

# Amphenol

## New from Amphenol PCD - Luminus Series connectors

Small.

Powerful.

Connector.



More Configurations  
More Colors  
More Accessories  
More Choices

*Added Value...*

The Luminus Series are small, cost-effective connectors that are highly reliable and simple to use. With multiple product options to choose from, they meet MIL-T-81714, accept AS39029 contacts, and are environmentally-sealed. Ideal for where space is limited, these innovative connectors feature a locking mechanism that ensures stability, and are suitable for blind-mating.

### Benefits at a Glance

#### MIL-T-81714

Developed to meet MIL-T-81714 requirements.

#### Multiple Keying Positions

Ensures proper connectivity.

#### Quick, Simple Connection

Makes wire installation and maintenance easy and efficient.

#### Multiple Configurations and Accessories

Flexible product options.

#### Interfacial and Triple-Barrier Seal

Enables environmental sealing.

#### Durability

Rugged polyamide housings; 100 mating cycles.

#### AS39029 Contacts

Accepts standard AS39029 contacts (formerly MIL-C-39029);  
(Stamp and Form contacts coming soon...)

#### Blind-Mate Connection

Polarization feature enables simple, blind mating.



(Actual Size of 8-Pin, Size 22)

#### Other High Performance Products



#### Quick Mount Relay Sockets

- Quick and easy installation
- No hardware; Reduces FOD
- Lightweight



#### High Performance P-Clamps

- PEEK polymer
- Non-corrosive
- Non-conductive
- Overmolded silicone cushions
- Lightweight

Contact us for more information.

## Twist &amp; Lock



## TECHNICAL SPECIFICATIONS

## MATERIALS

|                         |                                                              |
|-------------------------|--------------------------------------------------------------|
| Insulator Body          | Polyamide 6/6 (Nylon)                                        |
| Grommet                 | Silicone Rubber                                              |
| Contact Retainer        | Stainless Steel                                              |
| PERFORMANCE             |                                                              |
| Temp Range              | - 65°C to + 125°C                                            |
| Insulation Resistance   | 5000 Megaohms Min.<br>@ 500 VDC                              |
| Dielectric Withstanding | 1000 VRMS, 60 Hz @ Sea Level<br>300 VRMS, 60 Hz @ 50,000 ft. |
| Current Ratings         | Size 16: 13 Amps<br>Size 20: 7.5 Amps<br>Size 22: 5 Amps     |
| Durability              | 100 Mating Cycles                                            |
| Temp Cycling            | 5 (1) Hour Cycles:<br>- 65°C to + 125°C                      |
| Shock                   | 100G Sawtooth, 6MS                                           |
| Vibration               | 10-2000 Hz, 15G Peak                                         |
| Salt Spray              | 5% Salt Spray<br>@ 95°F for 48 Hours                         |
| Humidity                | 10 Days @ 25°C to 65°C,<br>80-90% RH                         |

## TERMINATION ACCESSORIES

| Wire Size | Crimp Tool  |                                    | Installation/<br>Removal Tool |
|-----------|-------------|------------------------------------|-------------------------------|
|           | Basic Tool  | Positioner                         |                               |
| 12        | M22520/L-01 | M22520/L-04                        | M81969/14-04                  |
| 16        | M22520/L-01 | M22520/L-04                        | M81969/14-03                  |
| 20        | M22520/L-01 | M22520/L-04                        | M81969/14-02                  |
| 22D       | M22520/2-01 | M22520/2-09 (P)<br>M22520/2-07 (S) | M81969/14-01                  |

