



## Terminal Junction Systems MIL-PRF-81714 Series I

### MIL-PRF81714 Series I Junction Modules

QPL approved modules (MIL-PRF-81714 and MIL-C-39029/1 contacts) are available in four standard sizes accommodating 12-26 AWG wire in both feed-back and feed-thru types with a full selection of bussing arrangements. The complete MIL-PRF-81714 Series I terminal junction system includes the following elements.

- Feedback Modules
- Feedthru Modules
- Ground Modules
- Electronic Modules
- Single In-Line Splices
- Dual In-Line Splices
- Electronic Splices
- Mounting Tracks
- Mil-C-39029/1 Contacts

### Module Design and Construction

The patented PCD terminal junction module design assures maximum efficiency and reliability. Key features and benefits include:

#### ▪ Integral Socket/Bus Bar

The Patented integral socket/bus bar assembly provides superior electrical characteristics and assures mechanical integrity over a long product life. This unique design totally eliminates all solder of welded joints, which could cause variations in electrical and/or mechanical performance.

#### ▪ Integral Contacts

Integral female contacts and bus bar have no mechanical functions – only the electrical conductivity function -

and are a highly conductive alloy for optimum electrical performance. Separate and independent BeCu pressure springs designated for maximum mechanical performance, provide consistent contact pressure.

#### ▪ Split Socket Design

Split socket design, conforming to the mating pin diameter, provides peripheral surface wipe and contact, while utilizing the maximum mating surfaces of pin and socket.

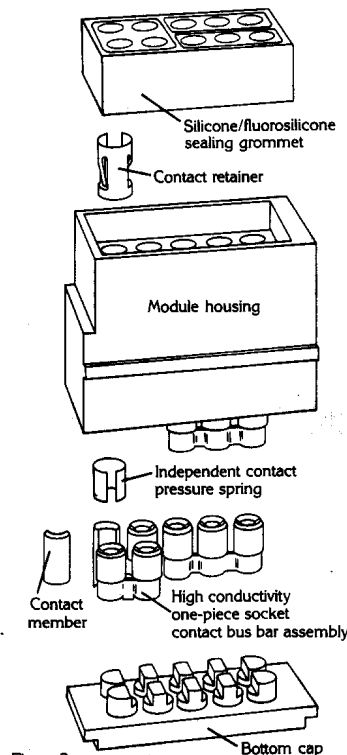
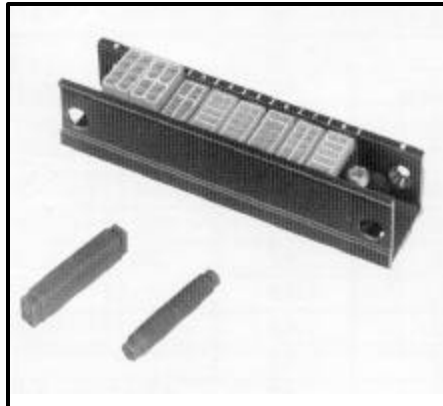


Figure 2.

### High Density Modules

A recently introduced series of high density modules which conform to all dimensional and performance requirements of MIL-PRF-81714/17 is now available from PCD and indicated on page 45.

The high density modules accept 21 size 22 contacts in a compact 3 X 7 configuration, with a wide variety of bus arrangements. The construction features one-piece screw machine contacts with a split socket design for a maximum performance. Contacts are securely packaged within a polyetherimide housing.

### Switch Connectors

MIL-PRF-81714 and related technology have been utilized to develop a broad and growing family of specialty connectors and pluggable switches, remote control circuit breakers (RCCB), and other applications where reliable plug-in or removal capability is required for a system component. Wire termination capabilities include crimp contacts and solder tabs. Product includes both standard and engineered connectors. Contact PCD for details.

### Class D Module System

PCD was the first supplier to qualify module and track systems to the high performance MIL-PRF-81714 Series I Class D requirements. Class D systems combine the maximum high temperature and high fluid resistance performance parameters previously divided among three module classes – A, B and C – and also meet random vibration standards. Class D modules replace obsolete Classes A, B and C.

# Military Qualified, QPL-Listed Terminal Junctions

## Mil-T-81714



| Military Number | PCD Number | Military Number | PCD Number | Military Number | PCD Number |
|-----------------|------------|-----------------|------------|-----------------|------------|
| M81714/1-DA1    | TJM122701  | M81714/6-DB1    | TJM222702  | M81714/16-2     | TJT703003  |
| M81714/1-DB1    | TJM122702  | M81714/6-DB2    | TJM222703  | M81714/16-3     | TJT703004  |
| M81714/1-DB2    | TJM120703  | M81714/6-DB3    | TJM222704  | M81714/16-4     | TJT703005  |
| M81714/1-DB3    | TJM120704  | M81714/6-DC1    | TJM222705  | M81714/16-5     | TJT703006  |
| M81714/1-DC1    | TJM120705  | M81714/6-DC2    | TJM222706  | M81714/16-6     | TJT703007  |
| M81714/1-DC2    | TJM122706  | M81714/6-DD1    | TJM222707  | M81714/16-7     | TJT703008  |
| M81714/1-DC3    | TJM122710  | M81714/6-DE1    | TJM222708  | M81714/16-8     | TJT703009  |
| M81714/1-DC4    | TJM122712  | M81714/6-DJ1    | TJM222709  | M81714/16-9     | TJT703011  |
| M81714/1-DD1    | TJM122707  | M81714/7-DA1    | TJM220701  | M81714/16-10    | TJT703012  |
| M81714/1-DD2    | TJM122711  | M81714/7-DB1    | TJM220702  | M81714/16-11    | TJT703013  |
| M81714/1-DE1    | TJM122708  | M81714/7-DB2    | TJM220703  | M81714/16-12    | TJT703014  |
| M81714/2-DA1    | TJM120701  | M81714/7-DB3    | TJM220704  | M81714/16-13    | TJT703015  |
| M81714/2-DB1    | TJM120702  | M81714/7-DC1    | TJM220705  | M81714/17-D30   | TJHD22700  |
| M81714/2-DB2    | TJM120703  | M81714/7-DC2    | TJM220706  | M81714/17-D31   | TJHD22701  |
| M81714/2-DB3    | TJM120704  | M81714/7-DD1    | TJM220707  | M81714/17-D32   | TJHD22702  |
| M81714/2-DC1    | TJM120705  | M81714/7-DE1    | TJM220708  | M81714/17-D33   | TJHD22703  |
| M81714/2-DC2    | TJM120706  | M81714/7-DJ1    | TJM220709  | M81714/17-D34   | TJHD22704  |
| M81714/2-DC3    | TJM120710  | M81714/8-DA1    | TJM216701  | M81714/17-D35   | TJHD22705  |
| M81714/2-DC4    | TJM120712  | M81714/8-DB1    | TJM216702  | M81714/17-D36   | TJHD22706  |
| M81714/2-DD1    | TJM120707  | M81714/8-DB2    | TJM216703  | M81714/17-D37   | TJHD22707  |
| M81714/2-DD2    | TJM120711  | M81714/8-DC1    | TJM216705  | M81714/17-D38   | TJHD22708  |
| M81714/2-DE1    | TJM120708  | M81714/8-DC2    | TJM216706  | M81714/17-D39   | TJHD22709  |
| M81714/3-DA1    | TJM116701  | M81714/8-DD1    | TJM216707  | M81714/17-D40   | TJHD22710  |
| M81714/3-DB1    | TJM116702  | M81714/8-DG1    | TJM216708  | M81714/17-D42   | TJHD22712  |
| M81714/3-DB2    | TJM116703  | M81714/8-DH1    | TJM216709  | M81714/17-D43   | TJHD22713  |
| M81714/3-DC1    | TJM116705  | M81714/10-1     | TJT702002  | M81714/17-D44   | TJHD22714  |
| M81714/3-DC2    | TJM116706  | M81714/10-2     | TJT702003  | M81714/17-D45   | TJHD22715  |
| M81714/3-DD1    | TJM116707  | M81714/10-3     | TJT702004  | M81714/60-12-01 | SJM012100  |
| M81714/5-1      | TJT701010  | M81714/10-4     | TJT702005  | M81714/60-12-02 | SJM012200  |
| M81714/5-2      | TJT701003  | M81714/10-5     | TJT702006  | M81714/60-12-03 | SJM012300  |
| M81714/5-3      | TJT701004  | M81714/10-6     | TJT702007  | M81714/60-16-01 | SJM016100  |
| M81714/5-4      | TJT701005  | M81714/10-7     | TJT702008  | M81714/60-16-02 | SJM016200  |
| M81714/5-5      | TJT701006  | M81714/10-8     | TJT702009  | M81714/60-16-03 | SJM016300  |
| M81714/5-6      | TJT701007  | M81714/11-20D   | TJS320700  | M81714/60-20-01 | SJM020100  |
| M81714/5-7      | TJT701008  | M81714/11-22D   | TJS322700  | M81714/60-20-02 | SJM020200  |
| M81714/5-8      | TJT701009  | M81714/12-20D-1 | TJS320701  | M81714/60-20-03 | SJM020300  |
| M81714/5-9      | TJT701011  | M81714/12-20D-2 | TJS320702  | M81714/60-20-04 | SJM020400  |
| M81714/5-10     | TJT701012  | M81714/12-22D-1 | TJS322701  | M81714/60-20-06 | SJM020600  |
| M81714/5-11     | TJT701013  | M81714/12-22D-2 | TJS322702  | M81714/60-22-01 | SJM022100  |
| M81714/5-12     | TJT701014  | M81714/12-16D-1 | TJS316701  | M81714/60-22-02 | SJM022200  |
| M81714/5-13     | TJT701015  | M81714/12-16D-2 | TJS316702  | M81714/60-22-04 | SJM022400  |
| M81714/6-DA1    | TJM222701  | M81714/16-1     | TJT703010  | M81714/60-22-05 | SJM022500  |

