Electronics

## Power Contacts

## Type I, Crimp, Snap-In



Socket

## Material

Contact Body-Bronze
Retention Spring-Beryllium copper

## Finish

Contact Body—. 000030 [0.00076] gold over . 000050 [0.00127] nickel.
Gold thickness controlled on socket O.D
Retention Spring-Nickel plated

## Related Product Data

Application Tooling—Pages 29, 30 Technical Documents
108-10108 Product Specification 114-10037 Application Specification


Size 12—Pin Diameter . 094 [2.39] (Test Current, 23 Ampere) $\ddagger$

| Wire Size Range |  | Loose Piece Contact No. |  | Tooling Part No. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Dies for | Hand |
| AWG | [ $\mathrm{mm}^{2}$ ] |  |  | Pin | Socket | Pneumatic Tool $^{\star}$ | Tool |
| 18-16 | 0.8-1.4 | 202421-1 | 202418-1 | 90122 | 90121 |
| 14-12 | 2-3 | 202422-1 | 202417-1 | 90122 | 90121 |

* Use hand actuated Power Unit Part No. 189721-2 or foot actuated Power Unit Part No. 189722-2. Both units require "C" Head Die Set Adapter Part No. 318161-1 and an Adapter Holder Part No. 356304-1 (with ratchet) or Part No. 189928-1 (without ratchet). Request Catalog 124208 for more information on the 626 Pneumatic Tool System.
$\ddagger$ Single contact, free-air test current; not to be construed as contact rating current. Use only for testing. Refer to contact current carrying capability information, page 3.
Extraction Tool Part No. 305183-8 (Instruction Sheet 408-1216)
Note: All part numbers are RoHS compliant.

Central America: 52-55-5-729-0425
South America: 55-11-3611-1514 www.tycoelectronics.com

## Power Contacts—High Current Upgrade (Continued)

Type II and Type III+, Size 16

The features of the High Current Size 16 contact have been designed to fit into the existing AMP Multimate Connectors such as CPC (Circular Plastic Connector), CMC (Circular Metal Connector), G Series, M Series, Econoseal Metrimate Square Grid and Drawer Connector housings. An initial T-Rise test in free air has shown a 23 amp capability with a $30^{\circ} \mathrm{C}$ T-Rise. The contact may be crimped onto 14 AWG wire with a Tyco Electronics hand tool P/N 601967-1. Use turret TH502 (1-601967-6) for the pin and turret TH501 (1-601967-5) for the socket.

## Material

Pin Body — Leaded Brass;
Copper Alloy (Board Mount)
Socket Body - Copper Alloy
Louvertac Band -Beryllium Copper
Retention Spring - Stainless Steel
Finish
Body - Silver
Louvertac Band - Gold


Extraction Tool Part No. 305183


4 Pos. CPC Posted Square Flange Receptacle
Part No. 796764-1
Mates with CPC Plug (Part No. 206060-1) with either
Type II or High Current Socket contact

Current-Carrying Capacity. The graph shows current-carrying capacity versus temperature rise for a fully energized 6 position Metrimate Square Grid plug P/N 207152-1 and receptacle P/N 207153-1. These initial representative amperage ratings were conducted with 14 AWG wires that were 2 feet long.

- Recognized under th Component Program of Underwriters
Laboratories Inc., File No. E28476

Current Rating for $30^{\circ} \mathrm{C}$ Temperature Rise 100\% Energized

6 Circuit Metrimate Connector (Wire-to-Wire)

TEMPERATURE RISE VS. CURRENT


CURRENT (AMPS) CRIMPED CONTACTS


Plug (for Sockets)

HITH



Receptacle (for Pins)


Notes: 1. High Current contacts with Louvertac bands are NOT intermateable with any other contact.
2. Additional information on CPC and CMC connectors is available in Catalog 82021.
3. Additional information on G Series connectors is available in Catalog 82046.
4. Additional information on M Series connectors is available in Catalog 82003.
5. Additional information on Metrimate connectors is available in Catalog 82045.
6. Additional information on Econoseal connectors is available in Catalog 82057.
7. Additional information on LGH connectors is available in Catalog 82024. Electronics

## Power Contacts (Continued)

## .125 POWERBAND Contacts

Pin Diameter-. 125 [3.175]
Test Current-50 Amperes $\ddagger$
Material and Finish
Contact - Copper
Spring - Beryllium copper
Plating Code
A. 0.00508 [.000200] min. silver on contact area, 0.00127 [.000050] min. on remainder, all over 0.00127 [.000050]
min. nickel underplate
B. 0.00076 [.000030] min. gold on contact area, gold flash on remainder, all over 0.00127 [.000050] min. nickel underplate

