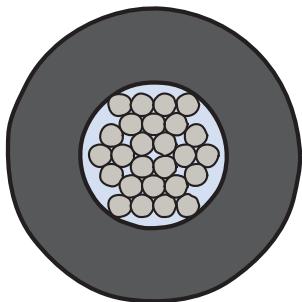
DURAELCTRIC LIGHT PERFORMANCE SUMMARY

- Service temperature range: -65°C to +200°C
- Fire-resistant and Low Smoke-Zero Halogen (LSZH)
- Excellent abrasion resistance
- 30% lighter than Duralectric D
- 50% lighter than Teflon®

| INSULATION COLOR PER MIL-STD-681 | |
|----------------------------------|--------|
| 0 | Black |
| 1 | Brown |
| 2 | Red |
| 3 | Orange |
| 4 | Yellow |
| 5 | Green |
| 6 | Blue |
| 7 | Violet |
| 8 | Gray |
| 9 | White |

961-108-2000 Single-wall hookup wire Duralectric™ Light insulation, 2000 VAC

TURBOFLEX CABLE



961-108-2000 with single-wall Duralectric Light insulation

| HOW TO ORDER | | | | | | |
|---------------------------------|--|------|-------|-----|----|----|
| Sample Part Number | 961 | -108 | -2000 | -00 | -N | -0 |
| Basic No. | TurboFlex single-wall hookup wire | | | | | |
| Insulation Material | -108 = Duralectric Light | | | | | |
| Voltage Rating | -2000 = 2000 VAC | | | | | |
| Wire Size Code (See Table I) | -8, -4, -2, -0, -00, -0000 | | | | | |
| Conductor Material | -N = Nickel/Copper (-60° – 260°C) -S = Silver/Copper (-60° – 200°C) -T = Tin/Copper (-60° – 150°C) | | | | | |
| Insulation Color | See Insulation Color table | | | | | |

| POWERLOAD COMPATIBILITY | | SINGLE-WALL HOOKUP WIRE | | 961-108-2000 | |
|--|------|------------------------------|--|--------------|--|
| PowerLoad Contact / Cavity Gauge (AWG) | | Duralectric Light Insulation | | N/A | |
| | 8 | 2000 VAC | | 200° | |
| | 4 | | | | |
| | 2 | | | | |
| | 0 | | | | |
| | 00 | | | | |
| | 0000 | | | | |
| ✓ = fully compatible | | | | | |

TURBOFLEX FEATURES

- Ultra-flexible rope lay power cable construction
- Wire gauges and insulation optimized for PowerLoad™ connectors
- Equipped with weight-saving Duralectric Light insulation

NOTES

- Bend radius is 4X – 12X the outer diameter ($\varnothing A$) depending on application requirements
- Cable marked with "GLENAIR TURBOFLEX", wire gauge, part number, CAGE 06324.

| TURBOFLEX WIRE SIZE, DIMENSIONS, DC RESISTANCE AND AMPACITY RATINGS | | | | | | | |
|---|-----|----------------------|---------------|----------------------------|--------------------------|----------------------|--|
| Wire Size Code | AWG | Strand / Count / AWG | Cir Mil (nom) | Weight lbs/1000 ft. (nom.) | $\varnothing A \pm .025$ | $\varnothing B$ Ref. | DC Resistance @ 20°C (Ohms / 1000 ft.) |
| | | | | | | | Nickel Copper Silver Copper Tin Copper |
| 8 | 8 | 7 X 95/36 | 16625 | 64.51 | .250 (6.35) | .159 (4.04) | .7188 .6755 .7252 |
| 4 | 4 | 7 X 7 X 34/36 | 41650 | 155.50 | .364 (9.25) | .271 (6.88) | .2979 .2800 .3006 |
| 2 | 2 | 7 X 7 X 54/36 | 66150 | 240.20 | .436 (11.07) | .342 (8.69) | .1876 .1763 .1893 |
| 0 | 1/0 | 7 X 7 X 86/36 | 105350 | 374.81 | .528 (13.41) | .431 (10.95) | .1178 .1107 .1188 |
| 00 | 2/0 | 7 X 7 X 108/36 | 132300 | 466.58 | .581 (14.76) | .483 (12.27) | .0938 .0882 .0946 |
| 0000 | 4/0 | 19 X 7 X 64/36 | 212800 | 745.91 | .714 (18.14) | .613 (15.57) | .0588 .0553 .0594 |

