

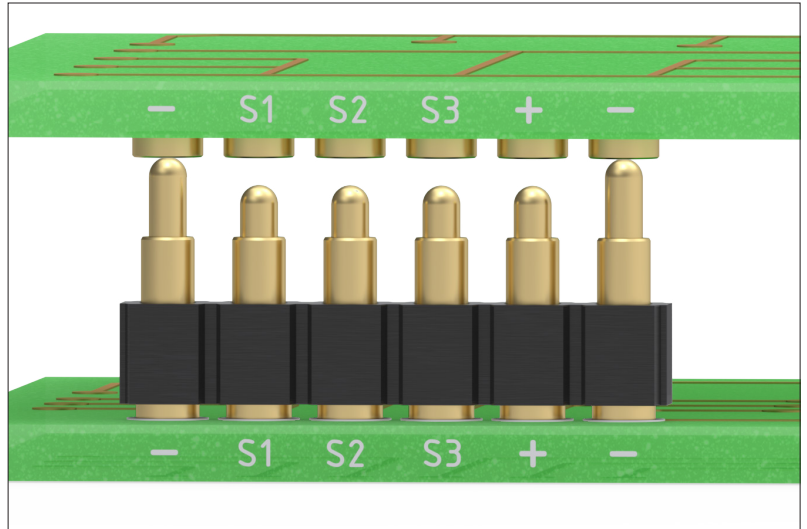
MAXIMUM SOLUTIONS

Mill-Max Introduces Pre-Wired Spring-Loaded Connectors

Tiered contact arrangement for applications requiring sequential connections

Mill-Max Manufacturing Corp., Inc. expands its line of spring-loaded products with single and double row First Mate/Last Break (FMLB) connectors. These connectors support applications where electrical signals must be made and broken in sequence rather than all at once, such as in hot swapping or hot plugging.

A common use for First Mate/Last Break (FMLB) connectors is to ensure the ground path is established before any other power or signal connections are made. This is done to eliminate stray currents from damaging devices or components. During hot plugging or hot swapping, if no ground contact is established first, the circuit may generate equalizing currents seeking a low resistance path. These currents may run between devices or components in a direction which can cause damage and failures. The same is true on disconnect with the ground path remaining in place until all other signal are deenergized.



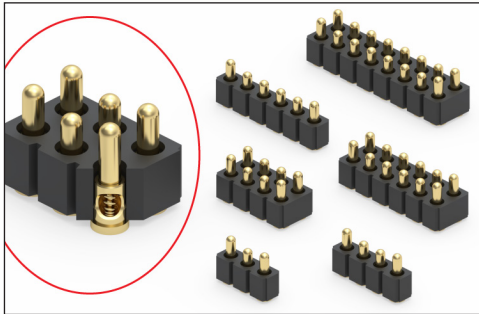
In other applications FMLB connectors may be used to power indicator lights or send an alert signal before energizing the prime circuit of the unit. The applications are varied and many.

This product release includes six new connectors, three unique configurations each available in single and double row versions, all on .100" (2.54 mm) pin centers. The single row versions have taller pins in the first and last positions, the double row versions have four taller pins, two on each end. There are four SMT and two through hole connector options. The low profile SMT versions, 811/813 series, have an initial height of .217" (5.51 mm) for the tallest pins with a .020" (.51 mm) offset to the remaining pins, while the 812/814 series provide an initial height of .288" (7.32 mm), an offset of .033" (.84 mm) and .090" (2.3 mm) maximum stroke on the longer end pins to allow for greater compression. The through hole connectors, 825/827 series, have an initial height of .332" (8.43 mm), for the tallest pins, an offset of .030" (.76 mm) and each pin has a maximum stroke of .090" (2.3 mm). The connectors feature spring pins with precision-machined external components and high reliability internal springs, all gold-plated to ensure the highest conductivity, corrosion resistance and durability. The pins have a current rating of 2 amps and the connector housings are molded from high temperature thermoplastic, suitable for most soldering processes. With the wide variety of spring-loaded pins Mill-Max manufactures, these are just a few of the many possible connector combinations we can produce. Contact our technical services staff to discuss your application and how we may be able to address your needs.

For more information, please visit www.mill-max.com/PR695.

