

APeX SERIES

Amphenol Pcd



Amphenol Pcd is one of the world's leading suppliers of interconnect products for Military, Commercial Aerospace and Industrial applications. Located north of Boston in Beverly, Massachusetts, the company designs and manufactures a wide range of products; System Attachments, Junction Modules, Relay Sockets, Terminal Blocks, Rectangular & Circular Connectors, Cable Assemblies and Adapters. Each product is made and engineered with the highest quality standards in the industry. With facilities in North America and Asia, Amphenol Pcd products are chosen by thousands of OEMs around the world, reliant on Amphenol's technical excellence, global network of distributors, and cost-effective solutions for custom systems.

Amphenol Pcd

72 Cherry Hill Dr. • Beverly, MA. 01915
978.624.3400 • info@amphenolpcd.com
www.amphenolpcd.com

Arinc 810

Arinc 810 Receptacle Kit

| Part Number | Description | Radial Cross | Contacts |
|-------------|---|--------------|----------|
| APX2B801C | APeX, Receptacle, 25 pos A polarization, 6 pos B polarization inserts | | WC * |
| APX2B801G | APeX, Receptacle, 25 pos A polarization, 6 pos B polarization inserts | 617 610 188 | WC * |
| APX2B801K | APeX, Receptacle, 25 pos A polarization, 6 pos B polarization inserts | | LC |
| APX2B801S1 | APeX, Receptacle, 25 pos A polarization, 6 pos B polarization inserts | | WC * |
| APX2B801S2 | APeX, Receptacle, Blank Insert, 6 pos B polarization inserts | 617 610 422 | WC * |
| APX2B801S2K | APeX, Receptacle, Blank Insert, 6 pos B polarization inserts | | LC |
| APX2B801S3 | APeX, Receptacle, 25 pos insert A polarization, 6 pos B polarization inserts | | WC * |
| APX2B801S4 | APeX, Receptacle, 25 pos insert A polarization, 6 pos B polarization inserts & all contacts | | WC * |
| APX2B801S5 | APeX, Receptacle, 25 pos insert A polarization, 6 pos B polarization inserts & all contacts | | WC * |

*WC: Reference drawing for exact contacts included.

Arinc 810 Plug Kit

| Part Number | Description | Radial Cross | Contacts |
|-------------|---|--------------|----------|
| APX2A801C | APeX, Plug, 25 pos A polarization, 6 pos B polarization inserts, with strain relief | | WC * |
| APX2A801G | APeX, Plug, 25 pos A polarization, 6 pos B polarization inserts, with strain relief | 617 610 189 | WC * |
| APX2A801K | APeX, Plug, 25 pos A polarization, 6 pos B polarization inserts, with strain relief | | LC |
| APX2A801S1 | APeX, Plug, 25 pos A polarization, 6 pos B polarization inserts, with strain relief | | WC * |
| APX2A801S2 | APeX, Plug, 25 pos A polarization, 6 pos B polarization inserts, with strain relief | | WC * |
| APX2A801S2K | APeX, Plug, 25 pos A polarization, 6 pos B polarization inserts, with strain relief | | LC |
| APX2A801S3 | APeX, Plug, 25 pos A polarization, 6 pos B polarization inserts, with strain relief | | WC * |
| APX2A801S4 | APeX, Plug, 25 pos A polarization, 6 pos B polarization inserts, with strain relief | | WC * |
| APX2A801S5 | APeX, Plug, 25 pos A polarization, 6 pos B polarization inserts, with strain relief | | WC * |

*WC: Reference drawing for exact number and type of included contacts.