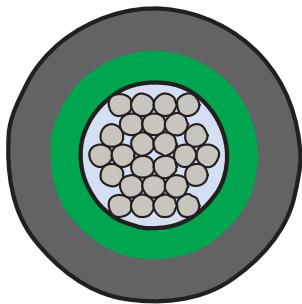


| DURALECTRIC LIGHT PERFORMANCE SUMMARY | |
|--|-----------------|
| • Service temperature range: | -65°C to +200°C |
| • Fire-resistant and Low Smoke-Zero Halogen (LSZH) | |
| • Excellent abrasion resistance | |
| • 30% lighter than Duralectric D | |
| • 50% lighter than Teflon® | |

| INSULATION COLOR PER MIL-STD-681 | |
|----------------------------------|--------|
| 0 | Black |
| 1 | Brown |
| 2 | Red |
| 3 | Orange |
| 4 | Yellow |
| 5 | Green |
| 6 | Blue |
| 7 | Violet |
| 8 | Gray |
| 9 | White |



961-107-1500 Dual-wall interconnect cable Duralectric insulation, Duralectric outer jacket, 1500 VAC



**961-107-1500 dual-wall
with Duralectric insulation,
Duralectric outer jacket**

| POWERLOAD COMPATIBILITY | | DUAL-WALL INTERCONNECT CABLE | |
|--|--|------------------------------------|--|
| | | 961-107-1500 | |
| PowerLoad Contact / Cavity Gauge (AWG) | | Duralectric Insulation | |
| 8 | | Duralectric Jacket | |
| 4 | | 1500 VAC | |
| 2 | | 260° | |
| 0 | | ✓ | |
| 00 | | ✓ | |
| 0000 | | ✓ | |
| ✓ = fully compatible | | | |

TURBOFLEX FEATURES

- Ultra-flexible rope lay power cable construction
- Wire gauges and insulation optimized for PowerLoad™ connectors
- Equipped with Duralectric insulation and outer jacket

NOTES

- Bend radius is 4X – 12X the outer diameter ($\varnothing A$) depending on application requirements
- Cable marked with "GLENAIR TURBOFLEX", wire gauge, part number, CAGE 06324.

| HOW TO ORDER | | | | | | | |
|------------------------------|--|-----|------|-------|-----|----|----|
| Sample Part Number | | 961 | -107 | -1500 | -00 | -N | -0 |
| Basic No. | TurboFlex dual-wall interconnect cable | | | | | | |
| Insulation / Jacket Material | -107 = Duralectric insulation, Duralectric outer jacket | | | | | | |
| Voltage Rating | -1500 = 1500 VAC | | | | | | |
| Wire Size Code (See Table I) | -8, -4, -2, -0, -00, -0000 | | | | | | |
| Conductor Material | -N = Nickel/Copper (-60° – 260°C) -S = Silver/Copper (-60° – 200°C) -T = Tin/Copper (-60° – 150°C) | | | | | | |
| Outer Jacket Color | See Insulation Color table. Insulation shall be Green for all outer jacket colors except Green. For Green outer jacket, insulation shall be White. | | | | | | |

