



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



MAX solutions

Mill-Max Spring-loaded Connectors Minimize Noise



When the power is on, you don't want shock or vibration to create spurious signals. Mill-Max Spring-loaded Connectors provide a reliable electrical connection in the most rigorous environments:

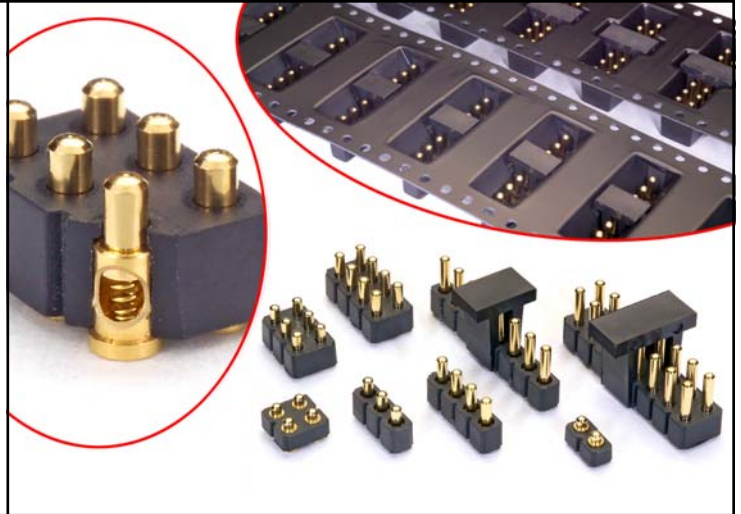
- **Maximum Continuity:** Precision-machined gold-plated components and a low-resistance spring maintain a consistent electrical path.
- **Maximum Stability:** Tested to a minimum of 50G shock and 10G vibration with no spikes $>1\mu\text{s}$ and $>1.15\text{V}$ with 0.5A applied.
- **Maximum Endurance:** 1,000,000 cycles and still electrically silent.
- **Maximum Range:** Six families of single and double row strip assemblies for .100" mounting grid - low and high profile surface mount styles available on carrier tape & a thru-hole style for manual placement. Plus – a choice of 45 discrete spring-loaded contacts for use in customer specific assemblies.

(1/09-506,525,534,537,540,546,554,560,561,562,568,571)

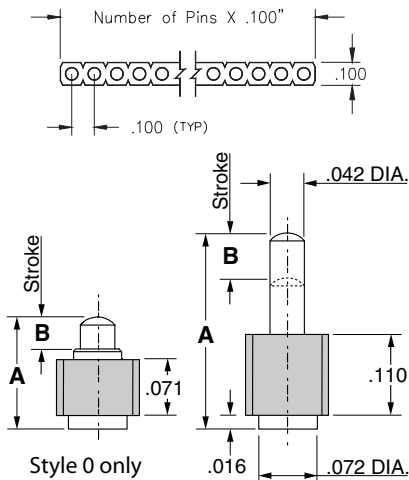
Mill-Max Mfg. Corp. • 190 Pine Hollow Road, Oyster Bay, NY 11771-0300
516-922-6000 • Fax: 516-922-9253 • www.mill-max.com



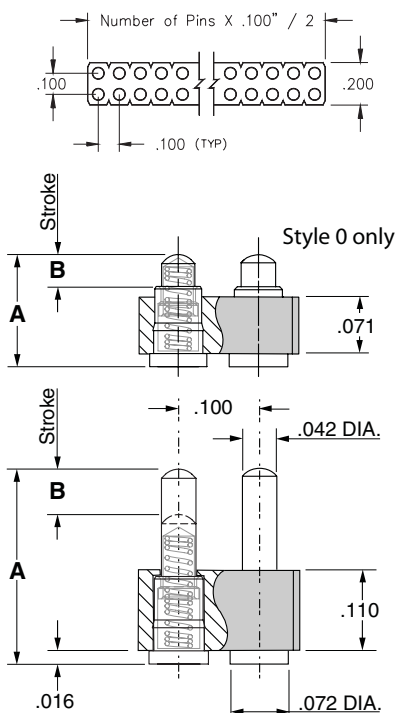
- Modular contacts for use on .100" grid, available in five heights from .137" to .236", supplied in single and double row contact strips.
- Precision machined piston / base and gold plated components assure a 1,000,000 min. cycle life.
- Pistons have a long stroke relative to the low profile of the assembly.
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak.
- High temperature thermoplastic insulators are suitable for surface mount processes.
- Both 811 & 813 series, contact styles 1 thru 4, are available on 32mm wide carrier tape for pick and place assembly per EIA-481. See page 119 for strip lengths available and ordering information.