APeX Plugs

| Part Number | Description | Radial Cross | Mate |
|-------------|--|--------------|-----------|
| APX2BL00N | APEX, ARINC810 Plug Shell, no inserts, with protective caps | 616610613 | APX2AR00N |
| APX2CA22N | APEX Plug, Shell, with jack screw, no mounting holes, with protective caps | EPXB2P22N | APX2DB32N |

Tools

| Part Number | Description | Radial Cross |
|-------------|---------------------|--------------|
| APXTL0001 | Insert/Removal tool | 282-521-002 |

Receptacles

| Part Number | Description | Radial Cross | Mate |
|-------------|--|--------------|-----------|
| APX2AR00N | Receptacle shell, with jack screw, with 2x size Self Locking 6-32 Threaded Holes, with protective cap | 617610212 | APX2BL00N |
| APX2AR11N | Receptacle shell, with jack screw, with 2x size 0.140 Through Holes, with protective cap. | 617610419 | APX2BL00N |
| APX2DB32N | APEX Receptacle Shell, with jack screw, 4x size Self Locking 6-32 Threaded Holes, with protective caps | | APX2CA22N |

Shell Key Specifications

| Item | Performance | Test Method |
|---------------------|---|-------------|
| Durability | 2000 mating cycles minimum | EIA-364-09 |
| Altitude Immersion | IR greater than 1000Mohm @ 500V, 25k feet | EIA-364-03 |
| Salt Spray | 96 hours | EIA-364-26 |
| Shock | 50G, half-sine, 3 axis | EIA-364-27 |
| Vibration | 7.56G, 1000hz, 3 Axis | EIA-364-28 |
| Temperature Life | 175C for 1000 hours | EIA-364-17 |
| Temperature Cycling | 100 cycles, -65C to +175C | EIA-364-32 |
| Humidity | 96 hours, 90% - 95% | EIA-364-31 |
| Mold Growth | 28 days | EN-2591-306 |

Contacts

| Part Number | Description | Radial Cross | APCD Mate | Cable Type |
|--------------|---|---------------|-----------|------------------|
| PIN CONTACTS | | | | |
| CNP882100 | Twinax, Crimp, Pin, ARINC600 | 617-165-011 | CNS882100 | ABS0386WF24 |
| CNP882110 | | | CNS882110 | ASNE0272TK22 |
| CNP882120 | | | CNS882120 | ASNE0272TK24 |
| CNP882130 | | | CNS882130 | ASNE0807WX26 |
| CNP812100 | size 12, Crimp, Pin | 617-250 | CNS812100 | |
| CNP822100 | size 22, Crimp, Pin | 617-200 | CNS822100 | |
| CNP831033 | size 22 pcb tail 0.186" | | CNS822100 | |
| CNP882200 | Quadrax, PCB Tail, Pin, 100 ohm, ARINC600 | 617-177-008EN | | ABS0972, ABS1503 |
| TBD | Quadrax, Crimp, Pin, 100 ohm, ARINC600 | | | |

| Part Number | Description | Radial Cross | APCD Mate | Cable Type |
|-----------------|---|--------------|------------------------|------------------|
| SOCKET CONTACTS | | | | |
| CNS882100 | Twinax, Crimp, Socket, ARINC600 | 617-065-011 | CNP882100 | ABS0386WF24 |
| CNS882110 | | | CNP882110 | ASNE0272TK22 |
| CNS882120 | | | CNP882120 | ASNE0272TK24 |
| CNS882130 | | | CNP882130 | ASNE0807WX26 |
| CNS812100 | size 12, Crimp, Socket | 617-350 | | |
| CNS822100 | size 22, Crimp, Socket | 617-300 | CNP831033 CNP822100 | |
| CNS882200 | Quadrax, Crimp, Socket, 100 ohm, ARINC600 | 617-075-011 | CNP882200 | ABS0972, ABS1503 |

