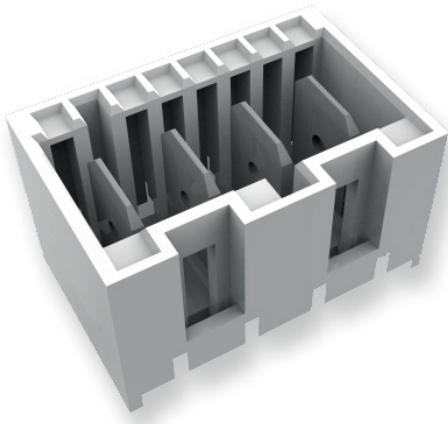


# PCB CONNECTOR THAT MEETS RAST 5 STANDARD

## PCB CONNECTOR THAT MEETS RAST 5 STANDARD WITH VERTICAL THROUGH HOLE TECHNOLOGY, AVAILABLE WITH TIN OR SILVER PLATING, EXTERNAL LOCKING

RAST 5 PCB connectors are designed for flexibility, reliability, and high performance. With a wide range of options, these connectors meet essential industrial and appliance safety standards, including UL94-V0 and IEC 60335-1 (GWT 750°C). They are also certified by UL, VDE, and CQC. Ideal for wire-to-board connections and control units in major appliances and other applications, these connectors feature a 5mm pitch and support 2 to 9 positions. Available in three different footprint layouts, they offer an optimized, versatile solution for a variety of design requirements.



### ELECTRICAL

- Rated Current: 10A for Tin plated version; 16A for Silver plated version
- Rated Voltage: 250V AC
- Insulation Resistance: 5000M  $\Omega$
- Dielectric Strength: 3000V/m
- Current Rating (A): 20
- Voltage Rating (VAC): 250, 400, 600

### MECHANICAL

- Positions: 3-17
- Configurations: Wire-To-Board

### MATERIAL

- Housing: Meets Thermoplastic UL 94 V0 and IEC 60335-1
- Contact: Copper Alloy, Tin or Silver plating over Nickel
- Operating Temperature (°C): -40 to +120

### STANDARDS & SPECIFICATIONS

- According to RAST 5 Specification
- Product Specification: 108-106080
- UL94 Rating: V-0 & v-2

### KEY FEATURES

- Designed to the RAST 5 Standard
- Tin / Silver plating
- 2-8 positions
- Available in multiple colors
- 3 footprint layouts
- Thousands of configurations of keying & latching & polarization
- UL/VDE/CQC approval
- Meets UL 94 V0 & GWT 750°C w/o flame

### APPLICATIONS



Refrigerator



Front-loading washing machine



Dishwasher



Microwave oven

## PCB CONNECTOR THAT MEETS RAST 5 STANDARD

### PRODUCT OFFERING

#### Part Number Ordering: Example for X-1971845-Y

##### -3

Substitute dash number listed for “Y”, therefore a -3 signifies PN 1971845-3.

##### 1- -3

Substitute first number for “X” and second number listed for “Y”, therefore a 1- -3 signifies PN 1-1971845-3.

\* Follow same numbering scheme throughout for other part numbers listed.

### EXTERNAL LOCKING - FULLY LOADED

| TIN PLATED  |       |       |       |       |       |       |       |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| No. of Pos. | 2     | 3     | 4     | 5     | 6     | 7     | 8     |
| X-1971845-Y | -2    | -3    | -4    | -5    | -6    | -7    | -8    |
|             | 1- -2 | 1- -3 | 1- -4 | 1- -5 | 1- -6 | 1- -7 | 1- -8 |
|             | 2- -2 | 2- -3 | 2- -4 | 2- -5 | 2- -6 | 2- -7 | 2- -8 |
|             | 3- -2 | 3- -3 | 3- -4 | 3- -5 | 3- -6 | 3- -7 | 3- -8 |
|             | 4- -2 | 4- -3 | 4- -4 | 4- -5 | 4- -6 | 4- -7 | 4- -8 |
|             | 5- -2 | 5- -3 | 5- -4 | 5- -5 | 5- -6 | 5- -7 | 5- -8 |
|             | 6- -2 | 6- -3 | 6- -4 | 6- -5 | 6- -6 | 6- -7 |       |
|             | 7- -2 | 7- -3 | 7- -4 | 7- -5 | 7- -6 | 7- -7 |       |
|             | 8- -2 | 8- -3 | 8- -4 | 8- -5 | 8- -6 |       |       |
|             | 9- -2 | 9- -3 | 9- -4 | 9- -5 | 9- -6 |       |       |
| X-1971895-Y | -2    | -3    | -4    |       |       |       |       |
|             | 1- -2 |       | 1- -4 |       |       |       |       |
|             | 2- -2 |       | 2- -4 |       |       |       |       |
|             | 3- -2 |       | 3- -4 |       |       |       |       |
|             |       |       | 4- -4 |       |       |       |       |

