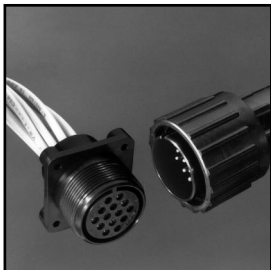




Micro



Miniature



Standard

Considerations when specifying AMP CPC Connectors:

- Wire type and size requirements
- Number of circuits required
- Current and voltage rating requirements
- Is environmental sealing or splash protection required?
- How much space is available for the connector?
- Is a plastic housing suitable for the application or is a more durable metal-shell housing required?
- Volume of contacts to be crimped — impacts recommended application tooling and contact packaging
- Required accessories

Industry Applications:

Micro CPC




Industrial Machinery
Instrumentation
Medical Equipment
Factory Automation
Robotics

Miniature CPC

Industrial Machinery
Instrumentation
Motor Vehicles
Recreational Vehicles

Standard CPC










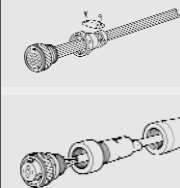
Industrial Machinery
Instrumentation
Agricultural Equipment
Welding Equipment
HVAC
Lighting
Security
Motor Vehicles
Recreational Vehicles

| Miniature CPC | | Metal-Shell Micro CPC | |
|--|---|---|--|
|  | <ul style="list-style-type: none"> • Small circular connector system for wire-to-wire, wire-to-board, and wire-to-panel configurations • 1-9 positions • Uses existing Mini-Universal MATE-N-LOK crimp, snap-in contacts • Sealing to IEC IP67 prevents ingress of dirt or fluids • 1/4-turn coupling ring with positive lock and alignment features |  | <ul style="list-style-type: none"> • Very small, rugged connector for medical and industrial applications • 7, 19, and 37 positions • Resistant to autoclaving (1,000 cycles @275°F) or chemical sterilization (500 cycles) • Sealing to IEC IP67 prevents ingress of dirt or fluids • Soldered spring probe or screw-machine pin & socket contacts |
| Micro CPC | IEC IP (Internal Protection) Definition | | |
|  | <ul style="list-style-type: none"> • Very small circular connector for applications where size, contact density, and durability are concerns • 2-19 positions • Soldered spring probe or screw-machine pin & socket contacts • Sealing to IEC IP65 prevents ingress of dirt or fluids • Capable of 3 A, 250 V • Squeeze-to-release coupling | <ul style="list-style-type: none"> • The first number (1-6) in an IP number specifies the degree of protection against ingress of solid foreign objects. • The second number (0-7) specifies the degree of protection against ingress of water. • IP65 and IP67 ratings, defined as follows, apply to certain CPC connectors: IP65 -- Protection against ingress of dust and protection against water stream out of a nozzle from any direction (jetting). • IP67 -- Protection against ingress of dust and protection against temporary immersion. | |

Summary Chart

| Product Name | Number of Positions | Contact System | Wire Range (AWG) | Current Rating (A) | Voltage Rating (V) | Coupling Mechanism | Wire-Wire | Wire-Panel | Wire-PCB | Sealing |
|------------------------------|---------------------|--|------------------|--------------------|--------------------|----------------------------|-----------|------------|----------|---------|
| Miniature CPC | | | | | | | | | | |
| | 1-9 | Universal MATE-N-LOK Crimp, Snap-in Contacts | 30-18 | 5 | 600 | 1/4-Turn Coupling Ring | X | X | X | IP67 |
| Micro CPC | | | | | | | | | | |
| | 2-19 | Spring Probe Solder or Screw-machine Pin & Socket Solder | 24-30 | 2 | 250 | Squeeze-to-Release | X | X | X | IP65 |
| Metal-Shell Micro CPC | | | | | | | | | | |
| | 7, 19, 37 | Spring Probe Solder or Screw-machine Pin & Socket Solder | 24-30 | 2 | 100 | Push-Pull Positive Locking | X | X | X | IP67 |

Reference: Catalog 1309175 (Miniature)
 Catalog 1309096 (Micro)
 Catalog 1654443 (Metal-Shell Micro)