| TURBOFLEX WIRE SIZE, DIMENSIONS, DC RESISTANCE AND AMPACITY RATINGS | | | | | | | |
|---|-----|----------------------|---------------|----------------------------|--------------------------|----------------------|--|
| Wire Size Code | AWG | Strand / Count / AWG | Cir Mil (nom) | Weight lbs/1000 ft. (nom.) | $\varnothing A \pm .025$ | $\varnothing B$ Ref. | DC Resistance @ 20°C (Ohms / 1000 ft.) |
| | | | | | | | Nickel Copper Silver Copper Tin Copper |
| 8 | 8 | 7 X 95/36 | 16625 | .73.26 | .263 (6.68) | .159 (4.04) | .7188 .6755 .7252 |
| 4 | 4 | 7 X 7 X 34/36 | 41650 | .168.94 | .377 (9.58) | .271 (6.88) | .2979 .2800 .3006 |
| 2 | 2 | 7 X 7 X 54/36 | 66150 | .256.65 | .449 (11.40) | .342 (8.69) | .1876 .1763 .1893 |
| 0 | 1/0 | 7 X 7 X 86/36 | 105350 | .396.40 | .543 (13.79) | .431 (10.95) | .1178 .1107 .1188 |
| 00 | 2/0 | 7 X 7 X 108/36 | 132300 | .490.62 | .596 (15.14) | .483 (12.27) | .0938 .0882 .0946 |
| 0000 | 4/0 | 19 X 7 X 64/36 | 212800 | .776.31 | .729 (18.52) | .613 (15.57) | .0588 .0553 .0594 |

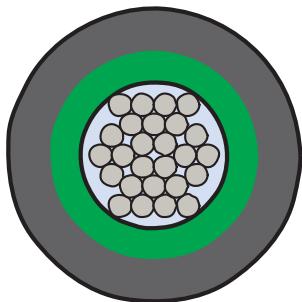


| DURALECTRIC D PERFORMANCE SUMMARY | | |
|---|--|--|
| • Service temperature range: -65°C to +260°C | | |
| • Fire-resistant and Low Smoke-Zero Halogen (LSZH) | | |
| • Resistant to common aerospace, military and industrial fluids | | |
| • UV resistant | | |

| JACKET/INSULATION COLOR PER MIL-STD-681 | | |
|---|--------------|------------------|
| Code | Jacket Color | Insulation Color |
| 0 | Black | Green |
| 1 | Brown | Green |
| 2 | Red | Green |
| 3 | Orange | Green |
| 4 | Yellow | Green |
| 5 | Green | White |
| 6 | Blue | Green |
| 7 | Violet | Green |
| 8 | Gray | Green |
| 9 | White | Green |

961-107-2000 Dual-wall interconnect cable Duralelectric insulation, Duralelectric outer jacket, 2000 VAC

TURBOFLEX CABLE



**961-107-2000 dual-wall
 with Duralelectric insulation,
 Duralelectric outer jacket**

| POWERLOAD COMPATIBILITY | | DUAL-WALL INTERCONNECT CABLE | |
|---|--------------|------------------------------------|----------------------|
| PowerLoad Contact / Cavity Gauge (AWG) | 961-107-2000 | Duralelectric Insulation | Duralelectric Jacket |
| | | 2000 VAC | |
| | | 260° | |
| 8 | + | | |
| 4 | + | | |
| 2 | + | | |
| 0 | + | | |
| 00 | ✓ | | |
| 0000 | + | | |
| ✓ = fully compatible + = compatible, but requires special termination process | | | |

| HOW TO ORDER | | | | | | | |
|------------------------------|--|--|--|-----|------|-------|-----------|
| Sample Part Number | | | | 961 | -107 | -2000 | -00 -N -0 |
| Basic No. | TurboFlex dual-wall interconnect cable | | | | | | |
| Insulation / Jacket Material | -107 = Duralelectric insulation, Duralelectric outer jacket | | | | | | |
| Voltage Rating | -2000 = 2000 VAC | | | | | | |
| Wire Size Code (See Table I) | -8, -4, -2, -0, -00, -0000 | | | | | | |
| Conductor Material | -N = Nickel/Copper (-60° – 260°C) -S = Silver/Copper (-60° – 200°C) -T = Tin/Copper (-60° – 150°C) | | | | | | |
| Outer Jacket Color | See Insulation Color table. Insulation shall be Green for all outer jacket colors except Green. For Green outer jacket, insulation shall be White. | | | | | | |