## PCB CONNECTOR THAT MEETS RAST 5 STANDARD

### EXTERNAL LOCKING - FULLY LOADED

| SILVER PLATED |       |       |       |       |       |       |       |
|---------------|-------|-------|-------|-------|-------|-------|-------|
| No. of Pos.   | 2     | 3     | 4     | 5     | 6     | 7     | 8     |
| X-1971846-Y   | -2    | -3    | -4    | -5    | -6    | -7    | -8    |
|               | 1- -2 | 1- -3 | 1- -4 | 1- -5 | 1- -6 | 1- -7 | 1- -8 |
|               | 2- -2 | 2- -3 | 2- -4 | 2- -5 | 2- -6 | 2- -7 | 2- -8 |
|               | 3- -2 | 3- -3 | 3- -4 | 3- -5 | 3- -6 | 3- -7 | 3- -8 |
|               | 4- -2 | 4- -3 | 4- -4 | 4- -5 | 4- -6 | 4- -7 | 4- -8 |
|               | 5- -2 | 5- -3 | 5- -4 | 5- -5 | 5- -6 | 5- -7 | 5- -8 |
|               | 6- -2 | 6- -3 | 6- -4 | 6- -5 | 6- -6 | 6- -7 |       |
|               | 7- -2 | 7- -3 | 7- -4 | 7- -5 | 7- -6 | 7- -7 |       |
|               | 8- -2 | 8- -3 | 8- -4 | 8- -5 | 8- -6 |       |       |
|               | 9- -2 | 9- -3 | 9- -4 | 9- -5 | 9- -6 |       |       |
| X-1971896-Y   | -2    | -3    | -4    |       |       |       |       |
|               | 1- -2 |       | 1- -4 |       |       |       |       |
|               | 2- -2 |       | 2- -4 |       |       |       |       |
|               | 3- -2 |       | 3- -4 |       |       |       |       |
|               |       |       | 4- -4 |       |       |       |       |

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## PCB CONNECTOR THAT MEETS RAST 5 STANDARD

|              | Series             | RAST 5 Tab Header                                            |                                                       |                                         |                                                |                               |                               |
|--------------|--------------------|--------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------|-------------------------------|
|              |                    | DIN Style                                                    |                                                       |                                         |                                                |                               |                               |
|              | Sub-type           | Vertical Standard Fully                                      |                                                       | Vertical Standard Fully/<br>Selectively | Vertical Opposite Fully                        | Vertical Standard Selectively | Vertical Opposite Selectively |
|              | Base No            | 521383                                                       | 1971845 /<br>1971846 /<br>1971896                     | 2390874 /<br>2390877 /<br>2392784       | 2232043 /<br>2232044<br>/ 2232045 /<br>2232046 | 2232511                       | 2322950                       |
| Drawing No   | CD                 | 521383                                                       | 1971845                                               | 2390874                                 | 2232043                                        | 2232511                       | 2322950                       |
|              | PD                 | 521383                                                       | 1971845                                               | 2390874                                 | 2232043                                        | 2232511                       | 2322950                       |
| Counterparts | Mating Part        | AMP multifitting mark II, AMP MONO-SHAPE, AMP Standard Timer |                                                       |                                         |                                                |                               |                               |
| Housing      | Material Type      | PA                                                           | PA                                                    | PA                                      | PA                                             | PA                            | PA                            |
|              | UL-V0              | X                                                            | X                                                     | X                                       | X                                              | X                             | X                             |
|              | UL-V2              | -                                                            | -                                                     | -                                       | -                                              | -                             | -                             |
|              | GWEPT 750°C        | -                                                            | X                                                     | X                                       | X                                              | X                             | X                             |
| Contact      | Bulk Material      | CuZn                                                         | CuZn                                                  | CuZn                                    | CuZn                                           | CuZn                          | CuZn                          |
|              | Plating            | Tin                                                          | Tin / Ag                                              | Tin                                     | Tin / Ag                                       | Tin / Ag                      | Tin                           |
| Application  | Qty of Pole        | 2-9                                                          | 2-8                                                   | 2-5, 7                                  | 2-8                                            | 3-8                           | 4-7                           |
|              | Wire Range         | NA                                                           |                                                       |                                         |                                                |                               |                               |
|              | Current rating (A) | 20A                                                          |                                                       |                                         |                                                |                               |                               |
|              | Voltage Rating (V) | 250V AC                                                      | 400V AC (fully loaded) / 600V AC (selectively loaded) |                                         |                                                |                               |                               |
| Document     | Product Spec       | 108-2183                                                     | 108-106080                                            |                                         |                                                |                               |                               |
|              | Application spec   |                                                              |                                                       |                                         |                                                |                               |                               |
| Document     | VDE                | 40017532                                                     | 40037338                                              |                                         |                                                |                               |                               |
|              | UL                 | E28476_20040922                                              | E28476_20121227                                       |                                         |                                                |                               |                               |