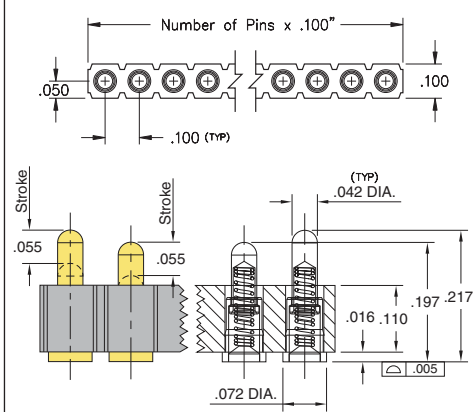
SPRING-LOADED CONNECTORS

SERIES 811 & 813 • .100" GRID SURFACE MOUNT, FIRST MATE/LAST BREAK • SINGLE AND DOUBLE ROW STRIPS



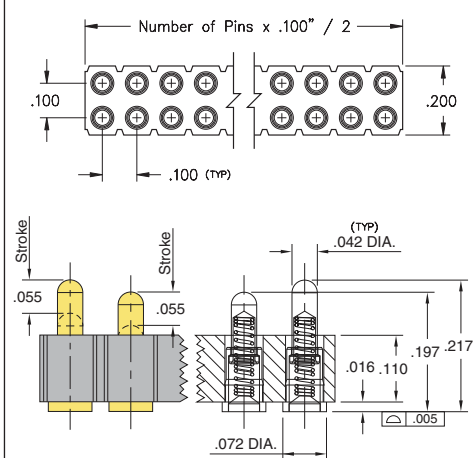
- Modular contacts for use on .100" grid, supplied in single and double row contact strips
- Taller pins in the end positions make contact first and break contact last to address applications where connection sequence is required
- Each pin has a full stroke capability of .055", allowing all pins to be compressed to the rated mid stroke while accounting for the .020" initial height offset of the 0900-3 (.217") and 0900-2 (.197")
- Precision-machined piston / base and gold-plated components assure up to 1,000,000 cycle life durability
- Pistons have a .0275" mid. stroke and a .055" max. stroke
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak
- Insulators are high temperature thermoplastic

SINGLE ROW Series 811



Coplanarity .005". For Pin Counts >10 positions consult Technical Support

DOUBLE ROW Series 813



Coplanarity .005". For Pin Counts >20 positions consult Technical Support

ORDERING INFORMATION

Single Row Series 811

811-22-0XX-30-022101

Specify number of contacts 03-10

Double Row Series 813

813-22-0XX-30-022101

Specify number of contacts 06-20

Technical Specifications

Materials:

Contact piston & base: Machined copper alloy plated 20μ" gold over 100μ" nickel
 Spring: Beryllium copper-plated 10μ" gold
 Insulator: High temperature thermoplastic, rated UL94 V-0

Mechanical:

Spring force @ initial height: 25 grams
 Spring force @ mid stroke (.0275"): 60 grams
 Durability: Up to 1,000,000 cycles
 Coplanarity: .005" (Single Row up to 10 pins; Double Row up to 20 pins),
 For higher pin counts, contact Technical Support

Electrical:

Voltage rating: 100Vrms/150Vdc
 Current rating: 2A (continuous), 3A (peak) per contact
 Contact resistance: 20mΩ max.
 Insulation resistance: 10,000MΩ min.
 Dielectric strength: 700Vrms min.
 Capacitance: 1pF max.

RoHS-2
2011/65/EU



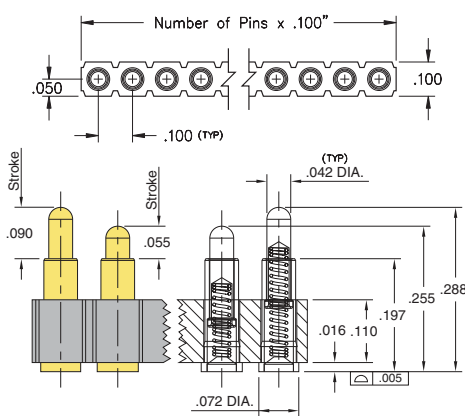
SPRING-LOADED CONNECTORS

SERIES 812 & 814 • .100" GRID SURFACE MOUNT, FIRST MATE/LAST BREAK • SINGLE AND DOUBLE ROW STRIPS



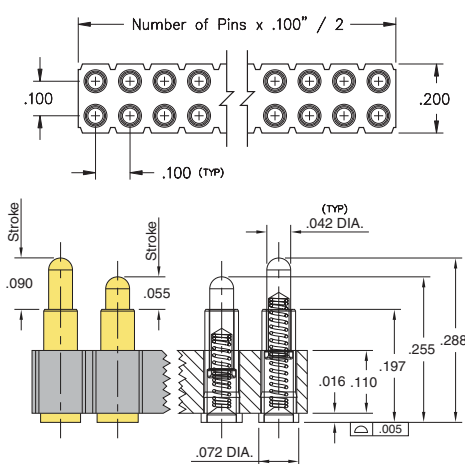
- Modular contacts for use on .100" grid, supplied in single and double row contact strips
- Taller pins in the end positions make contact first and break contact last to address applications where connection sequence is required
- The 0913-0 pin has a full stroke capability of .090", allowing all pins to be compressed to their rated mid stroke while accounting for the .033" initial height offset of the 0913-0 (.288") and 0907-0 (.255")
- Precision-machined piston / base and gold-plated components assure up to 1,000,000 cycle life durability
- 0907-0 spring pins have .0275" mid stroke and .055" max. stroke, 0913-0 spring pin have .045" mid stroke and .090" max. stroke
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak
- Insulators are high temperature thermoplastic

SINGLE ROW Series 812



Coplanarity .005". For Pin Counts >10 positions consult Technical Support

DOUBLE ROW Series 814



Coplanarity .005". For Pin Counts >20 positions consult Technical Support

ORDERING INFORMATION

Single Row Series 812

812-22-0XX-30-030101

Specify number of contacts 03-10

Double Row Series 814

814-22-0XX-30-030101

Specify number of contacts 06-20

Technical Specifications

Materials:

