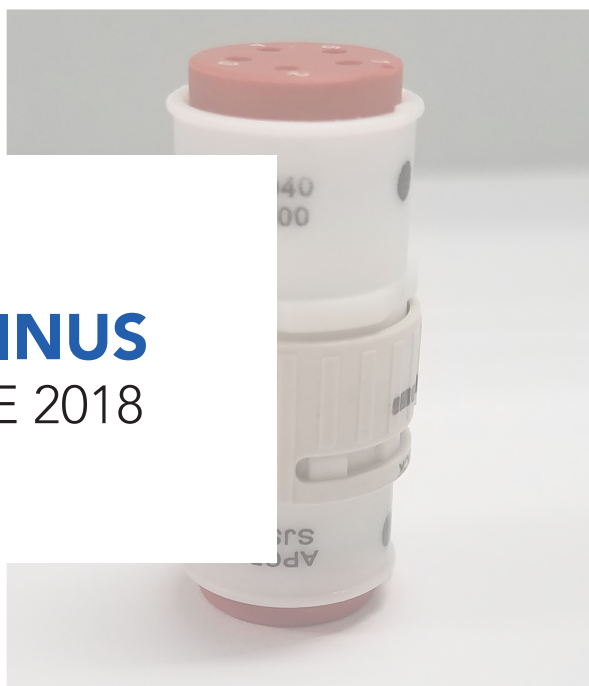


# Amphenol Pcd



**LUMINUS**  
GUIDE 2018



## Description:

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 suit 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.

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## Features and Benefits:

1/4 turn bayonet style connection; push and snap connection - Makes wire installation and 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

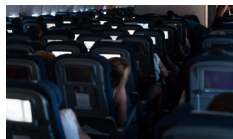
Blind-Mate Connection - Enables simple, blind mating; easy assembly

D160, M81714, FAR25 Compliance-Meets demanding military-aerospace environmental conditions

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## Typical Applications:

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



## Shell Size

05 (max dia: 0.318)



2, size 22, Twist & Lock



3, size 22, Twist & Lock

10 (max dia: 0.630)



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



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

06 (max dia: 0.390)



1, size 16 & 20, Push & Pull

11 (max dia: 0.700)



3, size 12, Twist & Lock



3, size 16, Push & Pull

07 (max dia: 0.448)



6, size 22, Twist & Lock



8, size 22, Twist & Lock



1, size 12, Push & Pull

14 (max dia: 0.875)



25, size 22, Twist & Lock

08 (max dia: 0.528)