## PCB CONNECTOR THAT MEETS RAST 5 STANDARD

|              | Series             | RAST 5 Tab Header                                     |                                                     |                          |                              |                                |
|--------------|--------------------|-------------------------------------------------------|-----------------------------------------------------|--------------------------|------------------------------|--------------------------------|
|              |                    | DIN Style                                             |                                                     |                          |                              |                                |
|              | Sub-type           | Vertical Shrouded Standard/<br>Opposite Fully         | Vertical Shrouded Standard/<br>opposite Selectively | R/A Standard Selectively | R/A Standard - Reverse Fully | R/A Standard Fully/Selectively |
|              | Base No            | 521385                                                | 1969738                                             | 521386                   | 1955660                      | 1969352                        |
| Drawing No   | CD                 | 1969740                                               | 1969738                                             | 521386                   | 1955660                      | 1969352                        |
|              | PD                 | 1969740                                               | 1969738                                             | 521386                   | 1955660                      | 1969352                        |
| Counterparts | Mating Part        |                                                       |                                                     |                          |                              |                                |
| Housing      | Material Type      | PA                                                    | PA                                                  | PA                       | PA                           | PA                             |
|              | UL-V0              | X                                                     | X                                                   | X                        | -                            | -                              |
|              | UL-V2              | -                                                     | -                                                   | -                        | X                            | X                              |
|              | GWEPT 750°C        | X                                                     | X                                                   | -                        | X                            | X                              |
| Contact      | Bulk Material      | CuZn                                                  | CuZn                                                | CuZn                     | CuZn                         | CuZn                           |
|              | Plating            | Tin / Ag                                              | Tin / Ag                                            | Tin                      | Tin                          | Tin                            |
| Application  | Qty of Pole        | 2~7                                                   | 3~4                                                 | 3~5                      | 2~7                          | 2~8                            |
|              | Wire Range         | NA                                                    |                                                     |                          |                              |                                |
|              | Current rating (A) | 20A                                                   |                                                     |                          |                              |                                |
|              | Voltage Rating (V) | 400V AC (fully loaded) / 600V AC (selectively loaded) |                                                     |                          | 250V AC                      |                                |
| Document     | Product Spec       | 108-106080                                            |                                                     | 108-2183                 |                              |                                |
|              | Application spec   |                                                       |                                                     |                          |                              |                                |
| Document     | VDE                | 40037338                                              |                                                     | -                        | 40017532                     | -                              |
|              | UL                 | E28476_20121227                                       |                                                     | E28476_20040922          |                              |                                |