**Flame Enterprises is the Leader in Relay Socket Distribution**  
**Put our Incredible Inventory of PCD Sockets to Work for You**

## *Military Qualified, QPL-Listed Terminal Junctions (cont.)*

| Military Number | PCD Number | Military Number | PCD Number | Military Number | PCD Number |
|-----------------|------------|-----------------|------------|-----------------|------------|
| M81714/60-22-06 | SJM022600  | M81714/67-02    | SJT502404  | M81714/67-16    | SJT516404  |
| M81714/60-22-10 | SJM022700  | M81714/67-03    | SJT503404  | M81714/67-18    | SJT518404  |
| M81714/61-0Z    | SJM000100  | M81714/67-04    | SJT504404  | M81714/67-19    | SJT519404  |
| M81714/61-0Y    | SJM000800  | M81714/67-05    | SJT505404  | M81714/67-20    | SJT520404  |
| M81714/61-0X    | SJM000200  | M81714/67-06    | SJT506404  | M81714/67-21    | SJT521404  |
| M81714/61-0W    | SJM000500  | M81714/67-07    | SJT507404  | M81714/67-25    | SJT525404  |
| M81714/63-12F   | SJG012270  | M81714/67-08    | SJT508404  | M81714/67-30    | SJT530404  |
| M81714/63-16F   | SJG016270  | M81714/67-09    | SJT509404  | M81714/67-32    | SJT532404  |
| M81714/63-16S   | SJG016170  | M81714/67-10    | SJT510404  | M81714/67-40    | SJT540404  |
| M81714/63-20F   | SJG020270  | M81714/67-12    | SJT512404  | M81714/69-01    | CNA051300  |
| M81714/63-20S   | SJG020170  | M81714/67-13    | SJT513404  | M81714/69-02    | CNA052300  |
| M81714/63-22F   | SJG022270  | M81714/67-14    | SJT514404  |                 |            |
| M81714/63-22S   | SJG022170  | M81714/67-15    | SJT515404  |                 |            |

**Flame Enterprises is the Leader in Relay Socket Distribution  
Put our Incredible Inventory of PCD Sockets to Work for You**



#### Materials:

**Module Body:** Polyetherimide per MIL-P-46184

**Grommet:** Silicone blend elastomer

**Contact Retainers:** Beryllium copper

**Internal Socket Contacts:** Copper alloy, gold plated in accordance with MIL-G-45204

#### Operating Range:

**Temperature:** -65°C to 200°C

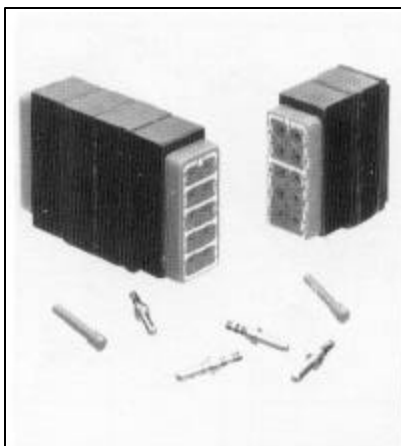
**Insulation Resistance:** 5000 megohms @ 25°C

#### Dielectric Withstanding

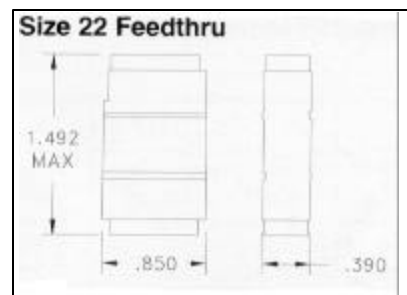
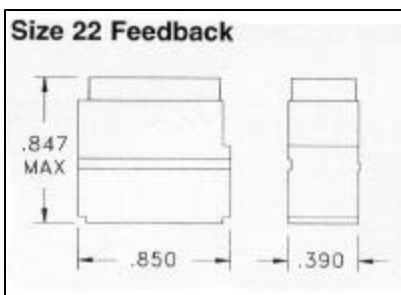
**Voltage:** 1500 VRMS at sea level and 200 VRMS at 100,000 ft.

**Current Rating:** 5 Amps

**Vibration and Shock:** MIL-T-81714 Paragraph 3.5.5 and 3.5.8



- High Reliability
- High Temperature
- High Fluid Resistance
- Feedback and Feedthru
- Accepts 16, 18, 20 AWG



| Bussing Configuration | Feedback     |           | Feedthru     |           | Contact |        |            |
|-----------------------|--------------|-----------|--------------|-----------|---------|--------|------------|
|                       | Military P/N | PCD P/N   | Military P/N | PCD P/N   | Qty*    | Size** | P/N M39029 |
|                       | M81714/1-DA1 | TJM122701 | M81714/6-DA1 | TJM222701 | 10      | 16/22  | /1-100     |
|                       | M81714/1-DB1 | TJM122702 | M81714/6-DB1 | TJM222702 | 10      | 16/22  | /1-100     |
|                       | M81714/1-DB2 | TJM122703 | M81714/6-DB2 | TJM222703 | 10      | 16/22  | /1-100     |
|                       | M81714/1-DB3 | TJM122704 | M81714/6-DB3 | TJM222704 | 10      | 16/22  | /1-100     |
|                       | M81714/1-DC1 | TJM122705 | M81714/6-DC1 | TJM222705 | 10      | 16/22  | /1-100     |
|                       | M81714/1-DC2 | TJM122706 | M81714/6-DC2 | TJM222706 | 10      | 16/22  | /1-100     |
|                       | M81714/1-DC3 | TJM122710 |              |           | 10      | 16/22  | /1-100     |
|                       | M81714/1-DC4 | TJM122712 |              |           | 10      | 16/22  | /1-100     |
|                       | M81714/1-DD1 | TJM122707 | M81714/6-DD1 | TJM222707 | 10      | 16/22  | /1-100     |
|                       | M81714/1-DD2 | TJM122711 |              |           | 10      | 16/22  | /1-100     |
|                       | M81714/1-DE1 | TJM122708 | M81714/6-DE1 | TJM222708 | 10      | 16/22  | /1-100     |
|                       |              |           | M81714/6-DJ1 | TJM222709 | 10      | 16/22  | /1-100     |

\*Contact quantity for feedthru is double feedback. Quantity figure denotes number of contacts accommodated by module. Modules are supplied with one additional spare contact and sealing plug.

\*\*Mating Pin/Wire Barrel



# Terminal Junction Modules

Class D

## M81714/2, /7 Series I

Size 20

### Materials:

**Module Body:** Polyetherimide per MIL-P-46184

**Grommet:** Silicone blend elastomer

**Contact Retainers:** Beryllium copper

**Internal Socket Contacts:** Copper alloy, gold plated in accordance with MIL-G-45204

### Operating Range:

**Temperature:** -65°C to 200°C

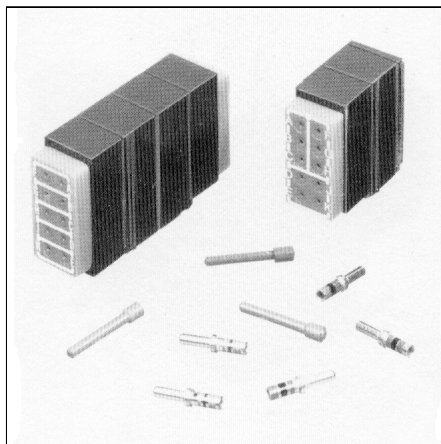
**Insulation Resistance:** 5000 megohms @ 25°C

### Dielectric Withstanding

**Voltage:** 1500 VRMS at sea level and 200 VRMS at 100,000 ft.

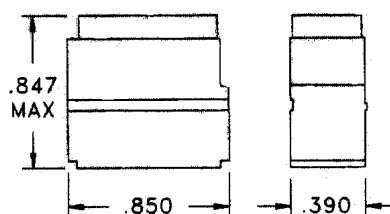
**Current Rating:** 7.5 Amps

**Vibration and Shock:** MIL-T-81714 Paragraph 3.5.5 and 3.5.8

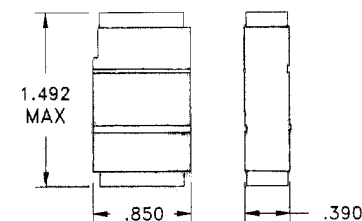


- High Reliability
- High Temperature
- High Fluid Resistance
- Feedback and Feedthru
- Accepts 20, 22, 24 AWG