SINGLE ROW Series 811



DOUBLE ROW Series 813



Ordering Information

Single Row Series 811

811-22-0XX-30-00X-101

Specify # of contacts

Specify contact style 0-4

01-64

Double Row Series 813

813-22-0XX-30-00X-101

Specify # of contacts

Specify contact style 0-4

04-72

CONTACT STYLE	INITIAL HEIGHT A	Stroke B
0	.137	.039
1	.177	.045
2	.197	.055
3	.217	.055
4	.236	.055

Technical Specifications

Materials:

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

Mechanical:

Spring force @ initial height (A): 25 grams
 Spring force @ mid stroke (B/2): 60 grams
 Spring force @ full stroke (B): 95 grams
 Durability: 1,000,000 cycles min.
 Coplanarity: .005" (Single Row up to 10 pins; Double Row up to 20 pins) For higher pin counts contact Tech Support.

Electrical:

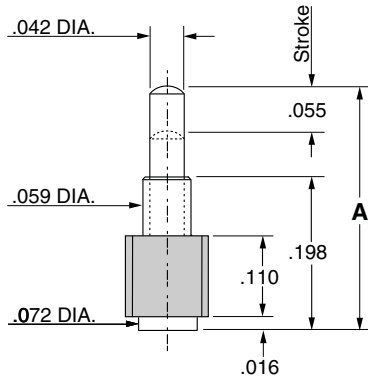
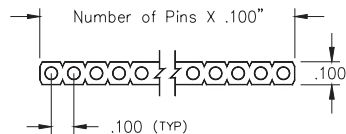
Voltage rating: 100Vrms/150Vdc
 Current rating: 2A (continuous), 3A (peak) per contact
 Contact resistance: 20mΩ max.
 Insulation resistance: 10,000MΩ min.
 Dielectric strength: 700Vrms min.
 Capacitance: 1pF max.



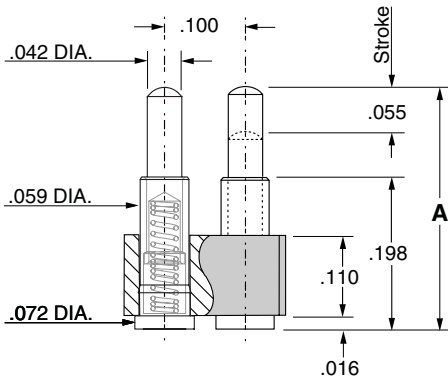
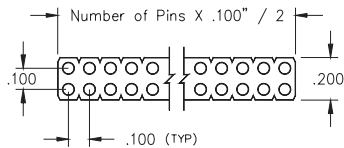
- Modular contacts for use on .100" grid, available in ten heights from .255" to .430", supplied in single and double row contact strips.
- Precision machined piston / base and gold plated components assure a 1,000,000 min. cycle life.
- Pistons have a long stroke relative to the low profile of the assembly.
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak.
- High temperature thermoplastic insulators are suitable for surface mount processes.
- Both 812 & 814 series are available on 32mm wide carrier tape for automated pick and place assembly per EIA-481. See page 119 for strip lengths available and ordering information.



