



NANO PEGASUS

Small, easy to use connectors that provide exceptional performance in tight spaces.



NANO PEGASUS

Overview

Nano-Pegasus & Nano-Luminus build upon APCD's success in light weight, plastic circular connectors in the aerospace market, in a very small way. Nano-Pegasus & Nano-Luminus are small, plastic, easy to use connectors designed specifically for sensing, command and control applications where a Micro or Nano Dsub would be used. Nano-Pegasus & Nano-Luminus provide exceptional performance in tight spaces, packing 11 high grade contacts in a shell size 5 housing (0.325" outer diameter). That's equivalent to 132 contacts per square inch! Contacts are rated for 1a, 350 Vdc operation. With 0.050" spacing, this gives 500 Vdc insulation resistance, and 350 Vac dielectric withstanding at 70k feet.

Scoop proof construction and enclosed contacts protect the small gauge contacts during mating. When mated, IP67 sealing is guaranteed by the interfacial seal, helping ensure the contacts are free from dust, moisture and corrosion. And unlike many of the competitive connectors, which are multi-piece assemblies, Nano-Pegasus & Nano-Luminus 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. Shells are a high grade polyetherimide construction, providing a temperature range of -65C to +175C, and high mating cycles, making Nano-Luminus suitable for man/machine interfaces. Nano-Pegasus adds a copper & nickel overplate, providing 40db to 60db EMI shielding.

Available in solder cup for user assembly or as a finished good pig tail assembly.

Features & Benefits

| | |
|-------------------------------------|--|
| 1/4 Turn Cam Lock | Easy to use, blind mate with audible click and visual locking aids |
| Interfacial & Wire sealing | IP67 performance for use in human interface, wet and damp applications |
| Polyetherimide Single Piece Housing | High temperature resistance, resistance to a large number of harsh fuels & chemicals, a long working life & high mating cycles |
| 7.5 grams / mated pair | Lighter weight means longer flight times, larger payloads, longer battery life in non-static applications |
| 28 awg wire barrel | 1a continuous over full voltage and temperature range |
| 0.050" Contact Spacing | Very high density interconnect, equivalent to 132 contacts per sq inch |
| 30μ inch gold plated contacts | Long working life & high mating cycles |
| Nickel / Copper plating | Up to 60db EMI shielding typical, depending on frequency of interest |

Materials & Specifications

| | |
|-------------------------|---------------------------------------|
| Shock | 300G, 3 Axis |
| Vibration | 43.9G Random |
| Flammability & Toxicity | Meets FAR Par 25 Appendix F, Part 1 |
| Sealing | IP67 when mated |
| Fluid Resistance | Skydrol, Ethylene Glycol, Jet A, more |
| DWV | 250VAC @ Sea-level; 100VAC @ 70k ft |
| Salt Spray | 5% @ 95 °C for 48 Hours |
| Temperature | -65°C to +175°C |
| EMI Shielding | 50db typical |



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Cable Configurations & Drawings

MCS XXXX B SS WW A P P C - VVV

MCS: Standard size Luminus/pegasus
MCN: Nano Luminus/Pegasus

XXXX: Unique Alpha Numeric Identifier
0001: Standard

Connector Style
A: Inline Receptacle
B: Inline Plug
C: Square Flange
D: Circle Flange
E: Jamnut Pcb
F: Oval Flange
G: Jamnut Flange Front Mount
H: Jamnut Flange Rear Mount