Size 20 Feedback



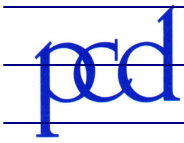
Size 20 Feedthru



| Bussing Configuration | Feedback     |           | Feedthru     |           | Contact |        |            |
|-----------------------|--------------|-----------|--------------|-----------|---------|--------|------------|
|                       | Military P/N | PCD P/N   | Military P/N | PCD P/N   | Qty*    | Size** | P/N M39029 |
|                       | M81714/2-DA1 | TJM120701 | M81714/7-DA1 | TJM220701 | 10      | 16/20  | /1-101     |
|                       | M81714/2-DB1 | TJM120702 | M81714/7-DB1 | TJM220702 | 10      | 16/20  | /1-101     |
|                       | M81714/2-DB2 | TJM120703 | M81714/7-DB2 | TJM220703 | 10      | 16/20  | /1-101     |
|                       | M81714/2-DB3 | TJM120704 | M81714/7-DB3 | TJM220704 | 10      | 16/20  | /1-101     |
|                       | M81714/2-DC1 | TJM120705 | M81714/7-DC1 | TJM220705 | 10      | 16/20  | /1-101     |
|                       | M81714/2-DC2 | TJM120706 | M81714/7-DC2 | TJM220706 | 10      | 16/20  | /1-101     |
|                       | M81714/2-DC3 | TJM120710 |              |           | 10      | 16/20  | /1-101     |
|                       | M81714/2-DC4 | TJM120712 |              |           | 10      | 16/20  | /1-101     |
|                       | M81714/2-DD1 | TJM120707 | M81714/7-DD1 | TJM220707 | 10      | 16/20  | /1-101     |
|                       | M81714/2-DD2 | TJM120711 |              |           | 10      | 16/20  | /1-101     |
|                       | M81714/2-DE1 | TJM120708 | M81714/7-DE1 | TJM220708 | 10      | 16/20  | /1-101     |
|                       |              |           | M81714/7-DJ1 | TJM220709 | 10      | 16/20  | /1-101     |

\*Contact quantity for feedthru is double feedback. Quantity figure denotes number of contacts accommodated by module. Modules are supplied with one additional spare contact and sealing plug.

\*\*Mating Pin/Wire Barrel



#### Materials:

**Module Body:** Polyetherimide  
per MIL-P-46184

**Grommet:** Silicone blend  
elastomer

**Contact Retainers:** Beryllium  
copper

**Internal Socket Contacts:**  
Copper alloy, gold plated in  
accordance with MIL-G-45204

#### Operating Range:

**Temperature:** -65°C to 200°C

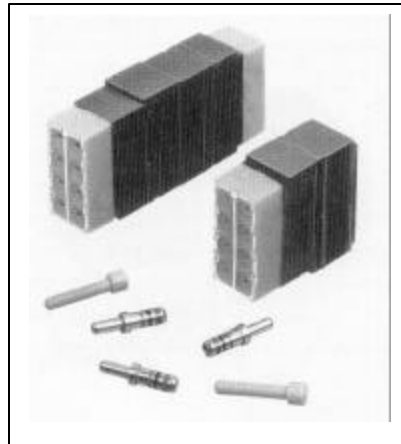
**Insulation Resistance:** 5000  
megohms @ 25°C

#### Dielectric Withstanding

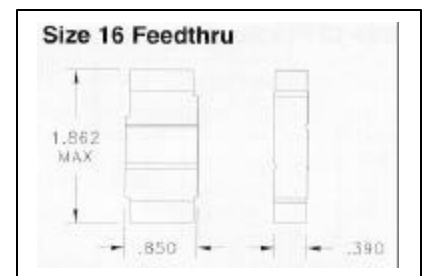
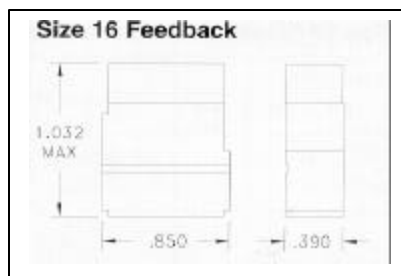
**Voltage:** 1500 VRMS at sea level  
and 200 VRMS at 100,000 ft.

**Current Rating:** 13 Amps

**Vibration and Shock:** MIL-T-  
81714 Paragraph 3.5.5 and 3.5.8



- **High Reliability**
- **High Temperature**
- **High Fluid Resistance**
- **Feedback and Feed-thru**
- **Accepts 16, 18, 20 AWG**



| Bussing Configuration | Feedback     |           | Feedthru     |           | Contact |        |            |
|-----------------------|--------------|-----------|--------------|-----------|---------|--------|------------|
|                       | Military P/N | PCD P/N   | Military P/N | PCD P/N   | Qty*    | Size** | P/N M39029 |
|                       | M81714/2-DA1 | TJM120701 | M81714/7-DA1 | TJM220701 | 10      | 16/20  | /1-102     |
|                       | M81714/2-DB1 | TJM120702 | M81714/7-DB1 | TJM220702 | 10      | 16/20  | /1-102     |
|                       | M81714/2-DB2 | TJM120703 | M81714/7-DB2 | TJM220703 | 10      | 16/20  | /1-102     |
|                       | M81714/2-DB3 | TJM120704 | M81714/7-DB3 | TJM220704 | 10      | 16/20  | /1-102     |
|                       | M81714/2-DC1 | TJM120705 | M81714/7-DC1 | TJM220705 | 10      | 16/20  | /1-102     |
|                       | M81714/2-DC2 | TJM120706 | M81714/7-DC2 | TJM220706 | 10      | 16/20  | /1-102     |
|                       | M81714/2-DC3 | TJM120710 |              |           | 10      | 16/20  | /1-102     |
|                       | M81714/2-DC4 | TJM120712 |              |           | 10      | 16/20  | /1-102     |

\*Contact quantity for feed-thru is double feedback. Quantity figure denotes number of contacts accommodated by module.  
Modules are supplied with one additional spare contact and sealing plug.

\*\*Mating Pin/Wire Barrel



# Terminal Junction Modules

## High Density M81714/17\* Series

Class D

Size 22D

### Materials:

**Module Body:** Polyetherimide  
per MIL-P-46184

**Grommet:** Silicone blend  
elastomer

**Contact Retainers:** Beryllium  
copper

**Internal Socket Contacts:**  
Copper alloy, gold plated in  
accordance with MIL-G-45204

### Operating Range:

**Temperature:** -65°C to 200°C

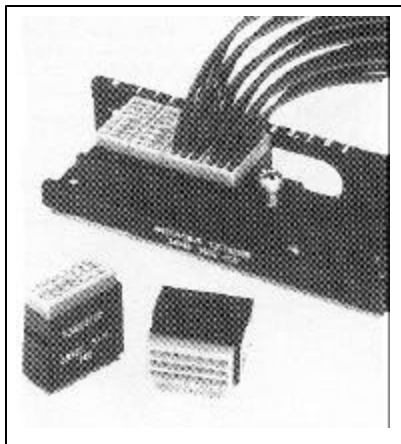
**Insulation Resistance:** 5000  
megohms @ 25°C

### Dielectric Withstanding

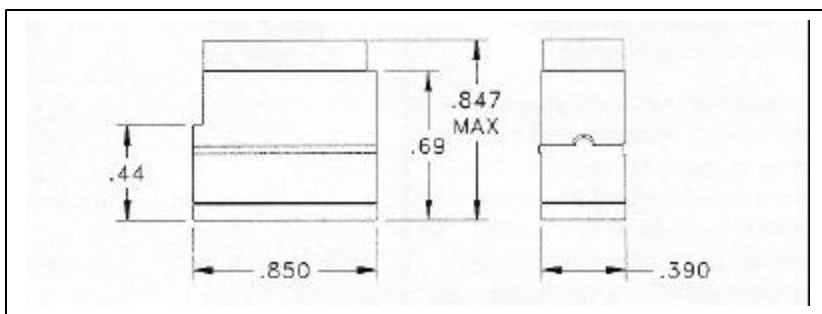
**Voltage:** 1000 VRMS at sea level  
and 200 VRMS at 110,000 ft.

**Current Rating:** 5 Amps

**Vibration and Shock:** MIL-T-  
81714 Paragraph 3.5.5 and 3.5.8



- High Density
- High Reliability
- High Temperature
- High Fluid Resistance
- Accepts 22 & 26 AWG



| Bussing Configuration | Military P/N<br>*M81714 | PCD P/N   | Bussing Configuration | Military P/N<br>*M81714 | PCD P/N   |
|-----------------------|-------------------------|-----------|-----------------------|-------------------------|-----------|
|                       | /17-D30                 | TJHD22700 |                       | /17-D38                 | TJHD22708 |
|                       | /17-D31                 | TJHD22701 |                       | /17-D39                 | TJHD22709 |
|                       | /17-D32                 | TJHD22702 |                       | /17-D40                 | TJHD22710 |
|                       | /17-D33                 | TJHD22703 |                       | /17-D42                 | TJHD22712 |
|                       | /17-D34                 | TJHD22704 |                       | /17-D43                 | TJHD22713 |
|                       | /17-D35                 | TJHD22705 |                       | /17-D44                 | TJHD22714 |
|                       | /17-D36                 | TJHD22706 |                       | /17-D45                 | TJHD22715 |
|                       | /17-D37                 | TJHD22707 |                       |                         |           |

\*Contacts supplied: M39029/1-507 Qty 22

\*QPL Pending



# Terminal Electronic Component Modules

Confirm to MIL-T-81714/26

Class D

Electronic terminal junction modules meet all dimensional and performance requirements of MIL-T-81714/26 and are specifically developed for electronic component packaging. Available for size 20 and 22 contacts, these modules function as highly efficient and reliable electronic component packages. They improve system efficiency and density by permitting various electronic components such as diodes and resistors, which usually take up valuable real estate elsewhere in the system, to be securely packaged within the module housing.