| TURBOFLEX WIRE SIZE, DIMENSIONS, DC RESISTANCE AND AMPACITY RATINGS | | | | | | | | | |
|---|-----|-------------------------|------------------|-------------------------------------|--------------|--------------|--|------------------|------------|
| Wire Size Code | AWG | Strand / Count / AWG | Cir Mil (nom) | Weight lbs/1000 ft. (nom.) | Ø A ±.025 | Ø B Ref. | DC Resistance @ 20°C (Ohms / 1000 ft.) | | |
| | | | | | | | Nickel Copper | Silver Copper | Tin Copper |
| 8 | 8 | 7X 95/36 | 16625 | 80.38 | .290 (7.34) | .159 (4.04) | .7188 | .6755 | .7252 |
| 4 | 4 | 7X 7X 34/36 | 41650 | 179.77 | .406 (10.31) | .271 (6.88) | .2979 | .2800 | .3006 |
| 2 | 2 | 7X 7X 54/36 | 66150 | 269.46 | .478 (12.14) | .342 (8.69) | .1876 | .1763 | .1893 |
| 0 | 1/0 | 7X 7X 86/36 | 105350 | 411.81 | .572 (14.53) | .431 (10.95) | .1178 | .1107 | .1188 |
| 00 | 2/0 | 7X 7X 108/36 | 132300 | 507.50 | .625 (15.88) | .483 (12.27) | .0938 | .0882 | .0946 |
| 0000 | 4/0 | 19 X 7X 64/36 | 212800 | 796.86 | .758 (19.25) | .613 (15.57) | .0588 | .0553 | .0594 |

TURBOFLEX FEATURES

- Ultra-flexible rope lay power cable construction
- Wire gauges and insulation optimized for PowerLoad™ connectors
- Equipped with Duralelectric insulation and outer jacket

NOTES

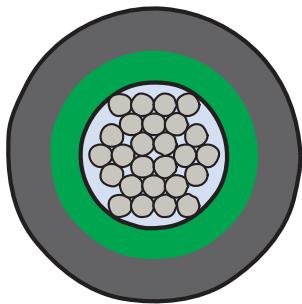
- Bend radius is 4X – 12X the outer diameter (ØA) depending on application requirements
- Cable marked with "GLENAIR TURBOFLEX", wire gauge, part number, CAGE 06324.



DURALECTRIC D PERFORMANCE SUMMARY

- Service temperature range: -65°C to +260°C
- Fire-resistant and Low Smoke-Zero Halogen (LSZH)
- Resistant to common aerospace, military and industrial fluids
- UV resistant

| JACKET/INSULATION COLOR PER MIL-STD-681 | | |
|---|--------------|------------------|
| Code | Jacket Color | Insulation Color |
| 0 | Black | Green |
| 1 | Brown | Green |
| 2 | Red | Green |
| 3 | Orange | Green |
| 4 | Yellow | Green |
| 5 | Green | White |
| 6 | Blue | Green |
| 7 | Violet | Green |
| 8 | Gray | Green |
| 9 | White | Green |