## Plug Specifications

| Pin Count | Contact Size       | Part No.<br>W/ Contacts | Part No.<br>W/O Contacts | L (in) | D (in) | Mated Length (in) | Weight (oz) | Key | Color  | Cradle    | Mating Half<br>W/ Contacts | Mating Half<br>W/O Contacts | Shell Size * | Contact part number         |
|-----------|--------------------|-------------------------|--------------------------|--------|--------|-------------------|-------------|-----|--------|-----------|----------------------------|-----------------------------|--------------|-----------------------------|
| 2-Pin     | 22D                | SJS830251               | SJS830250                | 0.767  | 0.392  | 1.260             | 0.053       | N/A | Black  | N/A       | SJS830271                  | SJS830270                   | 5            | M39029/57-354; socket       |
| 3-Pin     | 16                 | SJS840311               | SJS840310                | 0.784  | 0.602  | 1.270             | 0.092       | N/A | White  | SJS445000 | SJS840301<br>SJS840321     | SJS840300<br>SJS840320      | 8            | M39029/57-358; socket       |
|           |                    | SJS840341               | SJS840340                | 0.784  | 0.602  | 1.260             | 0.092       | ALT | Black  | SJS445000 | SJS840331<br>SJS840351     | SJS840330<br>SJS840350      | 8            |                             |
|           | 22D                | SJS830211               | SJS830210                | 0.779  | 0.392  | 1.270             | 0.053       | N/A | Black  | N/A       | SJS830231                  | SJS830230                   | 5            | M39029/57-354; socket       |
| 4-Pin     | 16                 | SJS840411               | SJS840410                | 0.784  | 0.602  | 1.270             | 0.095       | N/A | White  | SJS445000 | SJS840401                  | SJS840400                   | 8            | M39029/57-358; socket       |
| 5-Pin     | 22D                | SJS860511               | SJS860510                | 0.742  | 0.602  | 1.270             | 0.092       | N/A | White  | SJS445000 | SJS860501<br>SJS860521     | SJS860500<br>SJS860520      | 8            | M39029/57-354; socket       |
|           |                    | SJS870511               | SJS870510                | 0.742  | 0.602  | 1.270             | 0.088       | N/A |        | N/A       | SJS870521                  | SJS870520                   | 8            | M39029/58-360; pin          |
| 8-Pin     | 22D                | SJS831100               | SJS830100                | 0.757  | 0.524  | 1.260             | 0.061       | A   | Black  | SJS883000 | SJS831200<br>SJS831220     | SJS830200                   | 7            | M39029/57-354; socket       |
|           |                    | SJS831101               | SJS830101                | 0.757  | 0.524  | 1.260             | 0.061       | B   | Green  |           | SJS831201<br>SJS831221     | SJS830201<br>SJS830221      | 7            |                             |
|           |                    | SJS831102               | SJS830102                | 0.757  | 0.524  | 1.260             | 0.061       | C   | Yellow |           | SJS831202<br>SJS831222     | SJS830202<br>SJS830222      | 7            |                             |
| 9-Pin     | (4) 16,<br>(5) 22D | SJS860911               | SJS860910                | 0.741  | 0.714  | 1.270             | 0.116       | N/A | White  | SJS991000 | SJS860901                  | SJS860900                   | 10           | M39029/57-354; -358; socket |