PCD electronic modules offer significant design, material and construction improvements over competitive modules. Hand soldering operations have been completely eliminated. Electronic components are encapsulated in a semi-rigid elastomer that provides electrical spacing and insulation as well as shock and vibration protection.

Typical commercially available diode configurations are indicated on this page. A broad variety of additional configurations is available, and modules can be customized to meet specific customer designs.

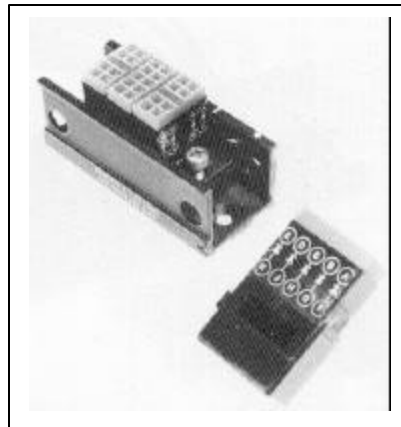
## Materials:

**Module Body:** Polyetherimide

**Grommet:** Silicone blend elastomer

**Contact Retainers:** Beryllium copper

**Internal Socket Contacts:** Copper alloy, gold plated in accordance with MIL-G-45204



- **Accepts electronic components**
- **Standard or Custom Configurations**
- **Meets MIL-T-81714**
- **Rugged Construction**

| Circuit Diagram | PCD P/N   | Diode P/N   | Qty |
|-----------------|-----------|-------------|-----|
|                 | TJE120810 | JANTXIN5552 | 5   |
|                 | TJE120811 | JANTXIN5552 | 4   |
|                 | TJE120815 | IN4005      | 2   |
|                 | TJE120998 | BYW56       | 2   |
|                 | TJE120999 | BYW56       | 2   |

## Operating Range:

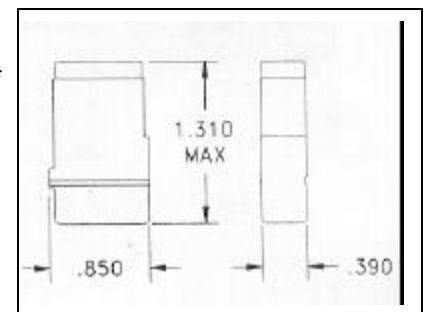
Temperature: -65° to 200°C\*

Insulation Resistance: 5000 megohms min @ 25°C\*

**Dielectric Withstanding Voltage:** 1500 VRMS at sea level and 200 VRMS at 100,000 ft. altitude\*

**Current Rating:** 7.5 amps\*

**Vibration and Shock:** Per MIL-T-81714 Paragraph 3.5.8 and 3.5.9



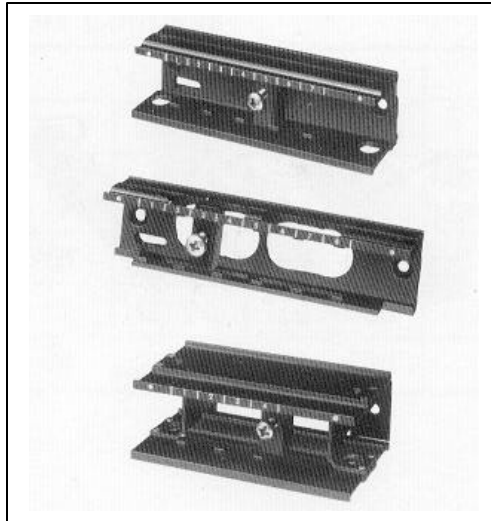


# Terminal Junction Mounting Tracks

## M81714/5, /10, /16 Series I

Class D

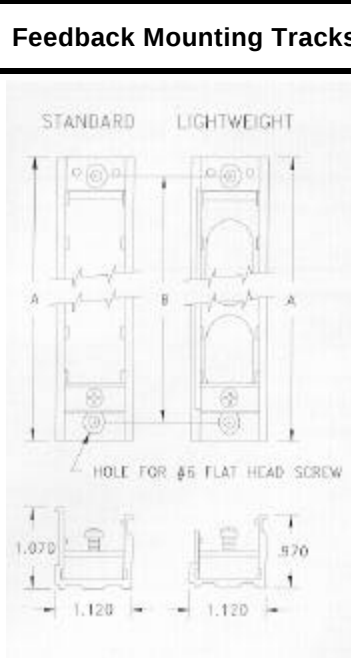
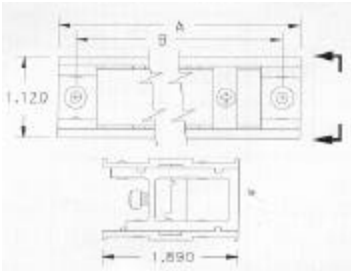
- Enhanced Class D Vibration Performance
- Standard and Lightweight
- Feedback and Feedthru



PCD offers feedback and feedthru mounting tracks, as well as a lightweight feedback type with weight reduction cut-outs per MIL-T-81714/16 for weight critical applications.

One track holds all module sizes; size 22, 20 and 16 modules require one mounting space; size 12 requires three.

Each track unit consists of an aluminum alloy track and locking clamp black anodized per MIL-A-8625. The stainless steel clamp screw is self locking to meet vibrations, shock and temperature variation requirements.

| Feedback Mounting Tracks                                                           | Standard                 |              | Lightweight  |           | Mtg. Pos* | Dimensions |            |
|------------------------------------------------------------------------------------|--------------------------|--------------|--------------|-----------|-----------|------------|------------|
|                                                                                    | Mil P/N                  | PCD P/N      | MIL P/N      | PCD P/N   |           | A          | B          |
|   | M81714/5-1               | TJT701010    | M81714/16-1  | TJT703010 | 10        | 5.29       | 4.79       |
|                                                                                    | NONE                     | TJT701002    | NONE         | TJT703002 | 2         | 2.17       | 1.67       |
|                                                                                    | M81714/5-2               | TJT701003    | M81714/16-2  | TJT703003 | 3         | 2.56       | 2.06       |
|                                                                                    | M81714/5-3               | TJT701004    | M81714/16-3  | TJT703004 | 4         | 2.95       | 2.45       |
|                                                                                    | M81714/5-4               | TJT701005    | M81714/16-4  | TJT703005 | 5         | 3.34       | 2.84       |
|                                                                                    | M81714/5-5               | TJT701006    | M81714/16-5  | TJT703006 | 6         | 3.73       | 3.23       |
|                                                                                    | M81714/5-6               | TJT701007    | M81714/16-6  | TJT703007 | 7         | 4.12       | 3.62       |
|                                                                                    | M81714/5-7               | TJT701008    | M81714/16-7  | TJT703008 | 8         | 4.51       | 4.01       |
|                                                                                    | M81714/5-8               | TJT701009    | M81714/16-8  | TJT703009 | 9         | 4.90       | 4.40       |
|                                                                                    | M81714/5-9               | TJT701011    | M81714/16-9  | TJT703011 | 11        | 5.68       | 5.18       |
|                                                                                    | M81714/5-10              | TJT701012    | M81714/16-10 | TJT703012 | 12        | 6.07       | 5.57       |
|                                                                                    | M81714/5-11              | TJT701013    | M81714/16-11 | TJT703013 | 13        | 6.46       | 5.96       |
|                                                                                    | M81714/5-12              | TJT701014    | M81714/16-12 | TJT703014 | 14        | 6.85       | 6.35       |
|                                                                                    | M81714/5-13              | TJT701015    | M81714/16-13 | TJT703015 | 15        | 7.24       | 6.74       |
|                                                                                    | NONE                     | TJT701016    | NONE         | TJT703016 | 16        | 7.63       | 7.13       |
|                                                                                    | NONE                     | TJT701017    | NONE         | TJT703017 | 17        | 8.02       | 7.52       |
|                                                                                    | NONE                     | TJT701018    | NONE         | TJT703018 | 18        | 8.41       | 7.91       |
|                                                                                    | NONE                     | TJT701019    | NONE         | TJT703019 | 19        | 8.80       | 8.30       |
|                                                                                    | NONE                     | TJT701020    | NONE         | TJT703020 | 20        | 9.19       | 8.69       |
|                                                                                    | Feedback Mounting Tracks | Military P/N |              | PCD P/N   |           | Mtg. Pos*  | Dimensions |
|                                                                                    |                          |              |              | A         | B         |            |            |
|  | M81714/10-1              |              | TJT702010    |           | 10        | 5.55       | 5.05       |
|                                                                                    | NONE                     |              | TJT702002    |           | 2         | 2.43       | 1.93       |
|                                                                                    | M81714/10-2              |              | TJT702003    |           | 3         | 2.82       | 2.32       |
|                                                                                    | M81714/10-3              |              | TJT702004    |           | 4         | 3.21       | 2.71       |
|                                                                                    | M81714/10-4              |              | TJT702005    |           | 5         | 3.60       | 3.10       |
|                                                                                    | M81714/10-5              |              | TJT702006    |           | 6         | 3.9        | 3.49       |
|                                                                                    | M81714/10-6              |              | TJT702007    |           | 7         | 4.38       | 3.88       |
|                                                                                    | M81714/10-7              |              | TJT702008    |           | 8         | 4.77       | 4.27       |
|                                                                                    | M81714/10-8              |              | TJT702009    |           | 9         | 5.16       | 4.66       |