SINGLE ROW Series 812



DOUBLE ROW Series 814



Ordering Information

Single Row Series 812

812-22-0XX-30-00X-101

Specify # of contacts → 02-64
 Specify contact style 0-9

Double Row Series 814

814-22-0XX-30-00X-101

Specify # of contacts → 04-72
 Specify contact style 0-9

CONTACT STYLE	INITIAL HEIGHT A	CONTACT STYLE	INITIAL HEIGHT A
0	.255	5	.350
1	.275	6	.370
2	.295	7	.390
3	.315	8	.410
4	.335	9	.430

Technical Specifications

Materials:

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

Mechanical:

Spring force @ initial height (A): 25 grams
 Spring force @ mid stroke (.0275): 60 grams
 Spring force @ full stroke (.055): 95 grams
 Durability: 1,000,000 cycles min.

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.



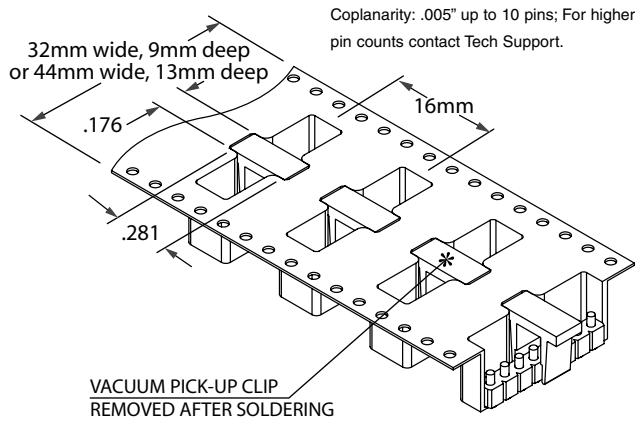
Ordering Information for Series 811/812/813/814 in Carrier Tape

Single Row Series 811/812

811-22-00X-30-00X-191
Specify # of contacts → 2-8 (32mm wide tape, 400 parts per 13" reel) → Specify contact style 1-4

812-22-00X-30-00X-191
Specify # of contacts → 2-8 (32mm wide tape, 400 parts per 13" reel) → Specify contact style 0-2

812-22-0XX-30-00X-191
Specify # of contacts → 2-12 (44mm wide tape, 200 parts per 13" reel) → Specify contact style 3-9

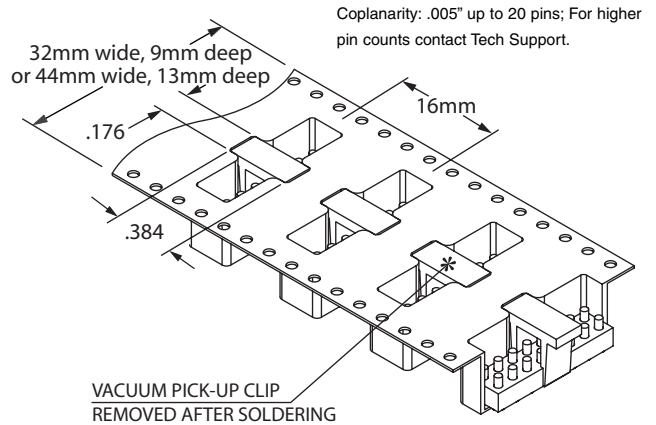


Double Row Series 813/814

813-22-0XX-30-00X-191
Specify # of contacts → 04-16 (32mm wide tape, 400 parts per 13" reel) → Specify contact style 1-4

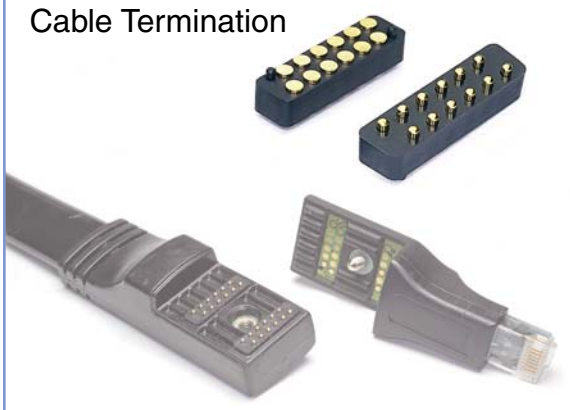
814-22-0XX-30-00X-191
Specify # of contacts → 04-16 (32mm wide tape, 400 parts per 13" reel) → Specify contact style 0-2

