



# LUMINUS

Luminus: Small, lightweight, low-cost circular solutions



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## Overview

Luminus are lightweight, cost-effective connectors that are highly reliable and simple to use. With multiple configurations and arrangements available, a solution can be tailored to suite your application's exact requirements. Proven solutions can be found in single engine general aviation, multiple-engine business and passenger jets, and high performance rotary aircraft.

Ideal where space is limited, these innovative, "scoop-proof" connectors feature a locking mechanism that ensures stability, are suitable for blind-mating, and are RoHS compliant.

## Features & Benefits

|                                                             |                                                                                                                |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1/4 turn bayonet style connection; push and snap connection | Makes wire installation/maintenance easy and efficient; positive "click" when locked                           |
| Interfacial and Triple-Barrier Seal                         | Enables environmental sealing (IP 67 rating)                                                                   |
| Multiple Keying Positions                                   | Ensures proper connectivity                                                                                    |
| Multiple Configurations and Accessories                     | Tailored solutions to meet application needs                                                                   |
| Contacts                                                    | AS39029 MIL Spec contacts for broad application compatibility. Stamped & Formed available as lower cost option |
| Visual markings                                             | Visual aid for easy assembly                                                                                   |
| Rugged Polyamide Housings; 500 mating cycles                | Durability                                                                                                     |
| Blind-Mate Connection                                       | Enables simple, blind mating; easy assembly                                                                    |
| D160, M81714, FAR25 Compliance                              | Meets demanding military-aerospace environmental conditions                                                    |

## Materials & Specifications

|                         |                                         |
|-------------------------|-----------------------------------------|
| Materials               | Insulator Body: Polyamide 6/6 (Nylon)   |
|                         | Grommet & Face Seal: Silicone Rubber    |
|                         | Contact Retainer: Stainless Steel       |
| Temperature Range       | -65°C to 125°C                          |
| Temperature Life        | 500 hours @ 85°C                        |
| Insulation Resistance   | 5000 MΩ Min. @ 500 VDC                  |
| Dielectric Withstanding | 1500 VAC, 60 Hz @ Sea Level, 1ma        |
|                         | 300 VAC, 60 Hz @ 70,000 ft, 2ma         |
| Durability              | 500 mating cycles                       |
| Temperature Cycling     | 5(1) Hour Cycles: -65°C to 125°C        |
| Thermal Shock           | -65°C to 200°C                          |
| Vibration               | 30G Sinusoidal; 43.96G Random           |
| Shock                   | 300G, 3msec, Half-Sine                  |
| Salt Spray              | 5% Salt Spray @ 95°C for 48 Hours       |
| Humidity                | 10 Days @ 25°C to 65°C,<br>90% - 95% RH |
| Seal Rating             | IP67                                    |
| RoHS & REACH Compliance | Yes                                     |

|                                                                     |                                                     |        |
|---------------------------------------------------------------------|-----------------------------------------------------|--------|
| Fluid Immersion                                                     | Lubricating Oil per Mil-Prf-7808                    |        |
|                                                                     | Cleaning Compound per Mil-Prf-87937, Alkaline Base  |        |
|                                                                     | Isopropyl Alcohol & Mineral Spirit Solution         |        |
|                                                                     | Skydrol Hydraulic Fluid                             |        |
|                                                                     | Hydraulic Fluids per MIL-PRF-83282<br>MIL-PRF-87257 |        |
|                                                                     | Ethylene Glycol                                     |        |
| Flammability                                                        | Propylene Glycol                                    |        |
|                                                                     | Aviation Jet A                                      |        |
|                                                                     | UL94, V0.                                           |        |
|                                                                     | DOTG section 26.6.2 & 26.6.3                        |        |
| Contact Insertion & Removal Force<br><small>(not to exceed)</small> | FAR Part 25 App F Part I                            |        |
|                                                                     | size 22                                             | 10 lbs |
|                                                                     | size 20                                             | 10 lbs |
|                                                                     | size 16                                             | 13 lbs |
|                                                                     | size 12                                             | 15 lbs |
| Contact Retention<br><small>(minimum)</small>                       | size 22                                             | 10 lbs |
|                                                                     | size 20                                             | 15 lbs |
|                                                                     | size 16                                             | 25 lbs |
|                                                                     | size 12                                             | 30 lbs |