SS: Actual shell size
05
06
07
08
09
10
11
12
13
14

WW: Number of positions in connector
Example 11: 11 Positions

Key Field
A/B/C/D/E/F

N: Not plated
P: Plated

Contact Type
P: Pins
S: Sockets

Termination Type
C: Crimp
S: Solder

VVV: Cable Length
Example 072: 72

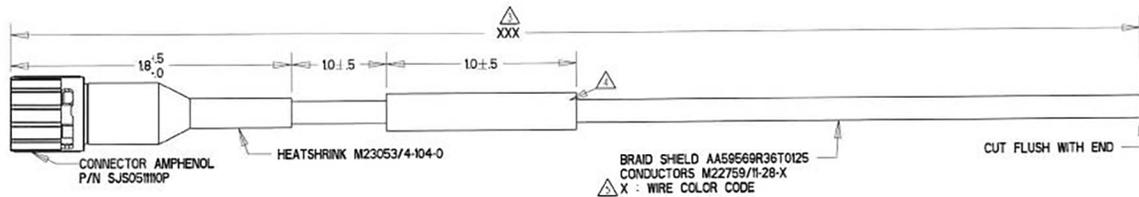
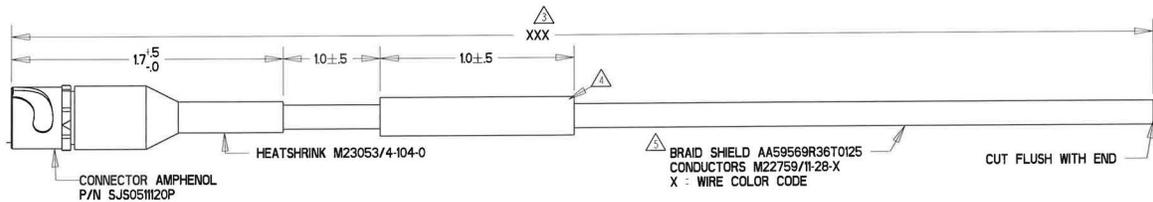
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Supported Contacts

Integral Solder Cup or wire crimp. C54400 Bronze Alloy with 30 micro-inches gold plate. 28 awg pin barrel. Wire barrel accepts 28 or 30 wire gauges. (0.126" / 0.32mm or 0.01" / 0.254mm)

Existing Cable Assemblies

| | Position | Style | Pigtail | Plug/Receptacle | Crimp/Solder | Cable Type |
|----------------------|----------|--------------|---------|-----------------|--------------|----------------|
| MCN0001A0511APPS-006 | 11 | Nano Pegasus | Pigtail | Receptacle | Solder | M22759/11-28-x |
| MCN0001B0511APSS-006 | 11 | Nano Pegasus | Pigtail | Plug | Solder | M22759/11-28-x |
| MCN0002A0511APPS-006 | 11 | Nano Pegasus | Pigtail | Receptacle | Solder | M22759/32-30-x |
| MCN0002B0511APSS-006 | 11 | Nano Pegasus | Pigtail | Plug | Solder | M22759/32-30-x |



Configurations & Ordering Info

| | Solder Cup Contacts | Crimp Contacts (Available in pigtail configurations only) |
|---------------------------|---------------------|---|
| 11 pin inline plug | SJS0511110P | SJS051111P |
| 11 pin inline receptacle | SJS0511120P | SJS051121P |
| 11 pin Jamnut panel mount | TBD | TBD |
| 11 pin Jamnut pcb mount | TBD | TBD |
| 11 pin Oval flange mount | TBD | TBD |

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Applications

- Communications via single and dual USB2.0, CAN Bus, USB3.0, CAT5 & CAT6 ethernet, or user defined low and medium speed requirements.
- Command and Control as typically found in subsystem interconnects with user defined high density data and low power signaling.
- Sensor connectivity, such as found in missile and munition guidance systems, infrared target acquisition and tracking gimbels, angle of attack and inertial guidance systems.
- Low pin count Micro (M83513) & Nano (M32139) DSub alternative where a circular connector is more appropriate.



More from Amphenol Pcd's Pegasus Series

Pegasus

The Pegasus Series is Amphenol Pcd's latest innovation in small, lightweight, rugged connectors. Designed for use in harsh environments, Pegasus builds on the successful Luminus Aerospace connector with the addition of EMI shielding.

EMI shielding is provided by electroless copper and nickel plate, with a copper alloy spring finger gasket to ensure shell-to-shell conductivity. Tests show between 40db and 60db of attenuation, depending on frequency. This combination of light weight, small size, and EMI shielding makes Pegasus the ideal choice where protection against ambient noise transients, or suppression of emitted noise is required, and space and weight are at a premium.

Pegasus High Speed

Amphenol Pcd has expanded the capability Pegasus to support industry standard TWINAX and QUADRAX style contacts. Pegasus High Speed brings an easy to use, light weight, low cost connection solution to applications that have typically relied on heavier, more complicated, and therefore more expensive, metal shell connectors.

Supporting the AS39029/90, /91, /113, /114 Twinax and ARINC600, ARINC404, AS39029/119, /120 Quadrax rear release, rear removable, size 8 style contacts, Pegasus 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.

Scoop proof construction and molded in alignment keys help protect the small gauge contacts during mating. When mated, IP67 sealing is guaranteed by the interfacial seal, helping ensure the contacts are free from dust, moisture and corrosion. A triple riser grommet sealing boot provides back end sealing on the wire side.

Compatibility with standard Pegasus shell sizes means many of the currently available tape and screw mount cradle accessories are supported, easing installation and mounting tasks.

Amphenol Pcd
www.amphenolpcd.com