961-109-1500 Dual-wall interconnect cable**Duralectric Light insulation, Duralectric Light outer jacket, 1500 VAC****961-109-1500 dual-wall with Duralectric Light insulation and outer jacket**

| POWERLOAD COMPATIBILITY | | DUAL-WALL INTERCONNECT CABLE | | | | |
|--|--------------|------------------------------|--------------------------|----------|------|--|
| PowerLoad Contact / Cavity Gauge (AWG) | 961-109-1500 | Duralectric Light Insulation | Duralectric Light Jacket | 1500 VAC | 200° | |
| 8 | ✓ | | | | | |
| 4 | ✓ | | | | | |
| 2 | ✓ | | | | | |
| 0 | ✓ | | | | | |
| 00 | ✓ | | | | | |
| 0000 | ✓ | | | | | |
| ✓ = fully compatible | | | | | | |

| HOW TO ORDER | | | | | | | |
|------------------------------|--|-----|------|-------|-----|----|----|
| Sample Part Number | | 961 | -109 | -1500 | -00 | -N | -0 |
| Basic No. | TurboFlex dual-wall interconnect cable | | | | | | |
| Insulation / Jacket Material | -109 = Duralectric Light insulation, Duralectric Light outer jacket | | | | | | |
| Voltage Rating | -1500 = 1500 VAC | | | | | | |
| Wire Size Code (See Table I) | -8, -4, -2, -0, -00, -0000 | | | | | | |
| Conductor Material | -N = Nickel/Copper (-60° – 260°C) -S = Silver/Copper (-60° – 200°C) -T = Tin/Copper (-60° – 150°C) | | | | | | |
| Outer Jacket Color | See Insulation Color table. Insulation shall be Green for all outer jacket colors except Green. For Green outer jacket, insulation shall be White. | | | | | | |

| TURBOFLEX WIRE SIZE, DIMENSIONS, DC RESISTANCE AND AMPACITY RATINGS | | | | | | | | | |
|---|-----|----------------------|---------------|----------------------------|--------------|--------------|--|---------------|------------|
| Wire Size Code | AWG | Strand / Count / AWG | Cir Mil (nom) | Weight lbs/1000 ft. (nom.) | Ø A ±.025 | Ø B Ref. | DC Resistance @ 20°C (Ohms / 1000 ft.) | | |
| | | | | | | | Nickel Copper | Silver Copper | Tin Copper |
| 8 | 8 | 7 X 95/36 | 16625 | .67.82 | .270 (6.86) | .159 (4.04) | .7188 | .6755 | .7252 |
| 4 | 4 | 7 X 7 X 34/36 | 41650 | .160.27 | .384 (9.75) | .271 (6.88) | .2979 | .2800 | .3006 |
| 2 | 2 | 7 X 7 X 54/36 | 66150 | .246.33 | .457 (11.61) | .342 (8.69) | .1876 | .1763 | .1893 |
| 0 | 1/0 | 7 X 7 X 86/36 | 105350 | .382.92 | .551 (14.00) | .431 (10.95) | .1178 | .1107 | .1188 |
| 00 | 2/0 | 7 X 7 X 108/36 | 132300 | .474.31 | .601 (15.27) | .483 (12.27) | .0938 | .0882 | .0946 |
| 0000 | 4/0 | 19 X 7 X 64/36 | 212800 | .756.82 | .737 (18.72) | .613 (15.57) | .0588 | .0553 | .0594 |

TURBOFLEX FEATURES

- Ultra-flexible rope lay power cable construction
- Wire gauges and insulation optimized for PowerLoad™ connectors
- Equipped with Duralectric Light insulation and outer jacket

NOTES

- Bend radius is 4X – 12X the outer diameter (ØA) depending on application requirements
- Cable marked with "GLENAIR TURBOFLEX", wire gauge, part number, CAGE 06324.