## PCB CONNECTOR THAT MEETS RAST 5 STANDARD

|               | Series             | RAST 5 Tab Header                                     |                                   |                         |                               |                                               |                                               |
|---------------|--------------------|-------------------------------------------------------|-----------------------------------|-------------------------|-------------------------------|-----------------------------------------------|-----------------------------------------------|
|               |                    | Positive Lock Style                                   |                                   |                         |                               |                                               |                                               |
|               | Sub-type           | Vertical Standard Selectively                         | Vertical Standard/ Opposite Fully | Vertical Opposite Fully | Vertical Opposite Selectively | Vertical Shrouded Standard w inner wall Fully | Vertical Shrouded Opposite w inner wall Fully |
|               | Base No            | 2232611                                               | 2232647                           | 2372858                 | 2385644                       | 2371464                                       | 2371673                                       |
| Drawing No    | CD                 | 2232611                                               | 2232647                           | 2372858                 | 2385644                       | 2371466                                       | 2371673                                       |
|               | PD                 | 2232611                                               | 2232647                           | 2372858                 | 2385644                       | 2371466                                       | 2371673                                       |
| Counter-parts | Mating Part        | Positive Lock RAST 5 Connector System                 |                                   |                         |                               |                                               |                                               |
| Housing       | Material Type      | PA                                                    | PA                                | PA                      | PA                            | PA                                            | PA                                            |
|               | UL-V0              | X                                                     | X                                 | X                       | X                             | X                                             | X                                             |
|               | UL-V2              | -                                                     | -                                 | -                       | -                             | -                                             | -                                             |
|               | GWEPT 750°C        | X                                                     | X                                 | X                       | X                             | X                                             | X                                             |
| Contact       | Bulk Material      | CuZn                                                  | CuZn                              | CuZn                    | CuZn                          | CuZn                                          | CuZn                                          |
|               | Plating            | Tin / Ag                                              | Tin / Ag                          | Tin                     | Tin                           | Tin                                           | Tin                                           |
| Application   | Qty of Pole        | 3-8                                                   | 2-8                               | 2-5                     | 5                             | 2-4                                           | 2-5                                           |
|               | Wire Range         | NA                                                    |                                   |                         |                               |                                               |                                               |
|               | Current rating (A) | 20A                                                   |                                   |                         |                               |                                               |                                               |
|               | Voltage Rating (V) | 400V AC (fully loaded) / 600V AC (selectively loaded) |                                   |                         |                               |                                               |                                               |
| Document      | Product Spec       | 108-106080                                            |                                   |                         |                               |                                               |                                               |
|               | Application spec   |                                                       |                                   |                         |                               |                                               |                                               |
| Document      | VDE                | 40037338                                              |                                   |                         |                               |                                               |                                               |
|               | UL                 | E28476_20121227                                       |                                   |                         |                               |                                               |                                               |

## PCB CONNECTOR THAT MEETS RAST 5 STANDARD

|               | RAST 5 Tab Header  |                                                       |                                         |                                  |                                  |                    |                          |
|---------------|--------------------|-------------------------------------------------------|-----------------------------------------|----------------------------------|----------------------------------|--------------------|--------------------------|
|               | Series             | Positive Lock Style                                   |                                         |                                  |                                  |                    |                          |
|               |                    |                                                       |                                         |                                  |                                  |                    |                          |
|               | Sub-type           | Vertical Shrouded Standard w Feet Fully               | Vertical Shrouded Opposite w Feet Fully | Vertical Shrouded Standard Fully | Vertical Shrouded Opposite Fully | R/A Standard Fully | R/A Standard - GWT Fully |
|               | Base No            | 2405963                                               | 2405966                                 | 2292457 / 2390868                | 2337101 / 2390869                | 521384             | 1969234                  |
| Drawing No    | CD                 | 2405963                                               | 2405966                                 | 2292457                          | 2337101                          | 521384             | 1969234                  |
|               | PD                 | 2405963                                               | 2405966                                 | 2292457                          | 2337101                          | 521384             | 1969234                  |
| Counter-parts | Mating Part        |                                                       |                                         |                                  |                                  |                    |                          |
| Housing       | Material Type      | PA                                                    | PA                                      | PA                               | PA                               | PA                 | PA                       |
|               | UL-V0              | X                                                     | X                                       | X                                | X                                | X                  | -                        |
|               | UL-V2              | -                                                     | -                                       | -                                | -                                | -                  | X                        |
|               | GWEPT 750°C        | X                                                     | X                                       | X                                | X                                | -                  | X                        |
| Contact       | Bulk Material      | CuZn                                                  | CuZn                                    | CuZn                             | CuZn                             | CuZn               | CuZn                     |
|               | Plating            | Tin                                                   | Tin                                     | Tin                              | Tin                              | Tin                | Tin                      |
| Application   | Qty of Pole        | 2-4                                                   | 2                                       | 2 ~ 5                            | 2                                | 2-9                | 2                        |
|               | Wire Range         | NA                                                    |                                         |                                  |                                  |                    |                          |
|               | Current rating (A) | 20A                                                   |                                         |                                  |                                  |                    |                          |
|               | Voltage Rating (V) | 400V AC (fully loaded) / 600V AC (selectively loaded) |                                         |                                  |                                  |                    |                          |
| Document      | Product Spec       | 108-106080                                            |                                         |                                  |                                  | 108-2183           |                          |
|               | Application spec   |                                                       |                                         |                                  |                                  |                    |                          |
| Document      | VDE                | 40037338                                              |                                         |                                  |                                  | 40017532           |                          |
|               | UL                 | E28476_20121227                                       |                                         |                                  |                                  | E28476_20040922    |                          |

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