## Part Numbering-Twist & Lock



| # of Positions | Contact Size     | Shell Size | Key | Color  | Plug P/N   | Inline Receptacle P/N | Circular Receptacle P/N | Square Receptacle P/N | Jamnut PCB Mount P/N | Oval Receptacle P/N | Jam Nut Rear Mount Receptacle P/N |
|----------------|------------------|------------|-----|--------|------------|-----------------------|-------------------------|-----------------------|----------------------|---------------------|-----------------------------------|
| 1              | Quadrax          | 8          | -   | -      | SJS801110  | SJS801120             | -                       | SJS801130*            | SJS801160*           | SJS801170*          | SJS801190*                        |
| 2              | 22D              | 5          | -   | Black  | SJS830250  | SJS830270             | -                       | -                     | SJS502160            | SJS502170           | SJS502190                         |
| 3              | 12               | 10         | -   | -      | SJS003110  | SJS003120*            | -                       | -                     | -                    | -                   | -                                 |
| 3              | 12               | 11         | -   | Black  | SJS103110* | SJS103120*            | -                       | -                     | -                    | -                   | -                                 |
| 3              | 16               | 8          | A   | White  | SJS840310  | SJS840300             | SJS840320               | SJS803730             | -                    | -                   | -                                 |
| 3              | 16               | 8          | B   | Black  | SJS840340  | SJS840350             | SJS840330               | SJS803130             | -                    | -                   | -                                 |
| 3              | 20               | 7          | -   | White  | SJS862300  | SJS862400             | -                       | SJS862450             | -                    | -                   | -                                 |
| 3              | 22D              | 5          | -   | Black  | SJS830210  | SJS830230             | -                       | -                     | SJS503160            | SJS503170           | SJS503190                         |
| 4              | 16               | 8          | A   | White  | SJS840410  | SJS840400             | SJS840420*              | SJS804730             | SJS840760            | -                   | SJS804790                         |
| 4              | 16               | 8          | B   | White  | SJS840440  | SJS840450             | SJS840430               | -                     | -                    | -                   | -                                 |
| 4              | 20               | 7          | -   | Black  | SJS704110  | SJS704120             | -                       | -                     | -                    | -                   | -                                 |
| 5              | 22D              | 8          | -   | White  | SJS860510  | SJS860500             | SJS860520               | SJS805730             | -                    | -                   | -                                 |
| 5              | 22D              | 8          | -   | White  | SJS870510  | -                     | SJS870520               | -                     | -                    | -                   | -                                 |
| 6              | 22D              | 7          | -   | Black  | SJS861700  | SJS861800             | -                       | -                     | SJS706160            | -                   | -                                 |
| 8              | 22D              | 7          | A   | Black  | SJS830100  | SJS830200             | -                       | SJS830220             | SJS708160            | SJS708170           | SJS708190                         |
| 8              | 22D              | 7          | B   | Green  | SJS830101  | SJS830201             | -                       | SJS830221             | -                    | -                   | -                                 |
| 8              | 22D              | 7          | C   | Yellow | SJS830102  | SJS830202             | -                       | SJS830222             | -                    | -                   | -                                 |
| 9              | 22D              | 8          | -   | Black  | SJS862100  | SJS862200             | -                       | SJS809130             | -                    | -                   | -                                 |
| 12             | 16               | 14         | -   | Black  | SJS412110  | SJS412120             | -                       | -                     | -                    | -                   | -                                 |
| 12             | 22D              | 8          | -   | White  | SJS861300  | SJS861400             | -                       | SJS812730             | SJS812760*           | -                   | -                                 |
| 12             | 22D              | 11         | A   | Black  | SJS112110  | SJS112120             | -                       | -                     | SJS112160            | -                   | -                                 |
| 12             | 22D              | 11         | B   | Green  | SJS112210  | SJS112220             | -                       | -                     | SJS112260            | -                   | -                                 |
| 12             | 22D              | 11         | C   | White  | SJS112310  | SJS112320             | -                       | -                     | SJS112360            | -                   | -                                 |
| 12             | 22D              | 11         | D   | Yellow | SJS112410  | SJS112420             | -                       | -                     | SJS112460            | -                   | -                                 |
| 25             | 22D              | 14         | A   | Black  | SJS425110  | SJS425120             | -                       | -                     | SJS425160            | -                   | -                                 |
| 25             | 22D              | 14         | B   | Green  | SJS425210  | SJS425220             | -                       | -                     | SJS425260            | -                   | -                                 |
| 25             | 22D              | 14         | C   | White  | SJS425310  | SJS425320             | -                       | -                     | SJS425360            | -                   | -                                 |
| 25             | 22D              | 14         | D   | Yellow | SJS425410  | SJS425420             | -                       | -                     | SJS425460            | -                   | -                                 |
| 5              | 12 (3)<br>22 (2) | 11         | -   | Black  | SJS1AE110* | SJ1AE120*             | -                       | -                     | -                    | -                   | -                                 |
| 9              | 16<br>22D        | 8          | -   | White  | SJS860100  | SJS860200             | -                       | SJS8AC730             | -                    | -                   | -                                 |
| 9              | 16<br>22D        | 10         | -   | White  | SJS860910  | SJS860900             | -                       | SJS0AA730             | -                    | -                   | -                                 |
| 10             | 16<br>22D        | 10         | -   | White  | SJS861100  | SJS861200             | -                       | SJS0A8730*            | SJS0BB760*           | -                   | -                                 |