\*Divide by 3 for size 12 module mounting



# Terminal Junction Splice Single/Dual/Diode

## M81714/11, /12, Series I

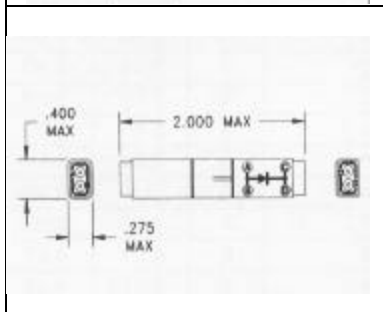
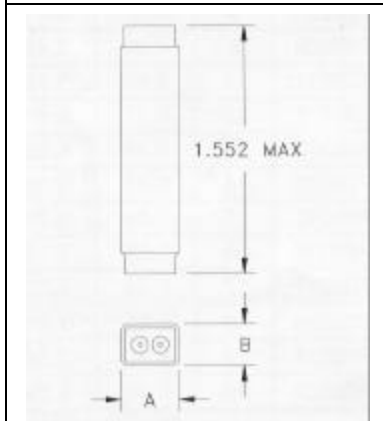
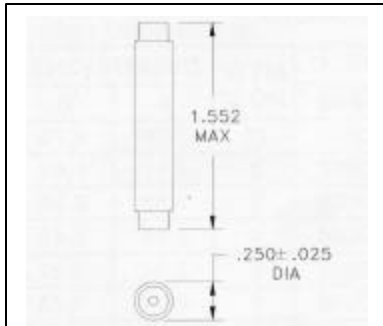
Class D

The single wire and dual wire splices provide a quick, efficient connection qualified to all requirements of the Mil-T-81714/11 and /12 terminal junction system.

TJSE electronic splices can be supplied with a variety of diodes or resistors within the splice package. Meeting the environmental and electrical parameters of M81714/24. Typical examples are indicated below. The electronic splice allows users to incorporate system modifications into a wire bundle, avoiding changes in panels or boards.



- High Temperature
- High Fluid Resistance
- Single and Dual Wire
- Common or Independent Circuits



| Single Wire Splices |           |          |       |              |
|---------------------|-----------|----------|-------|--------------|
| Military P/N        | PCD P/N   | Contact  |       |              |
|                     |           | Quantity | Size* | Part No.     |
| M81714/11-20D       | TJS320700 | 2        | 16/22 | M39029/1-101 |
| M81714/11-22D       | TJS322700 | 2        | 16/22 | M39029/1-100 |

| Dual Wire Splices |                |           |         |       |            |      |      |
|-------------------|----------------|-----------|---------|-------|------------|------|------|
| Bussing Type      | Mil P/N M81714 | PCD P/N   | Contact |       |            | Dim  |      |
|                   |                |           | Qty     | Size* | P/N M39029 | A    | B    |
|                   | /12-22D-1      | TJS322701 | 4       | 16/22 | /1-100     | .400 | .275 |
|                   | /12-20D-1      | TJS320701 | 4       | 16/20 | /1-101     | .400 | .275 |
|                   | /12-16D-1      | TJS316701 | 4       | 14/16 | /1-102     | .500 | .300 |
|                   | /12-22D-2      | TJS322702 | 4       | 16/22 | /1-100     | .400 | .275 |
|                   | /12-20D-2      | TJS320702 | 4       | 16/20 | /1-101     | .400 | .275 |
|                   | /12-16D-2      | TJS316702 | 4       | 14/16 | /1-102     | .500 | .300 |

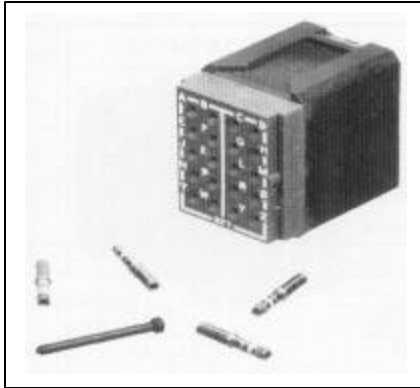
\*Mating Pin/Wire Barrel

| Diode Wire Splice** |           |           |     |         |            |     |
|---------------------|-----------|-----------|-----|---------|------------|-----|
| Circuit Type        | PCD P/N   | Diode     |     | Contact |            |     |
|                     |           | P/N       | Qty | Size*   | P/N M39029 | Qty |
|                     | TJSE22701 | JAN1N5618 | 1   | 16/22   | /1-100     | 4   |
|                     | TJSE20701 | JAN1N5618 | 1   | 16/20   | /1-101     | 4   |
|                     | TJSE22702 | JAN1N5618 | 2   | 16/22   | /1-100     | 4   |
|                     | TJSE20702 | JAN1N5618 | 2   | 16/20   | /1-101     | 4   |

\*Mating Pin/Wire Barrel

\*\*Not QPL Listed

- High Density
- Improved Sealing
- Two-Tine BeCu Contact Retention
- Easy Module Extraction
- All Bus Configurations



### Materials:

**Module Body:** Polyetherimide per MIL-P-46184

**Grommet:** Silicone rubber per ZZR765

**Contact Retainers:** Beryllium copper

**Internal Pin Contacts and Socket Contacts:** Copper alloy, hard gold plated per MIL-G-45204

### Operating Range:

**Temperature:** -65°C to 200°C

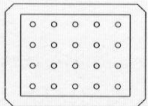
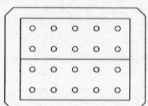
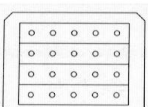
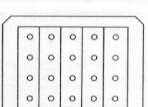
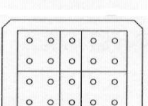
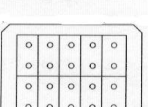
**Insulation Resistance:** 5000 megohms min @ 25°C

**Dielectric Withstanding Voltage:** 1500 VRMS at sea level and 200 VRMS at 110,000 ft. altitude

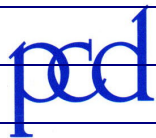
**Current Rating:** 5 amps

**Vibration and Shock:** Per MIL-Y-81714 Paragraph 3.5.5 and 3.5.8



| Bussing Configurations                                                              | Military P/N    | PCD P/N   | Contacts  |        |               |
|-------------------------------------------------------------------------------------|-----------------|-----------|-----------|--------|---------------|
|                                                                                     |                 |           | Quantity* | Size** | Part No.      |
|  | M81714/60-22-01 | SJM022100 | 20        | 22/22  | M39029/22-191 |
|  | M81714/60-22-02 | SJM022200 | 20        | 22/22  | M39029/22-191 |
|  | M81714/60-22-04 | SJM022400 | 20        | 22/22  | M39029/22-191 |
|  | M81714/60-22-05 | SJM022500 | 20        | 22/22  | M39029/22-191 |
|  | M81714/60-22-06 | SJM022600 | 20        | 22/22  | M39029/22-191 |
|  | M81714/60-22-10 | SJM022700 | 20        | 22/22  | M39029/22-191 |

\*Quantity figure denotes number of contacts accommodated by module. Modules are supplied with two additional spare contacts and sealing plugs

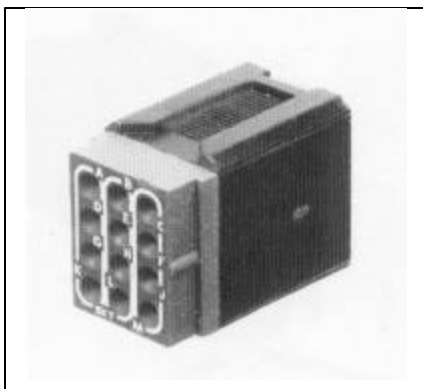


# Socket Junction Modules Relays

## M81714/60-20 Series II

Size 20

- High Density
- Improved Sealing
- Two-Tine BeCu Contact Retention
- Easy Module Extraction
- All Bus Configurations