APeX Modules, Inserts

| Part Number | Description | Radial Cross | EN4644 Cross |
|-------------|--|--------------|--------------|
| APXIN0001 | Blank insert | | |
| APXM006PA | 6 pin, size 12, polarization A, pin module | EPXBE06 | 6 |
| APXM006PB | 6 pin, size 12, polarization B, pin module | EPXBE06 | 6 |
| APXM006SA | 6 pin, size 12, polarization A, socket module | EPXBE06 | 6 |
| APXM006SB | 6 pin, size 12, polarization B, socket module, LC | EPXBE06 | 6 |
| APXM030PA | 30 pos, size 20, A polarization, Pin Module | EPXBE30 | 30 |
| APXM030PB | 30 pos, size 20, B polarization, Pin Module | EPXBE30 | 30 |
| APXM030SA | 30 pos, size 20, A polarization, socket module | EPXBE30 | 30 |
| APXM030SB | 30 pos, size 20, B polarization, socket module, B polarization | EPXBE30 | 30 |
| APXM25QPA | 25 pin polar A with twinax seal, pin module | EPXBE25Q1 | 25Q1 |
| APXM25QPB | 25 pin polar A with twinax seal, pin module | EPXBE25Q1 | 25Q1 |
| APXM25QSA | 25 socket polar A with twinax seal, socket module | EPXBE25Q1 | 25Q1 |
| APXM25QSB | 25 socket polar B with twinax seal, socket module | EPXBE25Q1 | 25Q1 |
| APXM003PA | 3 pos, size 5 Coax, A polarization, Pin Module, | EPXBEC3 | C3 |
| APXM003PB | 3 pos, size 5 Coax, B polarization, Pin Module, | EPXBEC3 | C3 |
| APXM003SA | 3 pos, size 5 Coax, A polarization, Socket Module | EPXBEC3 | C3 |
| APXM003SB | 3 pos, size 5 Coax, B polarization, Socket Module | EPXBEC3 | C3 |
| APXM03PPA | 3 pos, size 5 Power | EPXBEP3 | P3 |
| APXM03PPB | 3 pos, size 5 Power | EPXBEP3 | P3 |
| APXM03PSA | 3 pos, size 5 Power | EPXBEP3 | P3 |
| APXM03PSB | 3 pos, size 5 Power | EPXBEP3 | P3 |
| APXM014PA | 14 pos, size 16 | EPXBE14 | 14 |
| APXM014PB | 14 pos, size 16 | EPXBE14 | 14 |
| APXM014SA | 14 pos, size 16 | EPXBE14 | 14 |
| APXM014SB | 14 pos, size 16 | EPXBE14 | 14 |
| APXM017PA | 14 pos, size 20, 3 pos size 12 | EPXBE17 | 17 |
| APXM017PB | 14 pos, size 20, 3 pos size 12, | EPXBE17 | 17 |
| APXM017SA | 14 pos, size 20, 3 pos size 12 | EPXBE17 | 17 |
| APXM017SB | 14 pos, size 20, 3 pos size 12 | EPXBE17 | 17 |
| APXM022PA | 16 pos, size 20, 6 pos size 16 | EPXBE22 | 22 |
| APXM022PB | 16 pos, size 20, 6 pos size 16 | EPXBE22 | 22 |
| APXM022SA | 16 pos, size 20, 6 pos size 16 | EPXBE22 | 22 |

| Part Number | Description | Radial Cross | EN4644 Cross |
|-------------|--|--------------|--------------|
| APXM022SB | 16 pos, size 20, 6 pos size 16 | EPXBE22 | 22 |
| APXM028PA | 22 pos, size 22, 6 size 16 | EPXBE28 | 28 |
| APXM028PB | 22 pos, size 22, 6 size 16 | EPXBE28 | 28 |
| APXM028SA | 22 pos, size 22, 6 size 16 | EPXBE28 | 28 |
| APXM028SB | 22 pos, size 22, 6 size 16 | EPXBE28 | 28 |
| APXM034PA | 18 pos, size 22, 16 pos size 20 | EPXBE34 | 34 |
| APXM034PB | 18 pos, size 22, 16 pos size 20 | EPXBE34 | 34 |
| APXM034SA | 18 pos, size 22, 16 pos size 20 | EPXBE34 | 34 |
| APXM034SB | 18 pos, size 22, 16 pos size 20 | EPXBE34 | 34 |
| APXM040PA | 40 pos, size 22 | EPXBE40 | 40 |
| APXM040PB | 40 pos, size 22 | EPXBE40 | 40 |
| APXM040SA | 40 pos, size 22 | EPXBE40 | 40 |
| APXM040SB | 40 pos, size 22 | EPXBE40 | 40 |
| APXM048PA | 48 pos, size 22 | EPXBE48 | n/a |
| APXM048PB | 48 pos, size 22 | EPXBE48 | n/a |
| APXM048SA | 48 pos, size 22 | EPXBE48 | n/a |
| APXM048SB | 48 pos, size 22 | EPXBE48 | n/a |
| APXM10QPA | 2 pos quadrax, 8 pos size 20 | EPXBE10Q2 | 10Q2 |
| APXM10QSA | 2 pos quadrax, 8 pos size 20 | EPXBE10Q2 | 10Q2 |
| APXM13CPA | 6 pos, size 20, 4 pos size 14, 2 pos size 12, 1 pos size 5 COAX | EPXBE13C1 | 13C1 |
| APXM13CSA | 6 pos, size 20, 4 pos size 14, 2 pos size 12, 1 pos size 5 COAX | EPXBE13C1 | 13C1 |
| APXM13PPA | 6 pos, size 20, 4 pos size 14, 2 pos size 12, 1 pos size 5 Power | EPXBE13P1 | 13P1 |
| APXM13PSA | 6 pos, size 20, 4 pos size 14, 2 pos size 12, 1 pos size 5 Power | EPXBE13P1 | 13P1 |
| APXM22VPA | 6 pos, size 16, 16 pos, size 20 | EPXBE22V | 22V |
| APXM22VSA | 6 pos, size 16, 16 pos, size 20 | EPXBE22V | 22V |
| APXM003Q3PA | 3 pos quadrax | EPXBE3Q3 | 3Q3 |
| APXM003Q3PB | 3 pos quadrax | EPXBE3Q3 | 3Q3 |
| APXM003Q3SA | 3 pos quadrax | EPXBE3Q3 | 3Q3 |
| APXM003Q3SB | 3 pos quadrax | EPXBE3Q3 | 3Q3 |