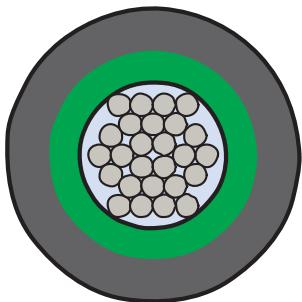
**DURALECTRIC LIGHT PERFORMANCE SUMMARY**

- Service temperature range: -65°C to +200°C
- Fire-resistant and Low Smoke-Zero Halogen (LSZH)
- Excellent abrasion resistance
- 30% lighter than Duralectric D
- 50% lighter than Teflon®

| INSULATION COLOR PER MIL-STD-681 | |
|----------------------------------|--------|
| 0 | Black |
| 1 | Brown |
| 2 | Red |
| 3 | Orange |
| 4 | Yellow |
| 5 | Green |
| 6 | Blue |
| 7 | Violet |
| 8 | Gray |
| 9 | White |

961-109-2000 Dual-wall interconnect cable Duralectric Light insulation, Duralectric Light outer jacket, 2000 VAC

TURBOFLEX CABLE



961-109-2000 dual-wall with Duralectric Light insulation and outer jacket

| POWERLOAD COMPATIBILITY | | DUAL-WALL INTERCONNECT CABLE | | 961-109-2000 | |
|--|---|------------------------------|--|--------------|--|
| PowerLoad Contact / Cavity Gauge (AWG) | | Duralectric Light Insulation | | | |
| | | Duralectric Light Jacket | | | |
| | | 2000 VAC | | | |
| | | 200° | | | |
| 8 | + | | | | |
| 4 | + | | | | |
| 2 | ✓ | | | | |
| 0 | ✓ | | | | |
| 00 | ✓ | | | | |
| 0000 | + | | | | |
| ✓ = fully compatible | | | | | |
| + = compatible, but requires special termination process | | | | | |

TURBOFLEX FEATURES

- Ultra-flexible rope lay power cable construction
- Wire gauges and insulation optimized for PowerLoad™ connectors
- Equipped with Duralectric Light insulation and outer jacket

NOTES

- Bend radius is 4X – 12X the outer diameter ($\varnothing A$) depending on application requirements
- Cable marked with "GLENAIR TURBOFLEX", wire gauge, part number, CAGE 06324.

| HOW TO ORDER | | | | | | | |
|------------------------------|--|--|--|-----|------|-------|-----------|
| Sample Part Number | | | | 961 | -109 | -2000 | -00 -N -0 |
| Basic No. | TurboFlex dual-wall interconnect cable | | | | | | |
| Insulation / Jacket Material | -109 = Duralectric Light insulation, Duralectric Light outer jacket | | | | | | |
| Voltage Rating | -2000 = 2000 VAC | | | | | | |
| Wire Size Code (See Table I) | -8, -4, -2, -0, -00, -0000 | | | | | | |
| Conductor Material | -N = Nickel/Copper (-60° – 260°C) -S = Silver/Copper (-60° – 200°C) -T = Tin/Copper (-60° – 150°C) | | | | | | |
| Outer Jacket Color | See Insulation Color table. Insulation shall be Green for all outer jacket colors except Green. For Green outer jacket, insulation shall be White. | | | | | | |

| TURBOFLEX WIRE SIZE, DIMENSIONS, DC RESISTANCE AND AMPACITY RATINGS | | | | | | | | | |
|---|-----|----------------------|---------------|----------------------------|-----------------------|----------------------|--|---------------|------------|
| Wire Size Code | AWG | Strand / Count / AWG | Cir Mil (nom) | Weight lbs/1000 ft. (nom.) | $\varnothing A$ ±.025 | $\varnothing B$ Ref. | DC Resistance @ 20°C (Ohms / 1000 ft.) | | |
| | | | | | | | Nickel Copper | Silver Copper | Tin Copper |
| 8 | 8 | 7 X 95/36 | 16625 | .71.00 | .287 (7.29) | .159 (4.04) | .7188 | .6755 | .7252 |
| 4 | 4 | 7 X 7 X 34/36 | 41650 | .164.76 | .401 (10.19) | .271 (6.88) | .2979 | .2800 | .3006 |
| 2 | 2 | 7 X 7 X 54/36 | 66150 | .250.74 | .472 (11.99) | .342 (8.69) | .1876 | .1763 | .1893 |
| 0 | 1/0 | 7 X 7 X 86/36 | 105350 | .388.21 | .566 (14.38) | .431 (10.95) | .1178 | .1107 | .1188 |
| 00 | 2/0 | 7 X 7 X 108/36 | 132300 | .481.89 | .620 (15.75) | .483 (12.27) | .0938 | .0882 | .0946 |
| 0000 | 4/0 | 19 X 7 X 64/36 | 212800 | .764.61 | .753 (19.13) | .613 (15.57) | .0588 | .0553 | .0594 |