\* Available at extended lead times

## Applications

- Aerospace Lighting
- Power & Signal Distribution
- Cabin Service Systems
- Actuation & Sensors
- In-Flight Entertainment



## Shell Sizes

### 05 (max dia: 0.318)



2, size 22, Twist & Lock



3, size 22, Twist & Lock

### 06 (max dia: 0.390)



1, size 16 & 20, Push & Pull

### 07 (max dia: 0.448)



6, size 22, Twist & Lock



8, size 22, Twist & Lock



1, size 12, Push & Pull

### 08 (max dia: 0.528)



4, size 16, Twist & Lock



5, size 22, Twist & Lock



9: 1, size 16; 8 size 22 Twist & Lock

### 08 (max dia: 0.528)- Continued



9, size 22 Twist & Lock



3, size 16 Twist & Lock



3, size 20 Push & Pull

### 10 (max dia: 0.630)



9: 4, size 16; 5 size 22 Twist & Lock



10: 4, size 16; 6 size 22 Twist & Lock

### 11 (max dia: 0.700)



3, size 12, Twist & Lock



3, size 16, Push & Pull

### 14 (max dia: 0.875)



25, size 22, Twist & Lock

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## More from Amphenol Pcd's Luminus Series

### Luminus High Speed

Amphenol Pcd has expanded the capability of Luminus to support industry standard TWINAX and QUADRAX style contacts. Luminus High Speed provides exceptional performance in tight spaces, with a svelte shell size 8 (0.512") outer diameter. With the explosive growth in ethernet enabled devices (IOT), this size and configuration is particularly suited for end point applications, such as individual avionics sensors, panel mounted units, seat back and wall mounted displays and monuments. Unlike many of the competitive connectors, which are multipiece assemblies, Luminus High Speed shells are a single piece housing, impervious to humidity and dust, further enhancing clean, crack free operations over the full operating temperature and environmental conditions.

### Ask about New Luminus Accessories Concepts

- Two stage Latch Connector
- 3-Way H Splice
- 3-Way T Splice
- 3-Way Y Splice
- 3-Way Vertical Distribution



[www.amphenolpcd.com](http://www.amphenolpcd.com)