## Related Product Data

Application Tooling-Pages 29, 30 Technical Document-Page 4

. 125 POWERBAND Pin Contact

. 125 POWERBAND Socket Contact

## Extraction Tool

Part No. 318813-1
(Instruction Sheet 408-4374)

| $\begin{gathered} \text { Wire Size } \\ \hline \text { AWG/mm²} \end{gathered}$ | Contact Finish | Pin Length | Contact Part No. |  |  |  | Tooling Part No.** |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Strip |  | Loose Piece |  | Heavy Duty Miniature (HDM) Applicators (for AMP-O-LECTRIC Model G Machine, Base Part No. 354500) | Die Sets for Hand Tool 69710-1 or 626 Pneumatic Tool System* |
|  |  |  | Pin | Socket | Pin | Socket |  |  |
| $\begin{gathered} 14-12 \\ 2-3 \end{gathered}$ | A | Standard | 213845-1 | 213847-1 | 213845-3 | 213847-3 | 680195-3 | 356612-1 |
|  | B | Standard | 213845-2 | 213847-2 | 213845-4 | 213847-4 |  |  |
|  | A | Extended ${ }^{1}$ | 213845-5 | - | 213845-7 | - |  |  |
|  | B | Extended ${ }^{1}$ | 213845-6 | - | 213845-8 | - |  |  |
| $\begin{gathered} 10-8 \\ 5-8 \end{gathered}$ | A | Standard | 213841-1 | 213843-1 | 213841-3 | 213843-3 | 680197-3 | 356611-1 (8 AWG) |
|  | B | Standard | 213841-2 | 213843-2 | 213841-4 | 213843-4 |  |  |
|  | A | Extended ${ }^{1}$ | 213841-5 | - | 213841-7 | - |  | 356611-2 (10 AWG) |
|  | B | Extended ${ }^{1}$ | 213841-6 | - | 213841-8 | - |  |  |

${ }^{1}$ For use in Metrimate Drawer Connectors listed in chart below and Two-Piece Sealed Circular Plastic Connectors (CPC), Series 5 and 6.
$\ddagger$ Single contact, free-air test current; not to be construed as contact rating current. Use only for testing.
Refer to contact current carrying capability information, page 3.
Note: Standard Size 8, High Current Size 8 upgrade, and . 125 POWERBAND contacts are not intermateable.
*A typical 626 Pneumatic Tool System requires: a power unit (Part No. 189721-2, hand actuated or 189722-2, foot actuated), an adapter
holder (Part No. 356304-1, with ratchet), and "C" Head adapter Part No. 318161-1.
**There are power options available for these tools/dies. See Battery Powered Crimp tool Kit and SDE Electric Terminator on page 30.
Note: All part numbers are RoHS compliant.

## .125 POWERBAND Metrimate Drawer Connectors

| No. of <br> Pos. | Housing Part No. |  |
| :---: | :---: | :---: |
|  | Plug | Receptacle |
| 8 | $213886-1^{* *}$ | $213500-3^{* *}$ |

Color: blue
**For use with . 125 POWERBAND contacts (Extended Pin Length), listed above.
Note: All part numbers are RoHS compliant.

Electronics

## Power Contacts (Continued)

Standard, Size 8, 4/8 Indent Crimp


Pin


Socket


Socket
Note: Standard Size 8, High Current Upgrade Size 8 and . 125 POWERBAND contacts are not intermateable.

## Material

Contact Body-Copper alloy
Retention Clip-Phosphor bronze
Finish
Contact Body—. 000050 [0.00127] gold over . 000050 [0.00127] nickel
Retention Spring-Nickel plated
Related Product Data
Technical Documents
108-10045 Product Specification 114-10014 Application Specification

Power Contacts, Standard, Size 8 (Test Current 50 Amperes) $\ddagger$

| Wire Range |  | Contacts |  | Crimping Tools |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| AWG | [ $\mathrm{mm}^{2}$ ] | Pin | Socket | Tool No. | Positioner |
| 18-16 | 0.8-1.4 | 213567-1 | 212014-1 | 608668-1 | (P) SP867 <br> (S) 608668-2 |
| 14-12 | 2-3 | 213662-1 | 212008-1 | 608651-1 | $\begin{aligned} & \text { (P) SP867 } \\ & \text { (S) } 608651-2 \\ & \hline \end{aligned}$ |
| 10 | 5 | 213740-1 | 213737-1 | 608651-1 | (P) 608651-3 (S) 608651-2 |
| 8 | 8 | 213552-2 | 213750-1 | 608651-1 | (P) 608651-3 <br> (S) 608651-2 |

$\ddagger$ Single contact, free-air test current; not to be construed as contact rating current. Use only for testing. Refer to contact current carrying capability information, page 3.
Note: All part numbers are RoHS compliant.