4, size 16, Twist & Lock



5, size 22, Twist & Lock



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



9, size 22 Twist & Lock



3, size 16 Twist & Lock



3, size 20 Push & Pull

## Materials and Specifications

|                                                      | Push & Pull                                      | Twist & Lock                                       |        |
|------------------------------------------------------|--------------------------------------------------|----------------------------------------------------|--------|
| Materials                                            | Insulator Body: Polyamide 6/6 (Nylon)            | Insulator Body: Polyamide 6/6 (Nylon)              |        |
|                                                      | Grommet: Silicone Rubber                         | Grommet & Face Seal: Silicone Rubber               |        |
|                                                      | Contact Retainer: Stainless Steel                | Contact Retainer: Stainless Steel                  |        |
|                                                      | Contacts: Copper Alloy Gold Plated               |                                                    |        |
| Temperature Range                                    | -65°C to 125°C                                   | -65°C to 125°C                                     |        |
| Temperature Life                                     | 150 hours @ 95°C                                 | 500 hours @ 85°C                                   |        |
| Insulation Resistance                                | 1500VAC, 60hz @ Sea Level                        | 5000 MΩ Min. @ 500 VDC                             |        |
| Dielectric Withstanding                              | 1500 VAC, 60 Hz @ Sea Level, 1ma                 | 1500 VAC, 60 Hz @ Sea Level, 1ma                   |        |
|                                                      | 300 VAC, 60 Hz @ 70,000 ft, 2ma                  | 300 VAC, 60 Hz @ 70,000 ft, 2ma                    |        |
| Durability                                           | 50 mating cycles                                 | 500 mating cycles                                  |        |
| Altitude Immersion                                   | 5% salt solution, 55k ft, DWV 1500VA             | 5% salt solution, 75k feet                         |        |
|                                                      |                                                  | 5000Mohms @ 1500 VAC, sea level                    |        |
|                                                      |                                                  | 5000Mohms @ 300 VAC, 70k ft                        |        |
|                                                      |                                                  | 5000Mohms @ 300 VAC, 100k ft                       |        |
| Temperature Cycling                                  | 5(1) Hour Cycles: 0 C to 95 C                    | 5(1) Hour Cycles: -65°C to 125°C                   |        |
| Thermal Shock                                        | 5(1) Hour Cycles: 0 C to 95 C                    | -65°C to 200°C                                     |        |
| Vibration                                            | Contact Factory                                  | 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, 90% - 95% RH             | 10 Days @ 25°C to 65°C, 90% - 95% RH               |        |
| Fluid Immersion                                      |                                                  | Lubricating Oil per Mil-Prf-7808                   |        |
|                                                      |                                                  | Cleaning Compound per Mil-Prf-87937, Alkaline Base |        |
|                                                      |                                                  | Isopropyl Alcohol & Mineral Spirit Solution        |        |
|                                                      | Skydrol Hydraulic Fluid                          | Skydrol Hydraulic Fluid                            |        |
|                                                      | Hydraulic Fluids per MIL-PRF-83282 MIL-PRF-87257 | Hydraulic Fluids per MIL-PRF-83282 MIL-PRF-87257   |        |
|                                                      | Ethylene Glycol                                  | Ethylene Glycol                                    |        |
|                                                      | Propylene Glycol                                 | Propylene Glycol                                   |        |
|                                                      | Aviation Jet A                                   | Aviation Jet A                                     |        |
| Seal Rating                                          | IP67                                             | IP67                                               |        |
| Flammability                                         | UL94, V0.                                        | UL94, V0.                                          |        |
|                                                      |                                                  | DOTG section 26.6.2 & 26.6.3                       |        |
|                                                      |                                                  | FAR Part 25 App F Part I                           |        |
| RoHS & REACH Compliance                              | Yes                                              | Yes                                                |        |
| Contact Insertion & Removal Force<br>(not to exceed) | -                                                | size 22                                            | 10 lbs |
|                                                      |                                                  | size 20                                            | 10 lbs |
|                                                      |                                                  | size 16                                            | 13 lbs |
|                                                      |                                                  | size 12                                            | 15 lbs |
| Contact Retention<br>(minimum)                       | -                                                | 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 PN                                                                | Jamnut PCB Mount                                                                    | Oval Receptacle PN                                                                  | Jam Nut Rear Mount Receptacle PN                                                    |
| 1              | Quadrax      | 8          | -   | -      | SJS801110                                                                         | SJS801120                                                                         | -                                                                                  | SJS801130*                                                                          | SJS801160*                                                                          | SJS801170*                                                                          | SJS801190*                                                                          |
| 2              | 22D          | 5          | -   | black  | SJS830250                                                                         | SJS830270                                                                         | -                                                                                  | -                                                                                   | -                                                                                   | SJS502170                                                                           | SJS502190                                                                           |
| 3              | 12           | 11         | -   | black  | SJS103110*                                                                        | SJS103120*                                                                        | -                                                                                  | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   |
| 3              | 22D          | 5          | -   | black  | SJS830210                                                                         | SJS830230                                                                         | -                                                                                  | -                                                                                   | -                                                                                   | SJS503170                                                                           | SJS503190                                                                           |
| 3              | 20           | 7          | -   | white  | SJS862300                                                                         | SJS862400                                                                         | -                                                                                  | SJS862450                                                                           | -                                                                                   | -                                                                                   | -                                                                                   |
| 3              | 16           | 8          | A   | white  | SJS840310                                                                         | SJS840300                                                                         | SJS840320                                                                          | SJS803730                                                                           | -                                                                                   | -                                                                                   | -                                                                                   |
| 3              | 16           | 8          | B   | black  | SJS840340                                                                         | SJS840350                                                                         | SJS840330                                                                          | SJS803130                                                                           | -                                                                                   | -                                                                                   | -                                                                                   |
| 3              | 12           | 10         | -   | -      | SJS003110                                                                         | SJS003120                                                                         | -                                                                                  | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   |
| 3              | 12           | 11         | -   | black  | SJS103110                                                                         | SJS103120                                                                         | -                                                                                  | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   |
| 4              | 16           | 8          | A   | white  | SJS840410                                                                         | SJS840400                                                                         | SJS840420                                                                          | SJS804730                                                                           | SJS840760                                                                           | -                                                                                   | SJS840790                                                                           |
| 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             | 22D          | 8          | -   | white  | SJS861300                                                                         | SJS861400                                                                         | -                                                                                  | SJS812730                                                                           | SJS812760*                                                                          | -                                                                                   | -                                                                                   |
| 12             | 22D          | 11         | A   | black  | SJS112110                                                                         | SJS112120                                                                         | -                                                                                  | -                                                                                   | SJS112160                                                                           | -                                                                                   | -                                                                                   |
| 12             | 22D          | 11         | B   | -      | SJS112210                                                                         | SJS112220                                                                         | -                                                                                  | -                                                                                   | SJS112260                                                                           | -                                                                                   | -                                                                                   |
| 12             | 22D          | 11         | C   | -      | SJS112310                                                                         | SJS112320                                                                         | -                                                                                  | -                                                                                   | SJS112360                                                                           | -                                                                                   | -                                                                                   |
| 12             | 22D          | 11         | D   | -      | SJS112410                                                                         | SJS112420                                                                         | -                                                                                  | -                                                                                   | SJS112460                                                                           | -                                                                                   | -                                                                                   |
| 25             | 22D          | 14         | A   | black  | SJS425110                                                                         | SJS425120                                                                         | -                                                                                  | -                                                                                   | SJS425160                                                                           | -                                                                                   | -                                                                                   |
| 25             | 22D          | 14         | B   | -      | SJS425210                                                                         | SJS425220                                                                         | -                                                                                  | -                                                                                   | SJS425260                                                                           | -                                                                                   | -                                                                                   |
| 25             | 22D          | 14         | C   | -      | SJS425310                                                                         | SJS425320                                                                         | -                                                                                  | -                                                                                   | SJS425360                                                                           | -                                                                                   | -                                                                                   |
| 25             | 22D          | 14         | D   | -      | SJS425410                                                                         | SJS425420                                                                         | -                                                                                  | -                                                                                   | SJS425460                                                                           | -                                                                                   | -                                                                                   |
| 12             | 20           | 14         | -   | -      | SJS412110                                                                         | SJS412120                                                                         | -                                                                                  | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   |
| 5              | 12 (3)       | 11         | -   | black  | SJS1AE110*                                                                        | SJ1AE120*                                                                         | -                                                                                  | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   |
|                | 22 (2)       |            |     |        |                                                                                   |                                                                                   | -                                                                                  | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   |
| 9              | 16           | 8          | -   | white  | SJS860100                                                                         | SJS860200                                                                         | -                                                                                  | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   |
|                | 22D          |            |     |        |                                                                                   |                                                                                   | -                                                                                  | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   |
| 9              | 16           | 10         | -   | white  | SJS860910                                                                         | SJS860900                                                                         | -                                                                                  | SJS0AA730                                                                           | -                                                                                   | -                                                                                   | -                                                                                   |
|                | 22D          |            |     |        |                                                                                   |                                                                                   | -                                                                                  | -                                                                                   | -                                                                                   | -                                                                                   | -                                                                                   |
| 10             | 16           | 10         | -   | white  | SJS861100                                                                         | SJS861200                                                                         | -                                                                                  | SJS0A8730*                                                                          | SJS0BB770*                                                                          | -                                                                                   | -                                                                                   |
|                | 22D          |            |     |        |                                                                                   |                                                                                   | -                                                                                  | SJS0AB730                                                                           | SJS0AB770                                                                           | -                                                                                   | -                                                                                   |