*APXM- Environmental Sealing
 APXME- Environmental Sealing
 APXMN- Non Sealed, front and back
 APXMH- Non Sealed, front and back
 APXMT- Non Sealed, front and back

APeX Module Key Specifications

| Item | Performance | Performance | Performance | Performance | Test Method |
|------------------------------|------------------------|-------------|-------------|-------------|-------------|
| Insulation Resistance | Greater than 5000Mohms | | | | EIA-364-21 |
| Dielectric Withstand Voltage | 1500VAC, 2 ma max | | | | EIA-364-20 |
| Contact size | 22 | 20 | 16 | 12 | |
| Contact Insertion Force | 10 lbs | 15 lbs | 20 lbs | 25 lbs | EIA-364-24 |
| Contact Removal Force | 8 lbs | 10 lbs | 15 lbs | 20 lbs | EIA-364-24 |
| Contact Retention | 12 lbs | 20 lbs | 25 lbs | 30 lbs | EIA-364-29 |

APeX Series

A high density, rectangular, modular connection system designed for use in avionics systems conforming to the EN4644 technical specification. Plug and Receptacle housings are a single piece, high-grade aluminum construction, precision-machined to ensure a lifetime of reliable operation. Housings are available in panel, rack or cable-to-cable mounting styles. Housings may be plated with nickel or aluminum chromate. Housings accommodate a wide range of modules, where each module is keyed to ensure proper orientation during installation. Plug and Receptacles shells may be configured with either pin or socket modules, depending on customer preference.

Housing-to-housing connectivity is assured using a center coupling screw, which may be a simple alignment feature or a multi-keyed jack screw and nut. Modules are made out of ULTEM, a rugged Polyetherimide plastic which is highly resistive to chemicals, stable through temperature and humidity variation, and with FAA FAR25 approved flammability and toxicity characteristics. Internally, stainless steel retaining clips ensure reliable locking under all operating conditions. Modules are rear insert, allowing cabling to be accomplished separately from panel mounting.

Each module may have an environmental rear seal of silicone elastomer, which is bonded to the housing using APCD's proprietary Epoxy sealant, proven superior in over 30 years use in the M81714 military module market. An interfacial seal front seal provides module to module sealing when mated, ensuring IP67 level performance. Typical applications include wing actuators, power generation and control, Ethernet distribution networks, electronic load management systems, and galleys.

Features & Benefits

-65C to +175C

Wide operating temperature range

Blind-Mate connection

Ease of Use

Silicone Elastomer Facial & Wire Sealing

Environmental performance to IP67

ULTEM module housings

Chemical resistance, Flammability & Toxicity compliance

Wide range of Module Configurations

Application flexibility

EN4644 Conformance

Intermateability with other manufacturers and 1000's of existing installations



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