Central America: 52-55-5-729-0425
South America: 55-11-3611-1514 www.tycoelectronics.com

## Power Contacts—High Current Upgrade (Continued)

## Metrimate Drawer Connector, Size 8

The Louvertac bands have the versatility of being designed into contact dimensions used in existing Tyco Electronics connectors.
Metrimate High Current contacts have been designed to fit into the existing Drawer Connector housings. A fully energized 8 position connector with 8 gage wires can handle 30 amps per line with a $30^{\circ} \mathrm{C}$-rise on either the cable-to-cable or cable-to-board.

## Cable-to-Cable

Material
Contact Body - Copper Alloys
Louvertac Band - Beryllium Copper
Retention Spring - Stainless Steel
Finish - Gold

## Product Specification

108-1449 Metrimate Pin and Socket with Louvertac High Current Contact

## Connector Voltage Rating -

 600 VAC```
- Recognized under the
    Component Program of
    Underwriters 
    Laboratories Inc.,
    File No. E28476
■ Certified by Canadian
    Standards
    Association,
    File No. LR7189A
```

Cable-to-Board
Material
Contact Body - Copper Alloys
Louvertac Band-Beryllium Copper
Retention Spring - Stainless Steel
Finish - Gold

A typical application would have solder tail pins mounted into the receptacle and crimp sockets mounted into the plug.