Note: Above part numbers come without contacts; inquire within for "with contacts" part numbers  
 \* SJS870510 uses pin contacts; SJS870520 uses socket contacts

\*Available at extended lead timed.

# LUMINUS

## Part Numbering (Push & Pull)

|              |             |            |     |        |  |  |
|--------------|-------------|------------|-----|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Contact Size | Contact Qty | Shell Size | Key | Color  | Plug P/N                                                                            | Receptacle                                                                          |
| 12           | 1           | 7          | n/a | blue   | SJS512100                                                                           | SJS512200                                                                           |
| 12           | 1           | 7          | n/a | red    | SJS512110                                                                           | SJS512210                                                                           |
| 16           | 1           | 6          | n/a | blue   | SJS716100                                                                           | SJS716200                                                                           |
| 16           | 1           | 6          | n/a | red    | SJS716110                                                                           | SJS716210                                                                           |
| 20           | 1           | 6          | n/a | green  | SJS720100                                                                           | SJS720200                                                                           |
| 20           | 1           | 6          | n/a | yellow | SJS720110                                                                           | SJS720210                                                                           |
| 16           | 3           | 11         | A   | red    | SJS816100                                                                           | SJS816200                                                                           |
| 16           | 3           | 11         | B   | white  | SJS816110                                                                           | SJS816210                                                                           |
| 16           | 3           | 11         | C   | blue   | SJS816120                                                                           | SJS816220                                                                           |
| 20           | 3           | 8          | A   | red    | SJS820100                                                                           | SJS820200                                                                           |
| 20           | 3           | 8          | B   | white  | SJS820110                                                                           | SJS820210                                                                           |
| 20           | 3           | 8          | C   | blue   | SJS820120                                                                           | SJS820220                                                                           |