### Materials:

**Module Body:** Polyetherimide per MIL-P-46184

**Grommet:** Silicone rubber per ZZR765

**Contact Retainers:** Beryllium copper

**Internal Pin Contacts and Socket Contacts:** Copper alloy, hard gold plated per MIL-G-45204

### Operating Range:

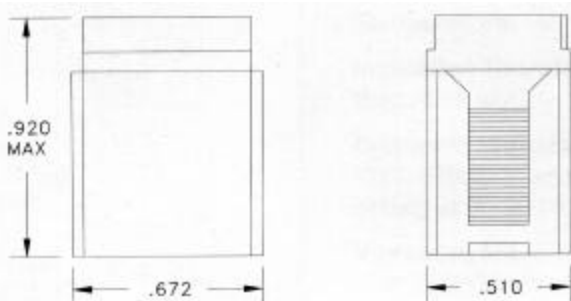
**Temperature:** -65°C to 200°C

**Insulation Resistance:** 5000 megohms min @ 25°C

**Dielectric Withstanding Voltage:** 1500 VRMS at sea level and 200 VRMS at 110,000 ft. altitude

**Current Rating:** 7.5 amps

**Vibration and Shock:** Per MIL-Y-81714 Paragraph 3.5.5 and 3.5.8



| Bussing Configurations | Military P/N    | PCD P/N   | Contacts  |        |               |
|------------------------|-----------------|-----------|-----------|--------|---------------|
|                        |                 |           | Quantity* | Size** | Part No.      |
|                        | M81714/60-20-01 | SJM020100 | 12        | 20/20  | M39029/22-192 |
|                        | M81714/60-20-02 | SJM020200 | 12        | 20/20  | M39029/22-192 |
|                        | M81714/60-20-03 | SJM020300 | 12        | 20/20  | M39029/22-192 |
|                        | M81714/60-20-04 | SJM020400 | 12        | 20/20  | M39029/22-192 |
|                        | M81714/60-20-06 | SJM020600 | 12        | 20/20  | M39029/22-192 |

\*Quantity figure denotes number of contacts accommodated by module. Modules are supplied with two additional spare contacts and sealing plugs

\*\* Mating End/Wire Barrel

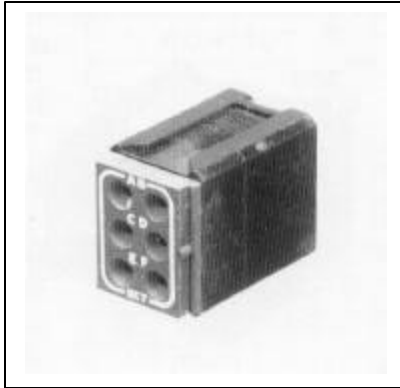


## Socket Junction Modules Relays

### M81714/60-16 Series II

Size 16

- High Density
- Improved Sealing
- Two-Tine BeCu Contact Retention
- Easy Module Extraction
- All Bus Configurations



#### Materials:

**Module Body:** Polyetherimide per MIL-P-46184

**Grommet:** Silicone rubber per ZZR765

**Contact Retainers:** Beryllium copper

**Internal Pin Contacts and Socket Contacts:** Copper alloy, hard gold plated per MIL-G-45204

#### Operating Range:

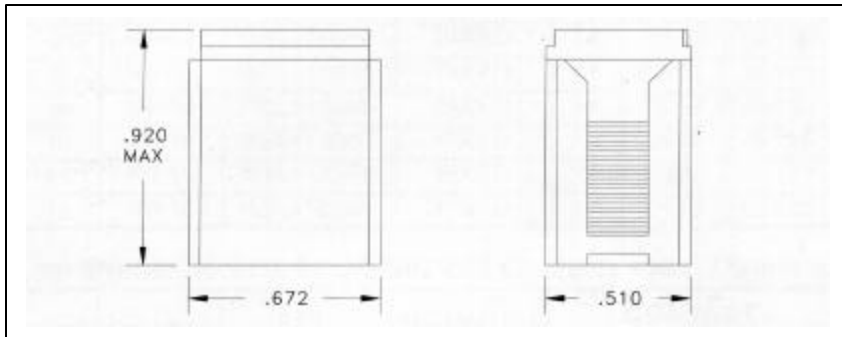
**Temperature:** -65°C to 200°C

**Insulation Resistance:** 5000 megohms min @ 25°C

**Dielectric Withstanding Voltage:** 1500 VRMS at sea level and 200 VRMS at 110,000 ft. altitude

**Current Rating:** 13 amps

**Vibration and Shock:** Per MIL-Y-81714 Paragraph 3.5.5 and 3.5.8



| Bussing Configurations | Military P/N    | PCD P/N   | Contacts  |        |               |
|------------------------|-----------------|-----------|-----------|--------|---------------|
|                        |                 |           | Quantity* | Size** | Part No.      |
|                        | M81714/60-16-01 | SJM016100 | 6         | 16/16  | M39029/22-193 |
|                        | M81714/60-16-02 | SJM016200 | 6         | 16/16  | M39029/22-193 |
|                        | M81714/60-16-03 | SJM016300 | 6         | 16/16  | M39029/22-193 |

\*Quantity figure denotes number of contacts accommodated by module. Modules are supplied with two additional spare contacts and sealing plugs

\*\* Mating End/Wire Barrel

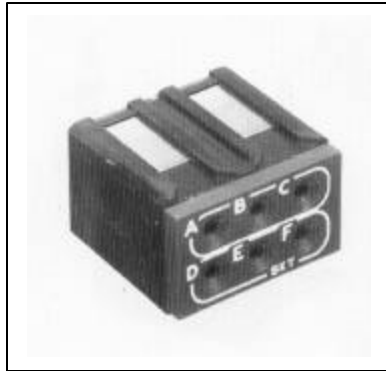


## Socket Junction Modules Relays

### M81714/60-12 Series II

Size 12

- High Density
- Improved Sealing
- Two-Tine BeCu Contact Retention
- Easy Module Extraction
- All Bus Configurations



#### Materials:

**Module Body:** Polyetherimide per MIL-P-46184

**Grommet:** Silicone rubber per ZZR765

**Contact Retainers:** Beryllium copper

**Internal Pin Contacts and Socket Contacts:** Copper alloy, hard gold plated per MIL-G-45204

#### Operating Range:

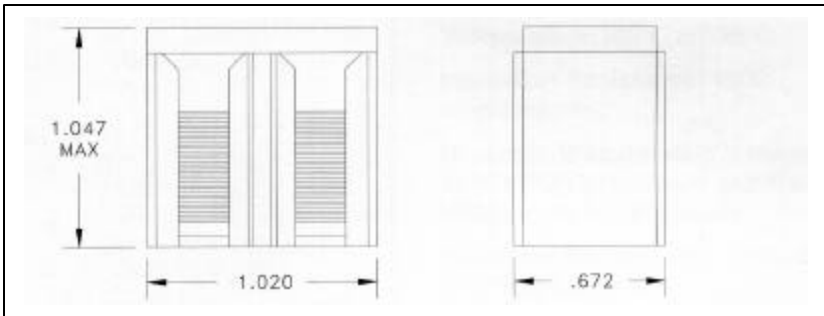
**Temperature:** -65°C to 200°C

**Insulation Resistance:** 5000 megohms min @ 25°C

**Dielectric Withstanding Voltage:** 1500 VRMS at sea level and 200 VRMS at 110,000 ft. altitude

**Current Rating:** 23 amps

**Vibration and Shock:** Per MIL-Y-81714 Paragraph 3.5.5 and 3.5.8



| Bussing Configurations | Military P/N    | PCD P/N   | Contacts  |        |               |
|------------------------|-----------------|-----------|-----------|--------|---------------|
|                        |                 |           | Quantity* | Size** | Part No.      |
|                        | M81714/60-12-01 | SJM012100 | 6         | 12/12  | M39029/22-605 |
|                        | M81714/60-12-02 | SJM012200 | 6         | 12/12  | M39029/22-605 |
|                        | M81714/60-12-03 | SJM012300 | 6         | 12/12  | M39029/22-605 |

\*Quantity figure denotes number of contacts accommodated by module. Modules are supplied with two additional spare contacts and sealing plugs

\*\* Mating End/Wire Barrel

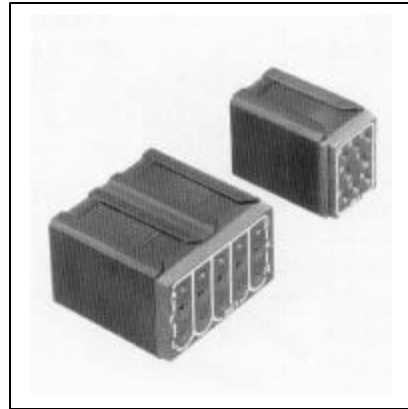


# Distribution Socket Junction Modules

## M81714/61 Series II

Mixed

- Power Distribution
- High Density
- Improved Sealing
- Two-Tine BeCu Contact Retention
- Easy Module Extraction
- All Bus Configurations



Distribution Socket Junction Modules, available in a variety of MIL-T-81714 configurations, feature the same construction and features as the standard Series II high density modules, and are recommended for power distribution applications.