814-22-0XX-30-00X-191
Specify # of contacts → 04-24 (44mm wide tape, 200 parts per 13" reel) → Specify contact style 3-9



Some Typical Applications

Cable Termination



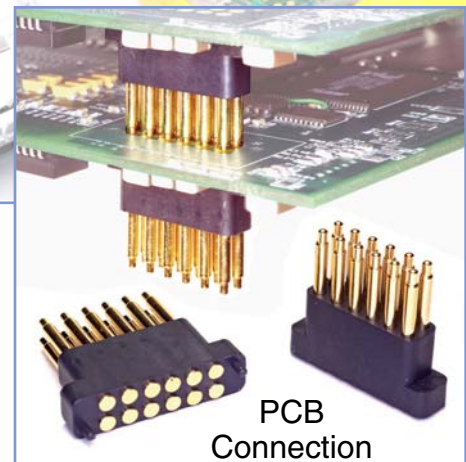
Internal Battery Connection



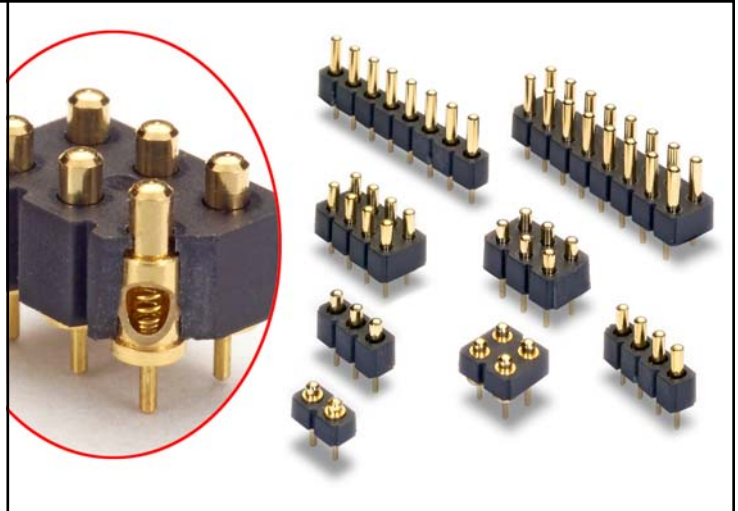
Charging Base for Portable Instruments



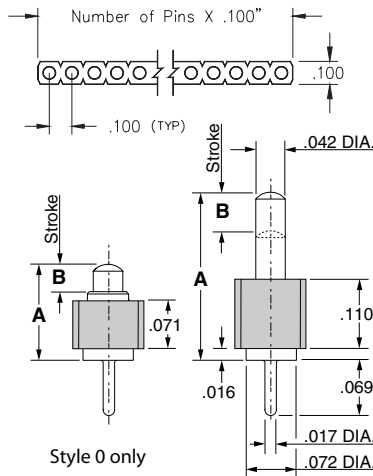
PCB Connection



- Modular contacts for use on .100" grid, available in five heights from .137" to .236", supplied in single and double row contact strips.
- Precision machined piston / base and gold plated components assure a 1,000,000 min. cycle life.
- Pistons have a long stroke relative to the low profile of the assembly.
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak.
- High temperature thermoplastic insulators are suitable for surface mount processes.
- 821 & 823 series contact strips are designed for manual placement into $\varnothing.022 \pm .003$ " plated-thru-holes in the circuit board prior to hand, wave or reflow soldering.



