

# Pairing compression grommet series PowerLoad connectors with TurboFlex wire

Use the table below to match the contact / cavity gauge of compression-grommet-equipped PowerLoad connectors with appropriate TurboFlex cable. Single-wall insulation cables are for hookup applications. Dual-wall construction (jacket and insulation) are for interconnect cabling. Three insulation materials are available: FEP, Duraelectric, and Duraelectric Light. Cable and connector combinations indicated with a "✓" are fully-compatible. Combinations indicated with a "∅" are not available. Certain combinations (indicated with a "+") require a special wire termination process to accommodate thicker cable diameters.

| PowerLoad Contact / Cavity Gauge (AWG) | SINGLE-WALL HOOKUP WIRE |                         |              |                               |              | DUAL-WALL INTERCONNECT CABLE |                     |                         |              |                               |              |
|--|-------------------------|-------------------------|--------------|-------------------------------|--------------|------------------------------|---------------------|-------------------------|--------------|-------------------------------|--------------|
|  | 961-102-2000            | 961-106-1500            | 961-106-2000 | 961-108-1500                  | 961-108-2000 | 961-103-2000                 | 961-104-2000        | 961-107-1500            | 961-107-2000 | 961-109-1500                  | 961-109-2000 |
|  | FEP Insulation          | Duraelectric Insulation |              | Duraelectric Light Insulation |              | FEP Insulation               |                     | Duraelectric Insulation |              | Duraelectric Light Insulation |              |
|  | N/A                     | N/A                     |              | N/A                           |              | FEP Jacket                   | Duraelectric Jacket | Duraelectric Jacket     |              | Duraelectric Light Jacket     |              |
|  | 2000 VAC                | 1500 VAC                | 2000 VAC     | 1500 VAC                      | 2000 VAC     | 2000 VAC                     | 2000 VAC            | 1500 VAC                | 2000 VAC     | 1500 VAC                      | 2000 VAC     |
|  | 200°                    | 260°                    | 260°         | 200°                          | 200°         | 200°                         | 200°                | 260°                    | 260°         | 200°                          | 200°         |
| 8                                      | ✓                       | ✓                       | ✓            | ✓                             | ✓            | +                            | +                   | ✓                       | +            | ✓                             | +            |
| 4                                      | ∅                       | ✓                       | ✓            | ✓                             | ✓            | ∅                            | ∅                   | ✓                       | +            | ✓                             | +            |
| 2                                      | ∅                       | ✓                       | ✓            | ✓                             | ✓            | ∅                            | ∅                   | ✓                       | +            | ✓                             | ✓            |
| 0                                      | ∅                       | ✓                       | ✓            | ✓                             | ✓            | ∅                            | ∅                   | ✓                       | +            | ✓                             | ✓            |
| 00                                     | ∅                       | ∅                       | ✓            | ∅                             | ✓            | ∅                            | ∅                   | ✓                       | ✓            | ✓                             | ✓            |
| 0000                                   | ∅                       | ∅                       | ✓            | ∅                             | ✓            | ∅                            | ∅                   | ✓                       | +            | ✓                             | +            |

✓ = fully compatible ∅ = not available + = compatible, but requires special termination process  
 Note: bonded-grommet PowerLoad connectors are fully compatible with all TurboFlex configurations

INTRODUCTION

## ABOUT TURBOFLEX WITH DURALECTRIC™ D JACKETING

Duraelectric™ D is a Glenair Signature elastomeric material used in wire insulation, cable and conduit jacketing, overmolding, and shrink boots. Glenair TurboFlex high-flexibility power distribution cables are supplied with Duraelectric jacketing in different wall thicknesses, as well as "tell-tale" dual-layering.

TurboFlex core conductors are available in three aerospace-grade material and temperature configurations:

- T = Tin/Copper (-60° – 150°C),
- S = Silver/Copper (-60° – 200°C)
- N = Nickel/Copper (-60° – 260°C)

A signature configuration of TurboFlex is available with high-temperature shielding and lightweight aluminum conductors.



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

## GENERAL DURALECTRIC D PERFORMANCE SUMMARY

- Service Temperature Range: -65°C to 260°C
- Fire Resistant and Low Smoke-Zero Halogen (LSZH)
- RoHS materials
- Resistant to common aerospace, military and industrial fluids
- UV resistant