### Materials:

**Module Body:** Polyetherimide per MIL-P-46184

**Grommet:** Silicone blend elastomer

**Contact Retainers:** Beryllium copper

**Internal Pin Contacts and Socket**

**Contacts:** Copper alloy, hard gold plated per MIL-G-45204

### Operating Range:

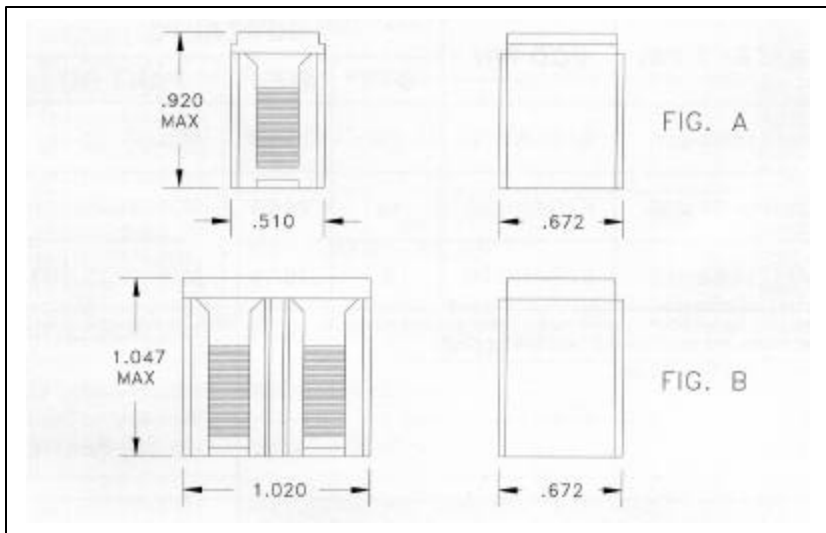
**Temperature:** -65°C to 200°C

**Insulation resistance:** 5000 megohms min. @ 25°C

**Dielectric Withstanding Voltage:** 1500 VRMS at sea level. 200 VRMS at 110,000 ft. altitude

**Current Rating:** (Max.) 5 amps (Size 22), 7.5 amps (Size 20), 13 amps (Size 16), 23 amps (Size 12)

**Vibration and Shock:** Per MIL-T-81714 Paragraph 3.5.5 and 3.5.8



| Configuration | Fig. | Military P/N<br>M81714 | PCD P/N   | Contacts |      |               | Bus Description                                  |
|---------------|------|------------------------|-----------|----------|------|---------------|--------------------------------------------------|
|               |      |                        |           | Qty      | Size | P/N<br>M39029 |                                                  |
|               | B    | /61-OZ                 | SJM000100 | 6        | 16   | /22-193       | 1 Bus                                            |
|               |      |                        |           | 2        | 12   | /22-605       | Two Size 12 and Six Size 16                      |
|               | A    | /61-OY                 | SJM000800 | 6        | 20   | /22-192       | 1 Bus                                            |
|               |      |                        |           | 2        | 16   | /22-193       | Two Size 16 and Six Size 20                      |
|               | B    | /61-0X                 | SJM000200 | 6        | 16   | /22-193       | 2 Busses                                         |
|               |      |                        |           | 2        | 12   | /22-605       | On Size 12 and Three Size 16 per Bus             |
|               | B    | /61-0W                 | SJM000500 | 5        | 22   | /22-191       | 5 Busses                                         |
|               |      |                        |           | 5        | 20   | /22-192       | One Size 22, One Size 20 and One Size 16 per Bus |
|               |      |                        |           | 5        | 16   | /22-193       |                                                  |



## Socket Grounding Modules

### Stud Mount M81714/63 Series II

Mounting directly to a ground plane or ground lug creates a multi-wire sealed grounding device. Mounting to a bus bar provides for power distribution, sensing or metering. All mounting hardware is furnished.

#### Materials:

**Module Body:** Polyetherimide per MIL-P-46184.

**Grommet:** Silicone blend elastomer

**Contact Retainers:** Beryllium copper

**Stud/Shell:** Copper alloy, gold plated per MIL-T-10727. Tin plating also available as an alternate.

**Socket Contacts:** Copper alloy, hard gold plated per MIL-G-45204

**Mounting Hardware:** Steel-cadmium plated per QQ-P-116

#### Operating range:

**Temperature:** -65°C to 200°C

**Current Rating (Max):** 5 amps (Size 22), 7.5 amps (Size 20), 13 amps (Size 16)

**Vibration and Shock:** Per MIL-T-81714 Paragraph 3.5.5 and 3.5.8

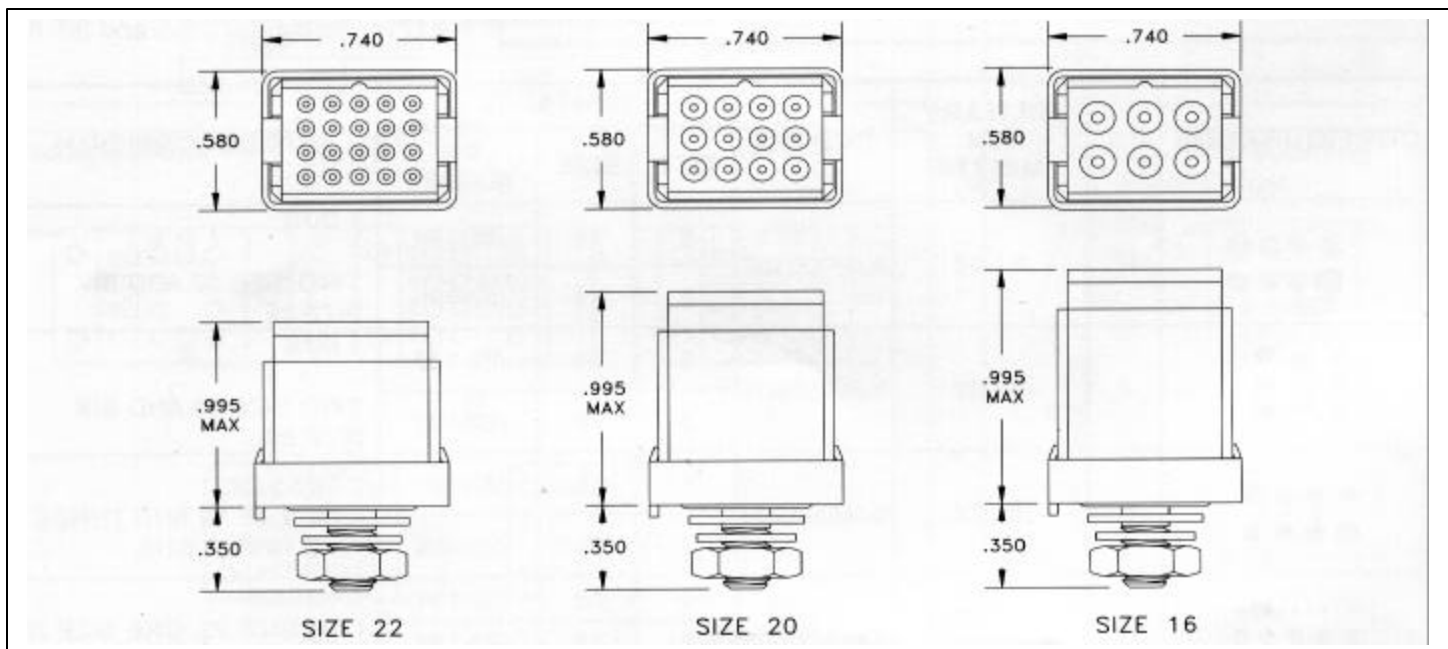


- **Integral Pins and Stud**
- **High Density**
- **Improved Sealing**
- **Two-Tine BeCu Contact Retention**

| Military P/N  | PCD P/N   | Contacts |        |               |
|---------------|-----------|----------|--------|---------------|
|               |           | Qty*     | Size** | Part No.      |
| M81714/63-22S | SJG022170 | 20       | 22/22  | M39029/22-191 |
| M81714/63-20S | SJG020170 | 12       | 20/20  | M39029/22-192 |
| M81714/63-16S | SJG016170 | 6        | 16/16  | M39029/22-193 |

\*Quantity figure denotes number of contacts accommodated by module. Modules are supplied with two additional spare contacts and sealing plugs.

\*\* Mating End/Wire Barrel





## Socket Grounding Modules

### Flange Mount M81714/63 Series II

Mounting directly to a ground plane or ground lug creates a multi-wire sealed grounding device. Mounting to a bus bar provides for power distribution, sensing or metering.

#### Materials:

**Module Body:** Polyetherimide per MIL-P-46184.

**Contact Retainers:** Beryllium copper

**Flange/Shell:** Copper alloy, gold plated per MIL-T-10727. Tin plating also available as an alternate.

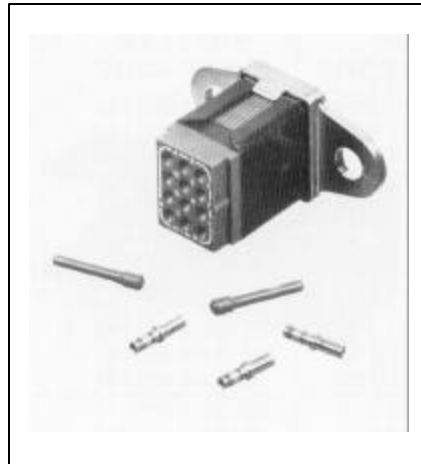
**Socket Contacts:** Copper alloy, hard gold plated per MIL-G-45204