DURAELCTRIC LIGHT PERFORMANCE SUMMARY

- Service temperature range: -65°C to +200°C
- Fire-resistant and Low Smoke-Zero Halogen (LSZH)
- Excellent abrasion resistance
- 30% lighter than Duralectric D
- 50% lighter than Teflon®

| INSULATION COLOR PER MIL-STD-681 | |
|----------------------------------|--------|
| 0 | Black |
| 1 | Brown |
| 2 | Red |
| 3 | Orange |
| 4 | Yellow |
| 5 | Green |
| 6 | Blue |
| 7 | Violet |
| 8 | Gray |
| 9 | White |

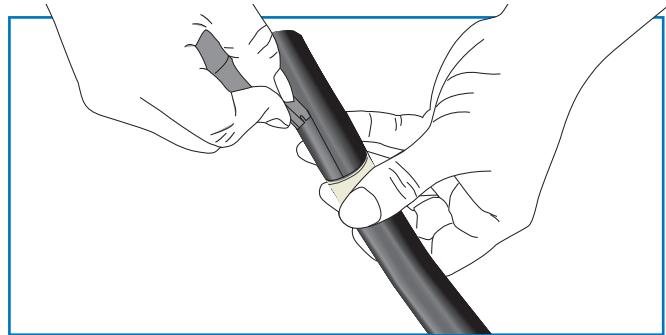
Insulation stripping procedure

Step 1

Using scale, mark off required length of insulation to be removed. Wrap tape around diameter of cable to provide a visual guide to indicate where jacket shall be scored.



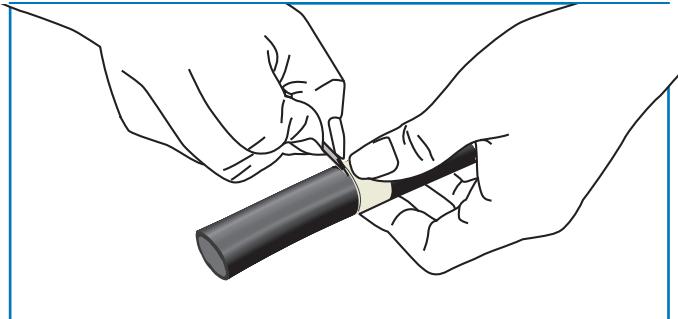
B) Score insulation lengthwise along the entire section of insulation to be removed.



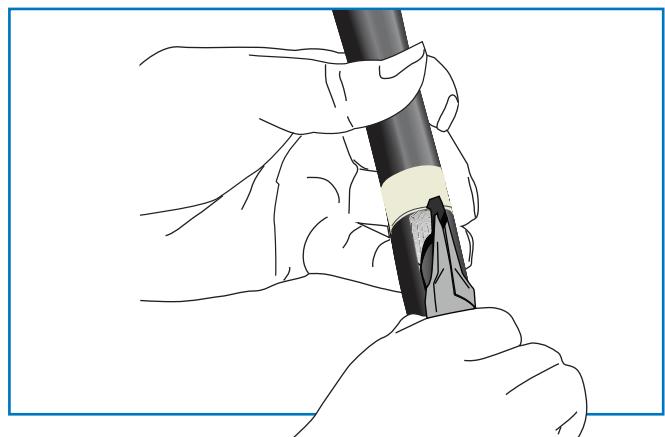
Step 2

A) Make a shallow incision (score) at the guide mark. It is not necessary to cut completely through the outer jacket. Continue scoring the insulation around the complete circumference of the cable.