\* Shell size: see back page

## Receptacle Specifications

| Pin Count | Contact Size       | Part No.<br>W/ Contacts | Part No.<br>W/O Contacts | L (in) | D (in) | Mated Length (in) | Weight (oz) | Key | Color  | Cradle    | Mating Half<br>W/ Contacts | Mating Half<br>W/O Contacts | Shell Size* | Contact part number      |
|-----------|--------------------|-------------------------|--------------------------|--------|--------|-------------------|-------------|-----|--------|-----------|----------------------------|-----------------------------|-------------|--------------------------|
| 2-Pin     | 22D                | SJS830271               | SJS830270                | 0.740  | 0.318  | 1.260             | 0.039       | N/A | Black  | N/A       | SJS830251                  | SJS830250                   | 5           | M39029/58-360; pin       |
| 3-Pin     | 16                 | SJS840301               | SJS840300                | 0.755  | 0.550  | 1.270             | 0.067       | N/A | White  | SJS445000 | SJS840311                  | SJS840310                   | 8           | M39029/58-364; pin       |
|           |                    | SJS840351               | SJS840350                | 0.755  | 0.550  | 1.270             | 0.067       | ALT | Black  |           | SJS840341                  | SJS840340                   | 8           |                          |
|           |                    | SJS840321 (Panel Rec.)  | SJS840320 (Panel Rec.)   | 0.755  | 0.520  | 1.270             | 0.116       | N/A | White  | N/A       | SJS840311                  | SJS840310                   | 8           |                          |
|           |                    | SJS840331 (Panel Rec.)  | SJS840330 (Panel Rec.)   | 0.755  | 0.520  | 1.270             | 0.116       | ALT | Black  | N/A       | SJS840341                  | SJS840340                   | 8           |                          |
|           | 22D                | SJS830231               | SJS830230                | 0.755  | 0.318  | 1.260             | 0.039       | N/A | Black  | N/A       | SJS830211                  | SJS830210                   | 5           | M39029/58-360; pin       |
| 4-Pin     | 16                 | SJS840401               | SJS840400                | 0.755  | 0.550  | 1.270             | 0.067       | N/A | White  | SJS445000 | SJS840411                  | SJS840410                   | 8           | M39029/58-364; pin       |
| 5-Pin     | 22D                | SJS860501               | SJS860500                | 0.755  | 0.550  | 1.270             | 0.088       | N/A | White  | SJS445000 | SJS860511                  | SJS860510                   | 8           | M39029/58-360; pin       |
|           |                    | SJS860521 (Panel Rec.)  | SJS860520 (Panel Rec.)   | 0.755  | 0.520  | 1.270             | 0.127       | N/A |        | N/A       | SJS860511                  | SJS860510                   | 8           |                          |
|           |                    | SJS870521               | SJS870520                | 0.744  | 0.528  | 1.270             | 0.134       | N/A |        | N/A       | SJS870511                  | SJS870510                   | 8           | M39029/57-354; socket    |
| 8-Pin     | 22D                | SJS831200               | SJS830200                | 0.768  | 0.448  | 1.260             | 0.048       | A   | Black  | SJS883000 | SJS831100                  | SJS830100                   | 7           | M39029/58-360; pin       |
|           |                    | SJS831201               | SJS830201                | 0.768  | 0.448  | 1.260             | 0.048       | B   | Green  |           | SJS831101                  | SJS830101                   | 7           |                          |
|           |                    | SJS831202               | SJS830202                | 0.768  | 0.448  | 1.260             | 0.048       | C   | Yellow |           | SJS831102                  | SJS830102                   | 7           |                          |
|           |                    | SJS831220 (Panel Rec.)  | SJS830220 (Panel Rec.)   | 0.768  | 0.448  | 1.270             | 0.089       | A   | Black  | N/A       | SJS830110                  | SJS830100                   | 7           |                          |
|           |                    | SJS831221 (Panel Rec.)  | SJS830221 (Panel Rec.)   | 0.768  | 0.448  | 1.270             | 0.089       | B   | Green  |           | SJS830111                  | SJS830101                   | 7           |                          |
|           |                    | SJS831222 (Panel Rec.)  | SJS830222 (Panel Rec.)   | 0.768  | 0.448  | 1.270             | 0.089       | C   | Yellow |           | SJS830112                  | SJS830102                   | 7           |                          |
|           |                    |                         |                          |        |        |                   |             |     |        |           |                            |                             |             |                          |
| 9-Pin     | (4) 16,<br>(5) 22D | SJS860901               | SJS860900                | 0.755  | 0.651  | 1.270             | 0.113       | N/A | White  | SJS991000 | SJS860911                  | SJS860910                   | 10          | M39029/58-360; -364; pin |

\* Shell size: see back page

## Cradle Specifications

| Part No.  | Length (in) | Weight (oz) | Height (in) | Color | For Shell Size |
|-----------|-------------|-------------|-------------|-------|----------------|
| SJS445000 | 1.031       | 0.095       | 0.701       | White | 8              |
| SJS883000 | 1.031       | 0.099       | 0.701       | Black | 7              |
| SJS991000 | 1.031       | 0.099       | 0.846       | White | 10             |



## Push &amp; Pull

## Product Description

**1-Pin:**

Developed to meet MIL-T-81714 criteria and available in two colors per size, these products feature an environmental sealing that meets EIA-364D-03B to 12,000 ft. Altitude Immersion Test standard. Mating and releasing the plug and receptacle is made simple to do. Simply push the part together to mate and lock, and "twist and pull" to release.

**3-Pin:**

Developed to meet MIL-T-81714 criteria and available in three colors, these products feature molded-in polarizing keys to enable blind-mate connections. Simply push the part together to mate and lock, and "squeeze and pull" to release.



## TECHNICAL SPECIFICATIONS

## MATERIALS

|                  |                       |
|------------------|-----------------------|
| Insulator Body   | Polyamide 6/6 (Nylon) |
| Grommet          | Silicone Rubber       |
| Contact Retainer | Stainless Steel       |