## Part Numbering (Accessories)

|            |  |  |  |  |  |  |  |  |  |  |  |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Shell Size | Strain Relief Single                                                                | Strain Relief Single 90°                                                            | Strain Relief Single 45°                                                            | Double Strain Relief                                                                | Double Side Tape Mount Cradle                                                       | Screw Mount Cradle                                                                  | Tube Mount Cradle                                                                    | Single Side Tape Tube Mount Cradle                                                    | Double Side Tape Tube Mount Cradle                                                    | Dummy Flanges                                                                         | Hard Protective Caps                                                                  |
| 5          | SJSA55000                                                                           | SJSAA5100                                                                           | SJSAA5200                                                                           | SJSA56000                                                                           | SJS257000                                                                           | SJS257100                                                                           | SJSA5V000                                                                            | SJS5AV010                                                                             | SJS5AV020                                                                             | -                                                                                     | SJSA5B000                                                                             |
| 7          | SJS450350                                                                           | SJSA75100                                                                           | SJSA75200                                                                           | SJSA76000                                                                           | SJS883000                                                                           | SJS450250                                                                           | SJSA7V000                                                                            | SJSA7V010                                                                             | SJSA7V020                                                                             | SJS830220D                                                                            | SJSA7B000                                                                             |
| 8          | SJSA85000                                                                           | SJSA85100                                                                           | SJSA85200                                                                           | SJSA86000                                                                           | SJS445000                                                                           | SJS450100                                                                           | SJSA8V000                                                                            | SJSA8V010                                                                             | SJSA8V020                                                                             | -                                                                                     | SJSA8B000                                                                             |
| 10         | SJSA05000                                                                           | SJSA05100                                                                           | SJSA05200                                                                           | SJSA06000                                                                           | SJS991000                                                                           | -                                                                                   | SJSA0V000                                                                            | SJSA0V010                                                                             | SJSA0V020                                                                             | SJS0AA730D                                                                            | SJSA0B000                                                                             |

## Contact Information: Machined and Stamped & Formed

Now with Quadrax & Fiber Optic (M29504) capability

|                 |                                  |
|-----------------|----------------------------------|
| Shipping Format | Loose (Tape & reel not included) |
| Mating Cycles   | 500                              |
| Materials       | Contact<br>Body: Copper Alloy    |
|                 | Hood<br>Stainless Steel          |
|                 | Sleeve<br>Stainless Steel        |

|                 |                                                                                                              |
|-----------------|--------------------------------------------------------------------------------------------------------------|
| Dimensions      | AS39029 Compatible                                                                                           |
| Plating Options | Machined<br>Gold plate 50 micro-inches min over                                                              |
|                 | Stamped & Formed<br>Selective gold plate over engagement area 3-5 micro-inches thick over nickel under plate |

## Contact Matrix

| Contact Size | Contact Style | Available |            | Contact P/N |                  | QPL Part No.<br>(Machined Only) | Contact Retention                | Crimp Tensile Strength |
|--------------|---------------|-----------|------------|-------------|------------------|---------------------------------|----------------------------------|------------------------|
|              |               | Push-Pull | Twist-Lock | Machined    | Stamped & Formed |                                 |                                  |                        |
| 12           | Pin           | Yes       | Yes        | CNP058365   | SCP058365        | M39029/58-365                   | .012" [0,30mm] @<br>30lbf [133N] | 100lbf [445N]          |
|              | Socket        | No        | Yes        | CNS057359   | SCS057359        | M39029/57-359                   |                                  |                        |
|              | Socket-L      | Yes       | No         | CNS056353   | n/a              | M39029/56-353                   |                                  |                        |
| 16           | Pin           | Yes       | Yes        | CNP058364   | SCP058364        | M39029/58-364                   | .012" [0,30mm] @<br>25lbf [111N] | 40lbf [180N]           |
|              | Socket        | No        | Yes        | CNS057358   | SCS057358        | M39029/57-358                   |                                  |                        |
|              | Socket-L      | Yes       | No         | CNS056352   | n/a              | M39029/56-352                   |                                  |                        |
| 20           | Pin           | Yes       | Yes        | CNP058363   | SCP058363        | M39029/58-363                   | .012" [0,30mm] @<br>20lbf [90N]  | 20lbf [90N]            |
|              | Socket        | No        | Yes        | CNS057357   | SCS057357        | M39029/57-357                   |                                  |                        |
|              | Socket-L      | Yes       | No         | CNS056351   | n/a              | M39029/56-351                   |                                  |                        |
| 22D          | Pin           | No        | Yes        | CNP058360   | n/a              | M39029/58-360                   | .012" [0,30mm] @<br>10lbf [44N]  | 10 lbf [45N]           |
|              | Socket        | No        | Yes        | CNS057354   | n/a              | M39029/57-354                   |                                  |                        |