```
■ Recognized under the Component Program of Underwriters -
    Laboratories Inc.,
    File No. E28476
■ Certified by Canadian
    Standards
    Association,
    File No. LR7189A
```



High Current Contacts

| Wire Size <br> AWG | Contact Part Numbers <br> Pin |  | Seeket- |
| :---: | :---: | :---: | :---: |

Extraction Tool Part No. 318813-1 or 305183-6
†Daniels Manufacturing Corp., Orlando, FL
Note: All part numbers are RoHS compliant.


Drawer Connector Housings

| Size | Housing Part Numbers |  |
| :---: | :---: | :---: |
| Configuration | Plug | Receptacle |
| 8 Positions <br> (8 Size 8 Cavities) | $213499-1$ | $213500-1$ |
| 15 Positions <br> (3 Size 8 Cavities \& 12 Size 16 Cavities) | $213426-1$ | $213427-1$ |

Extraction Tool Part No. 318813-1
Note: All part numbers are RoHS compliant.
Notes: 1. High Current contacts with Louvertac bands are NOT intermateable with any other contact.
2. Additional information on connectors is available in Catalog 82045.

Dimensions are shown for reference purposes only. Specifications subject to change.

## Power Contacts (Continued)

Type XII, Precision Formed, Crimp, Snap-In

## Material

Copper

## Finish

A-Tin-lead
B-. 000030 [0.00076] selective gold over .000030 [ 0.00076 ] nickel C-. 000100 [0.00254] silver plated contacts with lubricant added

## Test Current Rating

Silver or Gold- $\mathbf{3 5}$ amperes $\ddagger$
Tin Lead-15 amperes $\ddagger$
$\ddagger$ Single contact, free-air test current; not to be construed as contact rating current. Use only for testing. Refer to contact current carrying capability information, page 3.

Related Product Data
Application Tooling-Pages 29, 30 Technical Documents-Page 4


Extraction Tool Part No. 91019-3


Male


Male



Female


Female

| Wire Size Range ${ }^{1}$ |  | Ins. Dia. Range | Contact Finish | Strip Form Contact Part Nos. |  |  |  | Loose PieceContactPart Nos. |  | Tooling** |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Standard*** |  | Heavy Duty Miniature*** |  | Heavy Duty Miniature Applicator | Die Set for <br> Hand Tool 69710-1 or 626 Pneumatic Tool System |  |  |
| AWG | mm ${ }^{2}$ |  |  | Male | Female |  |  | Male | Female | Male | Female |
| $\begin{gathered} 16 \\ \text { and } \\ 14-12 \end{gathered}$ | $\begin{gathered} \text { 1.25-1.4 } \\ \text { and } \\ 2-3 \end{gathered}$ |  | $\begin{aligned} & .135-.160 \\ & 3.43-4.06 \end{aligned}$ | A | 66255-1 | 66740-7 | 66255-5 | 1-66740-2 | 66261-1 | 66740-8 | 567455- $\square^{* * *}$ | $\begin{gathered} 90145-2^{3,7} \\ \text { and } \\ 90145-1^{4,7} \end{gathered}$ |
|  |  | 66256-1² |  |  | - | 66256-5 | - | 66262-1² | - |  |  |
|  |  | B |  | 66255-2 | 66740-5 | 66255-6 | 1-66740-1 | 66261-2 | 66740-6 |  |  |
|  |  |  |  | 66256-2 | - | 66256-4 | - | 66262-2 | - |  |  |
|  |  | $\mathrm{C}^{5}$ |  | 66255-7 | 66740-1 | 66255-8 | 66740-9 | 66261-4* | 66740-2 |  |  |
|  |  |  |  | 66256-6 | - | 66256-72 | - | 66262-4² | - |  |  |
| 10 | 5-6 | $\begin{aligned} & .190-.220 \\ & 4.83-5.59 \end{aligned}$ | A | 66253-1 | 66741-7 | 66253-5 | 1-66741-2 | 66259-1 | 66741-8* | 567021- $\square^{* * *}$ | 90140-1 ${ }^{\text {² }}$ |  |
|  |  |  |  | 66254-12 | - | - | - | 66260-12 | - |  |  |  |
|  |  |  | B | 66253-2 | 66741-5 | 66253-6 | 1-66741-1 | 66259-2 | 66741-6 |  |  |  |
|  |  |  |  | 66254-2 ${ }^{\text {a }}$ | - | 66254-5 | - | 66260-2 | - |  |  |  |
|  |  |  | $\mathrm{C}^{5}$ | 66253-4 | 66741-1 | 66253-8 | 66741-9 | 66259-4 | 66741-2 |  |  |  |
|  |  |  |  | 66254-42 | - | - | - | 66260-4² | - |  |  |  |

${ }^{1}$ Wire strip length—. 281 [7.14].
${ }^{2}$ Ground contact.
${ }^{3}$ Die insert Part No. 90145-2 is for crimping 16 AWG [1.25-1.4 mm²] wire.
${ }^{4}$ Die insert Part No. 90145-1 is for crimping 14-12 AWG [2-3 mm²] wire.
${ }^{5}$ Recommended for high current/vibration applications where fretting corrosion is a problem.
${ }^{7}$ Die Set requires "C" Head Adapter Part No. 318161-1; Adapter Holder Part No. 356304-1 (with ratchet) or 189928-1 (without); and Power Unit
Part No. 189721-2 (hand actuated) or 189722-2 (foot actuated).
Extraction Tool Part No. 91019-3
**There are power options available for these tools/dies. See Battery Powered Crimp tool Kit and SDE Electric Terminator on page 30.
***Call Technical Support at 1-800-522-6752 for Automatic Machine Applicator Part Numbers.
Note: All part numbers are RoHS compliant except: Indicates non-RoHS compliant.

Central America: 52-55-5-729-0425
South America: 55-11-3611-1514 www.tycoelectronics.com

## Power Contacts—High Current Upgrade (Continued)

## Type XII, Screw Machined

The features of the High Current Type XII contact have been designed to fit into the existing AMP Multimate Connectors such as CPC (Circular Plastic Connector), CMC (Circular Metal Connector), G Series, and M Series housings. An initial T-Rise test in free air has shown a 60 amp capability with a $30^{\circ} \mathrm{C}$ T-Rise with 8 gage wires. The contact may be crimped onto 8 AWG wire with a Daniels Hand Tool M310 or AMP P/N 356114-1 and Positioner TP1068S or AMP P/N 356119-1.

## Cable-to-Cable

## Material

Body - Copper Alloy Louvertac Band - Beryllium Copper
Retention Spring - Stainless Steel
Finish
Body — Silver
Louvertac Band - Gold


Extraction Tool Part No. 224155-1

Current-Carrying Capacity. The graph shows current-carrying capacity versus temperature rise for a fully energized 3 position CPC plug P/N 206037-2 and receptacle P/N 206036-2. These initial representative amperage ratings were conducted with 8 AWG wires that were 3 feet long.

- Recognized under the Component Program of Underwriters
Laboratories Inc., Laboratories Inc., File No. E28476

* Not recommended for CPC connectors.

Current Rating for $30^{\circ} \mathrm{C}$ Temperature Rise 100\% Energized
3 Circuit Connector (Wire-to-Wire)
TEMPERATURE RISE VS CURRENT



Plug
(For Sockets)


Square Flange Receptacle
(For Pins)

Notes: 1. High Current contacts with Louvertac bands are NOT intermateable with any other contact.
2. Additional information on CPC and CMC connectors is available in Catalog 82021.
3. Additional information on G Series connectors is available in Catalog 82046.
4. Additional information on M Series connectors is available in Catalog 82003.
5. Additional information on LGH connectors is available in Catalog 82024.

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

## Mouser Electronics

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TE Connectivity: 213845-3