| | | | |
|--|--|---|--|
|  | <p>Series 1 Standard Density Connector 4-37 Positions Accepts Size 16 Multimate pin & socket contacts Signal and coaxial contacts can be combined in the same housing Sealable to IEC IP67</p> |  | <p>Series 5 Power Density Connector Sealable to IEC IP65 or IP67 3 positions Accepts economical POWERBAND stamped & formed contacts capable of carrying up to 50 amps</p> |
|  | <p>Series 2 High Density Connector 8-63 Positions Accepts Size 20 DF/DM contacts Smaller contact allows more circuit positions than Series 1 connectors</p> |  | <p>Series 6 Combination Standard & Power Density Sealable to IEC IP65 or IP67 10 positions Uses both Multimate Size 16 contacts and POWERBAND 50-amp contacts in same housing</p> |
|  | <p>Series 3 Power Density 3-7 positions Accepts Type XII "box" style power contacts capable of carrying up to 25 amps per contact Contact wire range is 16-10 AWG</p> |  | <p>Circular Plastic Metal-Shell (CMC) Consists of a thermoplastic insert in a nickel-plated, zinc alloy shell Available in Series 1-4 configurations (same contact configuration as all-plastic version) Optional "Tetraseal" interface seal provides splash-proof sealing between connector metal shells</p> |
|  | <p>Series 4 Combination Standard & Power Density 13-22 positions Accepts Size 16 Multimate contacts and Type XII power contacts in same housing</p> |  | <p>MIL-C-5015 Style CPC All-plastic connector that intermates with other manufacturer's metal-shell Mil-C-5015 type connectors Intermates with size 20-14 and 18-10 connectors Uses Multimate Size 16 contacts</p> |
|  | <p>Product Facts Lightweight, all-plastic and metal-shell circular connectors Quick connect/disconnect capability with thread assist and positive detent coupling Available in panel or chassis mount and free-hanging configurations Housings constructed from UL 94V-0 rated thermoplastic material</p> |  | <p>Accessories Cable Clamps Flexible Cable Boots Keying Plugs Interface Seals</p> |

Summary Chart

| Series | Description | Positions | Full Sealing* | Optional Interface Sealing** | 20 DF/DM | Type I | Type II | Type III+ & High Current Enhanced | Type III+ Posted | Submin. Coax | High Current Power | Type XII Power | POWERBAND |
|-----------------------------|--------------------------------------|-----------|---------------|------------------------------|----------|--------|---------|-----------------------------------|------------------|--------------|--------------------|----------------|-----------|
| All Plastic CPC | | | | | | | | | | | | | |
| Series 1 | Standard Density | IP67† | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Series 2 | High Density | 8-63 | | ✓ | | | | | | | | | |
| Series 3 | Power Density | 3-7 | | | | | | | | | | | ✓ |
| Series 4 | Combination Standard & Power Density | 13-22 | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | |
| Series 5 | Power Density | 3 | IP65 & IP67 | | | | | | | | | ✓ | |
| Series 6 | Combination Standard & Power Density | 10 | IP65 & IP67 | | | ✓ | ✓ | ✓ | | | ✓ | | ✓ |
| Metal-Shell CPC | | | | | | | | | | | | | |
| Series 1 | Standard Density | 5-37 | | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Series 2 | High Density | 28, 63 | | ✓ | ✓ | | | | | | | | |
| Series 3 | Power Density | 3, 7 | | ✓ | | | ✓ | | | ✓ | ✓ | ✓ | |
| Series 4 | Combination Standard & Power Density | 16, 22 | | ✓ | | | ✓ | ✓ | | ✓ | ✓ | ✓ | |
| MIL-C-5015 Style CPC | | | | | | | | | | | | | |
| – | Plastic Housing | 10, 14 | | | | | | ✓†† | | | | | |

*Has wire entry seals and peripheral interface seals. **Has peripheral interface seal only that provides splash-proof sealing between mating halves. †Series 1 Connectors are also available unsealed. ††High Current enhanced version is not compatible with MIL-C-5015 Style CPC

CPC Connector Contacts

| Type | Current Rating (A) | Wire (AWG) | Size/Type | Description |
|---------------------------------|--------------------|------------|----------------------|--|
| 20 DF | 7.5 | 28-20 | Size 20 (.040" Dia.) | Stamped & Formed, Crimp Snap-in |
| 20 DM | 7.5 | 24-20 | Size 20 (.040" Dia.) | Screw Machined, Crimp Snap-in |
| Type I | 23 | 18-12 | Size 12 (.094" Dia.) | Screw Machined, Crimp Snap-in |
| Type II | 13 | 28-14 | Size 16 (.062" Dia.) | "Multimate", Screw Machined, Crimp Snap-in |
| Type III+ | 13 | 30-14 | Size 16 (.062" Dia.) | "Multimate", Stamped & Formed, Crimp Snap-in |
| Type III+ High Current Enhanced | * | 30-14 | Size 16 (.062" Dia.) | "Multimate", Stamped & Formed, Crimp Snap-in |
| Type III+ Posted | 13 | n/a | Size 16 (.062" Dia.) | "Multimate", Stamped & Formed, For PCB, Wire-Wrap or TERMI-POINT Clips |
| Subminiature Coax | 1 | Coax | Size 16 (.062" Dia.) | Stamped & Formed, Crimp Snap-in, For Coaxial Cable |
| High Current Power | 23 | 18-14 | Size 16 (.062" Dia.) | "Louvertac", Screw Machined, Crimp Snap-in |
| Type XII | 35 | 16-10 | Box Design | Stamped & Formed, Crimp Snap-in |
| POWERBAND | 50 | 14-10 | .125" Dia. | Stamped & Formed, Crimp Snap-in |

*Contact Tyco Electronics for current rating information.

Reference: Catalog 82021