Note: when scoring insulation be sure not to cut completely through the outer material which could damage wire strands.

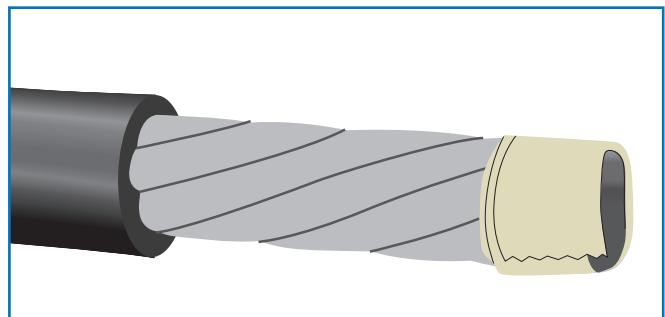


C) Using needle nose pliers, grab the insulation material where the lengthwise score meets the guide mark. Gently pull the insulation away, working downwards along the incision towards the end of the cable. Once insulation is removed wire is ready for crimp termination.



Step 3

If crimp process will not be completed immediately, wrap exposed wire strands with tape to prevent fraying.



Notes on wire crimping

Since wire gauges are defined by the cross sectional area of the metal conductor, please note the outer diameter of TurboFlex wires may be slightly larger than other wires of the same gauge. Consult the catalog pages for wire dimensions.

Note 1

Select appropriate crimp tool and die set as recommended by contact manufacturer. For optimal results, Glenair recommends the use of an indenting-type crimp die over a hex-style crimper.



Note 2

Always follow contact manufacturer specifications for minimum and maximum wire dimensions for the given contact size.

Note 3

Check TurboFlex wire-to-contact fit. The wire should fit freely but snugly into the crimp barrel. Never trim away individual strands to force-fit wire into a too-small crimp barrel.



Note 4

When crimping, hold the crimp die closed for a minimum of 8 seconds to allow adequate dwell time for wire strand deformation. Too-rapid crimping can result in a mechanically weak crimp joint.



Lightweight ground straps for electrostatic discharge, lightning strike dissipation, and power equipment grounding

LIGHTWEIGHT ARMORLITE™ MICROFILAMENT GROUND STRAPS



- Ultra lightweight metal-clad stainless steel braid material
- Low-profile lug design and assembly
- Available in seven widths and any length
- Low electrical resistance and high temperature tolerance
- High conductivity-to-weight / material-cross-section ratio
- Corrosion resistant materials for life-of-system durability
- Bend cycle durability up to 250,000 cycles per EN4199-001

LARGE-DIAMETER, LIGHTWEIGHT ARMORLITE™ EWIS GROUNDING HSTS



- Oversized heat shrink termination sleeves for grounding of long-run overbraided EWIS harnesses
- Manufactured in-house by Glenair (made in America)
- Fabricated from lightweight, highly flexible ArmorLite™ microfilament EMI/RFI braid material
- Weight reduction up to 70% lighter compared to legacy NiCu A-A-59569 / QQB575 materials

GROUND PLANE ADAPTER PLATE FOR USE WITH COMPOSITE THERMOPLASTIC PANELS



- Resolves connector-to-panel grounding issues in composite fuselage aircraft
- Fabricated from highly conductive tinned beryllium copper IAW AMS 4530 or ASTM B194 and ASTM B545
- Available for all popular aerospace connectors with straight and 90° ground attachments

FAST TURNAROUND ON UNUSUAL/BUILD-TO-PRINT REQUESTS



Hybrid braid materials and customizable lug material options



Specialized lug configurations including integrated bonding hardware and angled lugs



Heavy-duty braid and lug configurations



Round cross-section braid



Harsh environment and chemical-resistant ground strap jacketing



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