## PERFORMANCE

|                         |                                                                                                     |
|-------------------------|-----------------------------------------------------------------------------------------------------|
| Temperature Range       | - 65°C to + 125°C                                                                                   |
| Insulation Resistance   | > 5000 Megaohms Min.                                                                                |
| Dielectric Withstanding | 1500Vrms @ Sea Level                                                                                |
| Current Ratings         | Size 12: 23 Amps<br>Size 16: 13 Amps<br>Size 20: 7.5 Amps                                           |
| Sealing                 | Size 16 & 20: EIA-364-03B (12,000 Ft.)<br>Size 12: EIA-364-D, Method 3                              |
| Vibration               | Size 16 & 20: EIA-364-28D (Test Condition V, E)<br>Size 12: EIA-364-D (Method 28, Test Condition V) |
| Flammability            | UL94, V0.                                                                                           |
| CTI Rating              | UL746B, 600V                                                                                        |
| Contact Retention       | Size 16 & 20: EIA-364-29B (20 lb)<br>Size 12: 30 lbs                                                |

## TERMINATION ACCESSORIES

| Wire Size | Crimp Tool  |             | Installation/ Removal Tool |
|-----------|-------------|-------------|----------------------------|
|           | Basic Tool  | Positioner  |                            |
| 12        | M22520/1-01 | M22520/1-04 | M81969/14-04               |
| 16        | M22520/1-01 | M22520/1-04 | M81969/14-03               |
| 20        | M22520/1-01 | M22520/1-04 | M81969/14-02               |

## Plug Specifications

| Pin Count | Contact Size | Part No. W/ Contacts | Part No. W/O Contacts | Length (in) | Diameter (in) | Mated Length (in) | Weight (oz) | Key | Color  | Mating Half W/ Contacts | Mating Half W/O Contacts | Shell Size* | Contact Part No.      |
|-----------|--------------|----------------------|-----------------------|-------------|---------------|-------------------|-------------|-----|--------|-------------------------|--------------------------|-------------|-----------------------|
| 1-Pin<br> | 12           | SJS512101            | SJS512100             | 1.209       | 0.449         | 1.780             | 0.077       | N/A | Blue   | SJS512201               | SJS512200                | 7           | M39029/56-353; socket |
|           |              | SJS512111            | SJS512110             |             |               |                   |             |     | Red    | SJS512211               | SJS512210                | 7           |                       |
|           | 16           | SJS716101            | SJS716100             | 1.110       | 0.390         | 1.701             | 0.049       | N/A | Blue   | SJS716201               | SJS716200                | 6           | M39029/56-352; socket |
|           |              | SJS716111            | SJS716110             |             |               |                   |             |     | Red    | SJS716211               | SJS716210                | 6           |                       |
|           | 20           | SJS720101            | SJS720100             | 1.079       | 0.701         | 1.681             | 0.152       | N/A | Green  | SJS720201               | SJS720200                | 6           | M39029/56-351; socket |
|           |              | SJS720111            | SJS720110             |             |               |                   |             |     | Yellow | SJS720211               | SJS720210                | 6           |                       |
| 3-Pin<br> | 16           | SJS816101            | SJS816100             | 1.118       | 0.701         | 1.614             | 0.187       | A   | Red    | SJS816201               | SJS816200                | 11          | M39029/56-352; socket |
|           |              | SJS816111            | SJS816110             |             |               |                   |             | B   | White  | SJS816211               | SJS816210                | 11          |                       |
|           |              | SJS816121            | SJS816120             |             |               |                   |             | C   | Blue   | SJS816221               | SJS816220                | 11          |                       |
|           | 20           | SJS820101            | SJS820100             | 1.079       | 0.701         | 1.681             | 0.152       | A   | Red    | SJS820201               | SJS820200                | 8           | M39029/56-351; socket |
|           |              | SJS820111            | SJS820110             |             |               |                   |             | B   | White  | SJS820211               | SJS820210                | 8           |                       |
|           |              | SJS820121            | SJS820120             |             |               |                   |             | C   | Blue   | SJS820221               | SJS820220                | 8           |                       |