Contact piston & base: Machined copper alloy plated 20μ" gold over 100μ" nickel
 Spring: Beryllium copper-plated 10μ" gold
 Insulator: High temperature thermoplastic, rated UL94 V-0

Mechanical:

Spring force @ initial height (0907-0 & 0913-0): 25 grams
 Spring force @ mid stroke (0907-0 & 0913-0): 60 grams
 Durability: Up to 1,000,000 cycles
 Coplanarity: .005" (Single Row up to 10 pins; Double Row up to 20 pins),
 For higher pin counts, contact Technical Support

Electrical:

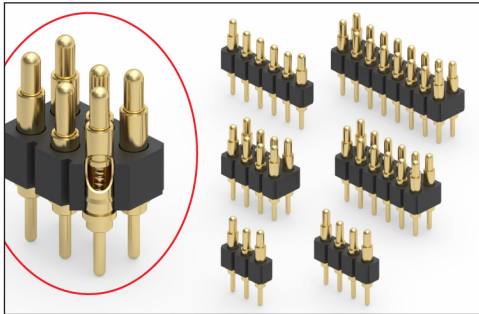
Voltage rating: 100Vrms/150Vdc
 Current rating: 2A (continuous), 3A (peak) per contact
 Contact resistance: 20mΩ max.
 Insulation resistance: 10,000MΩ min.
 Dielectric strength: 700Vrms min.
 Capacitance: 1pF max.

RoHS-2
2011/65/EU



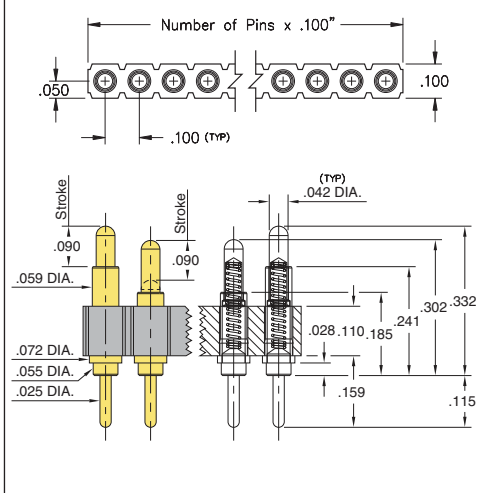
SPRING-LOADED CONNECTORS

SERIES 825 & 827 • .100" GRID THROUGH-HOLE MOUNT, FIRST MATE/LAST BREAK • SINGLE AND DOUBLE ROW STRIPS

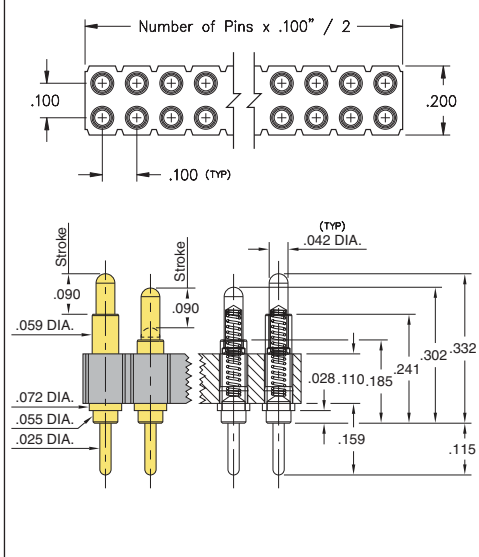


- Modular contacts for use on .100" grid, supplied in single and double row contact strips
- Taller pins in the end positions make contact first and break contact last to address applications where connection sequence is required
- Each pin has a full stroke capability of .090", allowing all pins to be compressed to the rated mid stroke while accounting for the .030" initial height offset of the 0914-1 (.332") and 0914-0 (.302")
- Precision-machined piston / base and gold-plated components assure up to 1,000,000 cycle life durability
- Pistons have a .045" mid. stroke and a .090" max. stroke
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak
- Insulators are high temperature thermoplastic

SINGLE ROW Series 825



DOUBLE ROW Series 827



ORDERING INFORMATION

Single Row Series 825

825-22-0XX-10-020101

Specify number of contacts 03-10

Double Row Series 827

827-22-0XX-10-020101

Specify number of contacts 06-20

Technical Specifications

Materials:

Contact piston & base: Machined copper alloy plated 20μ" gold over 100μ" nickel
 Spring: Beryllium copper-plated 10μ" gold
 Insulator: High temperature thermoplastic, rated UL94 V-0

Mechanical:

Spring force @ initial height: 25 grams
 Spring force @ mid stroke (.045"): 60 grams
 Durability: Up to 1,000,000 cycles
 Coplanarity: .005" (Single Row up to 10 pins; Double Row up to 20 pins),
 For higher pin counts, contact Technical Support

Electrical:

Voltage rating: 100Vrms/150Vdc
 Current rating: 2A (continuous), 3A (peak) per contact
 Contact resistance: 20mΩ max.
 Insulation resistance: 10,000MΩ min.
 Dielectric strength: 700Vrms min.
 Capacitance: 1pF max.

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