#### Operating range:

**Temperature:** -65°C to 200°C

**Current Rating (Max):** 5 amps (Size 22), 7.5 amps (Size 20), 13 amps (Size 16), 23 amps (Size 12)

**Vibration and Shock:** Per MIL-T-81714 Paragraph 3.5.5 and 3.5.8

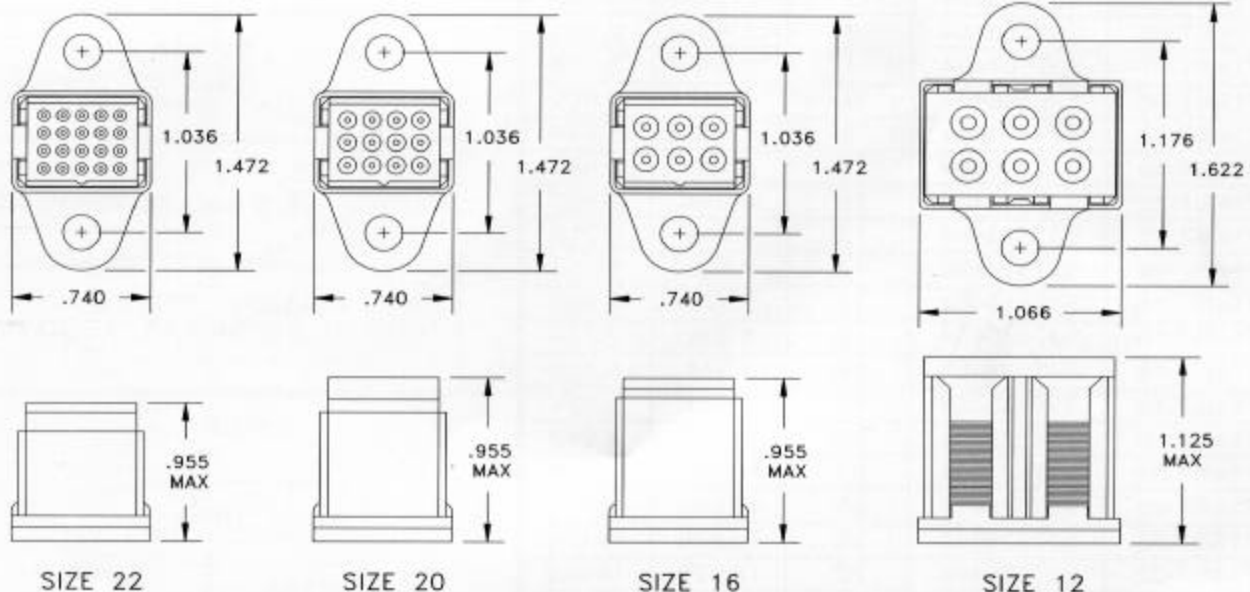


- Integral Pins and Flange
- High Density
- Improved Sealing
- Two-Tine BeCu Contact Retention

| Military P/N  | PCD P/N   | Contacts |        |               |
|---------------|-----------|----------|--------|---------------|
|               |           | Qty*     | Size** | Part No.      |
| M81714/63-22F | SJG022270 | 20       | 22/22  | M39029/22-191 |
| M81714/63-20F | SJG020270 | 12       | 20/20  | M39029/22-192 |
| M81714/63-16F | SJG016270 | 6        | 16/16  | M39029/22-193 |
| M81714/63-12F | SJG012270 | 6        | 12/12  | M39029/22-605 |

\*Quantity figure denotes number of contacts accommodated by module. Modules are supplied with two additional spare contacts and sealing plugs.

\*\* Mating End/Wire Barrel





# Socket Junction Module Mounting Tracks

## M81714/67 Series II

High strength, lightweight mounting track available with standard black anodized finish. Contact PCD for alternate finishes and markings.

### Materials:

**Rail:** Aluminum alloy. Black anodized finish

**Spring Clips:** Stainless steel

**Rivets:** Stainless steel

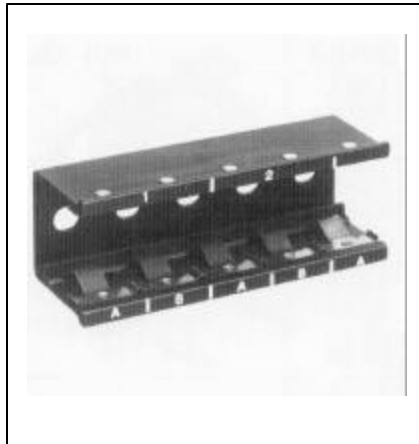
### Operating Range:

**Temperature:** -65°C to 200°C

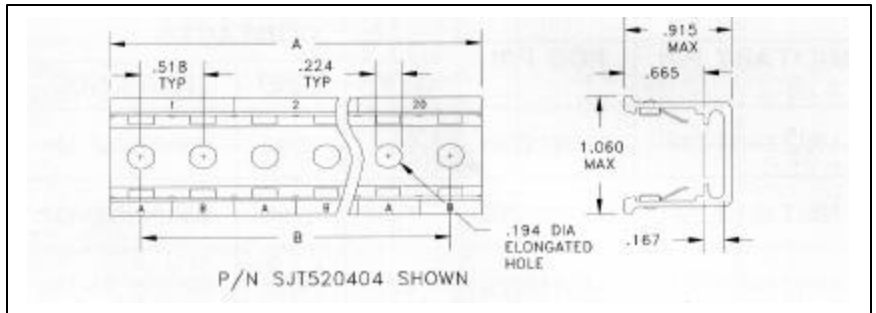
**Corrosion:** No exposure of base metal after 48 hours of salt spray

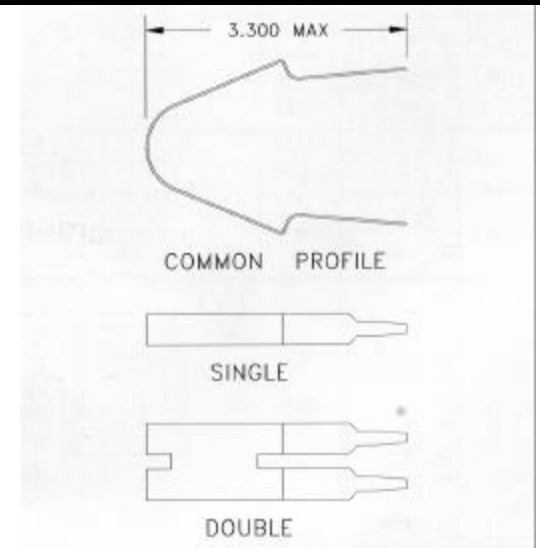
**Magnetic Permeability:** 2.0 MU max.

**Vibration and Shock:** Per MIL-T-81714 Paragraph 3.5.5 and 3.5.8



- **2 Through 40 Mounting Positions**
- **Optional Finish**
- **Optional Marking**



| Mounting Tracks |           |           |            |        | Removal Tools                                                                        |           |             |
|-----------------|-----------|-----------|------------|--------|--------------------------------------------------------------------------------------|-----------|-------------|
| Military P/N    | PCD P/N   | Mtg. Pos. | Dimensions |        | Mil P/N                                                                              | PCD P/N   | Description |
|                 |           |           | A          | B      |                                                                                      |           |             |
| M81714/67-02    | SJT502404 | 2*        | 1.036      | .518   | M81714/69-01                                                                         | CNA051300 | Single      |
| M81714/67-03    | SJT503404 | 3         | 1.554      | 1.036  |                                                                                      |           |             |
| M81714/67-04    | SJT504404 | 4         | 2.072      | 1.554  | M81714/69-02                                                                         | CNA052300 | Double      |
| M81714/67-05    | SJT505404 | 5         | 2.59       | 2.072  |                                                                                      |           |             |
| M81714/67-06    | SJT506404 | 6         | 3.108      | 2.590  |  |           |             |
| M81714/67-07    | SJT507404 | 7         | 3.626      | 3.108  |                                                                                      |           |             |
| M81714/67-08    | SJT508404 | 8         | 4.144      | 3.626  |                                                                                      |           |             |
| M81714/67-09    | SJT509404 | 9         | 4.662      | 4.144  |                                                                                      |           |             |
| M81714/67-10    | SJT510404 | 10        | 5.180      | 4.662  |                                                                                      |           |             |
| M81714/67-12    | SJT512404 | 12        | 6.216      | 5.698  |                                                                                      |           |             |
| M81714/67-13    | SJT513404 | 13        | 6.734      | 6.216  |                                                                                      |           |             |
| M81714/67-14    | SJT514404 | 14        | 7.252      | 6.734  |                                                                                      |           |             |
| M81714/67-15    | SJT515404 | 15        | 7.770      | 7.252  |                                                                                      |           |             |
| M81714/67-16    | SJT516404 | 16        | 8.288      | 7.770  |                                                                                      |           |             |
| M81714/67-18    | SJT518404 | 18        | 9.324      | 8.806  |                                                                                      |           |             |
| M81714/67-19    | SJT519404 | 19        | 9.842      | 9.324  |                                                                                      |           |             |
| M81714/67-20    | SJT520404 | 20        | 10.360     | 9.842  |                                                                                      |           |             |
| M81714/67-21    | SJT521404 | 21        | 10.878     | 10.360 |                                                                                      |           |             |
| M81714/67-25    | SJT525404 | 25        | 12.950     | 12.432 |                                                                                      |           |             |
| M81714/67-30    | SJT530404 | 30        | 15.540     | 15.022 |                                                                                      |           |             |
| M81714/67-32    | SJT532404 | 32        | 16.576     | 16.058 |                                                                                      |           |             |
| M81714/67-40    | SJT540404 | 40        | 20.720     | 20.202 |                                                                                      |           |             |

\*Size 12 socket junction modules take two mounting positions