\* Shell size: see back page

## Receptacle Specifications

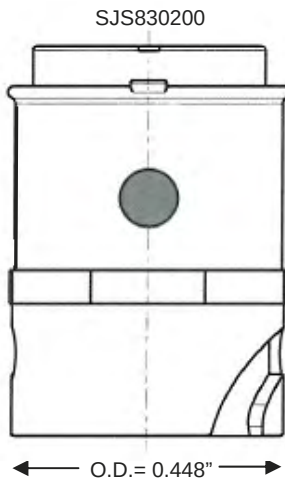
| Pin Count | Contact Size | Part No. W/ Contacts | Part No. W/O Contacts | Length (in) | Diameter (in) | Mated Length (in) | Weight (oz) | Key | Color  | Mating Half W/ Contacts | Mating Half W/O Contacts | Shell Size* | Contact Part No.   |
|-----------|--------------|----------------------|-----------------------|-------------|---------------|-------------------|-------------|-----|--------|-------------------------|--------------------------|-------------|--------------------|
| 1-Pin<br> | 12           | SJS512201            | SJS512200             | 1.118       | 0.488         | 1.780             | 0.063       | N/A | Blue   | SJS512101               | SJS512100                | 7           | M39029/58-365; pin |
|           |              | SJS512211            | SJS512210             |             |               |                   |             |     | Red    | SJS512111               | SJS512110                | 7           |                    |
|           | 16           | SJS716201            | SJS716200             | 1.059       | 0.429         | 1.654             | 0.053       | N/A | Blue   | SJS716101               | SJS716100                | 6           | M39029/58-364; pin |
|           |              | SJS716211            | SJS716210             |             |               |                   |             |     | Red    | SJS716111               | SJS716110                | 6           |                    |
|           | 20           | SJS720201            | SJS720200             | 1.028       | 0.390         | 1.701             | 0.042       | N/A | Green  | SJS720101               | SJS720100                | 6           | M39029/58-363; pin |
|           |              | SJS720211            | SJS720210             |             |               |                   |             |     | Yellow | SJS720111               | SJS720110                | 6           |                    |
| 3-Pin<br> | 16           | SJS816201            | SJS816200             | 1.028       | 0.701         | 1.614             | 0.162       | A   | Red    | SJS816101               | SJS816100                | 11          | M39029/58-364; pin |
|           |              | SJS816211            | SJS816210             |             |               |                   |             | B   | White  | SJS816111               | SJS816110                | 11          |                    |
|           |              | SJS816221            | SJS816220             |             |               |                   |             | C   | Blue   | SJS816121               | SJS816120                | 11          |                    |
|           | 20           | SJS820201            | SJS820200             | 0.988       | 0.701         | 1.681             | 0.131       | A   | Red    | SJS820101               | SJS820100                | 8           | M39029/58-363; pin |
|           |              | SJS820211            | SJS820210             |             |               |                   |             | B   | White  | SJS820111               | SJS820110                | 8           |                    |
|           |              | SJS820221            | SJS820220             |             |               |                   |             | C   | Blue   | SJS820121               | SJS820120                | 8           |                    |

\* Shell size: see back page



## Shell Size Designation

Other Products from Amphenol PCD



Shell Sizes: determined by the overall diameter (O.D.) of the receptacle in 16ths of an inch.

Example: SJS830100/SJS830200

O.D. of receptacle SJS830200 at mating interface is 0.448."

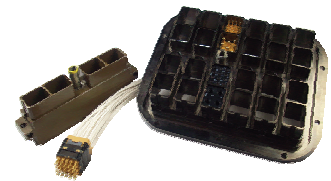
$$\begin{aligned}\text{Shell Size} &= (\text{O.D.}) / (1/16") \\ &= (0.448") / (1/16") \\ &= 7.168 \\ &= 7\end{aligned}$$

Round the closest whole number to designate the mated pair as Shell Size 7.



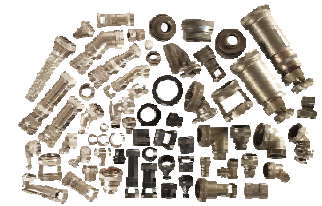
### Junction Modules

- Meet MIL-T-81714
- Multiple configurations
- Environmentally-Sealed



### SIMPLUS

- Standard and custom configurations
- Easy to install
- Interchangeable modules
- Polarized (A, B, C, D, N)



### Backshells for Circular Connectors

- QPL certified to AS85049 standard
- Complete range of products
- Short lead-time

## Mil-T-81714 Wire Splices



- Splices developed to MIL-T-81714
- Single and Multi-Contact Inline wire
- Contact size available: 16, 20, 22



- Designed to meet 1119 to NSA specifications
- Electronic Component Splices: diodes, fuses, capacitors, and resistors available

### Product Customization

Amphenol PCD welcomes inquiries for application-specific modifications to the standard Luminus Series connectors. This environmentally-sealed series is continuously expanding to meet current and future customer needs.

Application-specific customization include:

Varied Wire Gauges  
Custom Colors  
Unique Markings

High Power  
Electronic Packaging  
Increased Channel Sizes

Alternate Contacts  
Distinct Configurations  
Alternative Alterations

### Amphenol PCD Headquarters

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# Amphenol

CONNECTING PEOPLE + TECHNOLOGY

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