| Contact Size | Wire Accommodations |                        |                              |                              | Tool Information           |                                                 |                        |
|--------------|---------------------|------------------------|------------------------------|------------------------------|----------------------------|-------------------------------------------------|------------------------|
|              | Size (AWG)          | Max Current Rating (A) | ØD Range                     | Strip Length                 | Basic Tool                 | Positioner                                      | Insertion/Removal Tool |
| 12           | 12                  | 23                     | .097 - .142" [2,46 - 3,61mm] | .209 - .240" [5,31 - 6,10mm] | M22520/1-01                | M22520/1-04 (Yellow)                            | M81969/14-04           |
|              | 14                  | 17                     |                              |                              |                            |                                                 |                        |
| 16           | 16                  | 13                     | .065 - .109" [1,65 - 2,77mm] | .209 - .240" [5,31 - 6,10mm] | M22520/1-01                | M22520/1-04 (Blue)<br>M22520/7-04               | M81969/14-03           |
|              | 18                  | 10                     |                              |                              | M22520/7-01                |                                                 |                        |
|              | 20                  | 7.5                    |                              |                              |                            |                                                 |                        |
| 20           | 20                  | 7.5                    | .040 - .083" [1,02 - 2,11mm] | .209 - .240" [5,31 - 6,10mm] | M22520/1-01                | M22520/1-04 (Red)<br>M22520/2-10<br>M22520/7-08 | M81969/14-11           |
|              | 22                  | 5                      |                              |                              | M22520/2-01                |                                                 |                        |
|              | 24                  | 3                      |                              |                              | M22520/7-01                |                                                 |                        |
| 22D          | 22                  | 5                      | .030 - .054" [0,76 - 1,37mm] | .141 - .172" [3,58 - 4,37mm] | M22520/2-01<br>M22520/7-01 | M22520/2-06<br>M22520/7-06                      | M81969/14-01           |
|              | 24                  | 3                      |                              |                              |                            |                                                 |                        |
|              | 26                  | 2                      |                              |                              |                            |                                                 |                        |
|              | 28                  | 1.5                    |                              |                              |                            |                                                 |                        |



## AMPHENOL PCD PRODUCTS



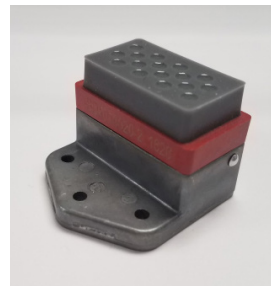
BACKSHELLS



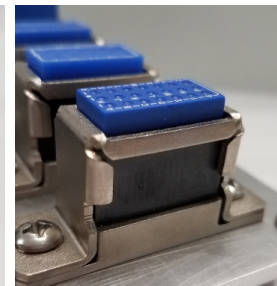
CABLE SOLUTIONS



CIRCULAR



GROUND BLOCKS



JUNCTION MODULES



LUMINUS



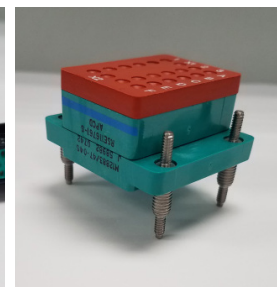
MILITARY AUDIO/POWER



PEGASUS SERIES



RECTANGULAR



RELAY SOCKETS



RUGGED SOLUTIONS



SIM



SOLARIS



SYSTEM ATTACHMENTS

**Amphenol Pcd**  
[www.amphenolpcd.com](http://www.amphenolpcd.com)