SINGLE ROW Series 821



Ordering Information

Single Row Series 821

821-22-0XX-10-00X-101

Specify contact style 0-4

Specify # of contacts → 02-64

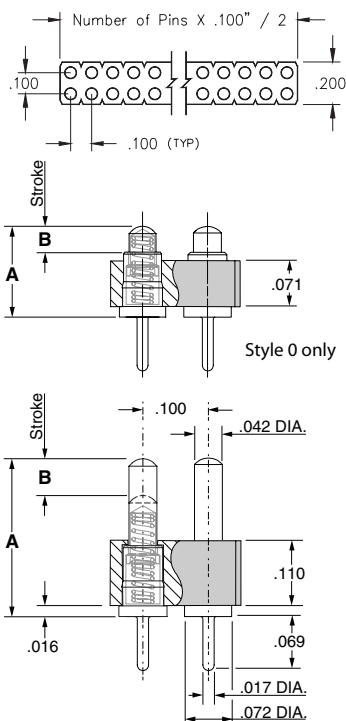
Double Row Series 823

823-22-0XX-10-00X-101

Specify contact style 0-4

Specify # of contacts → 04-72

DOUBLE ROW Series 823



CONTACT STYLE	INITIAL HEIGHT A	Stroke B
0	.137	.039
1	.177	.045
2	.197	.055
3	.217	.055
4	.236	.055

Technical Specifications

Materials:

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

Mechanical:

Spring force @ initial height (A): 25 grams
 Spring force @ mid stroke (B/2): 60 grams
 Spring force @ full stroke (B): 95 grams
 Durability: 1,000,000 cycles min.

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.



- Modular contacts for use on .100" grid, available in a height of .302", supplied in single and double row contact strips.
- Precision machined piston / base and gold plated components assure a 1,000,000 min. cycle life.
- Pistons have a .045 mid stroke & .090 max stroke.
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak.
- High temperature thermoplastic insulators are suitable for surface mount processes.
- 825 & 827 series contact strips are designed for manual placement into $\varnothing .030 \pm .003$ " plated-thru-holes in the circuit board prior to hand, wave or reflow soldering.



SINGLE ROW Series 825

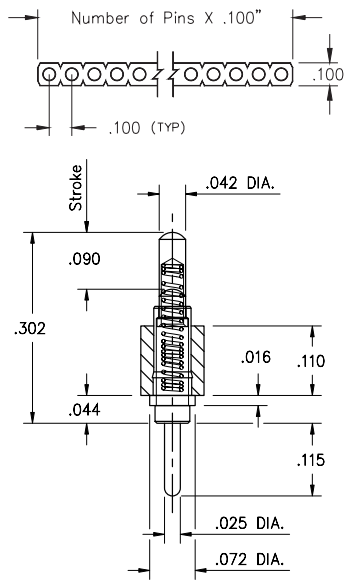


Fig. 1

Ordering Information

Single Row Series 825

825-22-0XX-10-001101

Specify # of contacts → 02-64

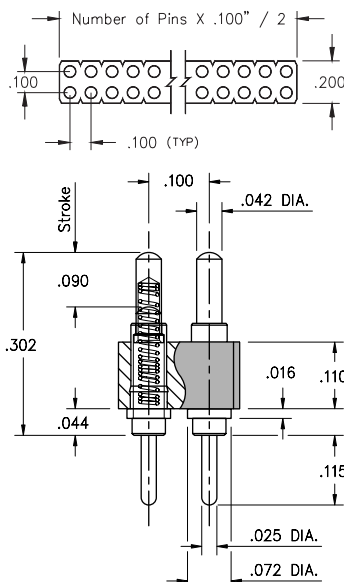
Fig. 2

Double Row Series 827

827-22-0XX-10-001101

Specify # of contacts → 04-72

DOUBLE ROW Series 827



Technical Specifications

Materials:

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

Mechanical:

Spring force @ initial height (A): 25 grams
 Spring force @ mid stroke (B/2): 60 grams
 Spring force @ full stroke (B): 95 grams
 Durability: 1,000,000 cycles min.

Electrical:

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





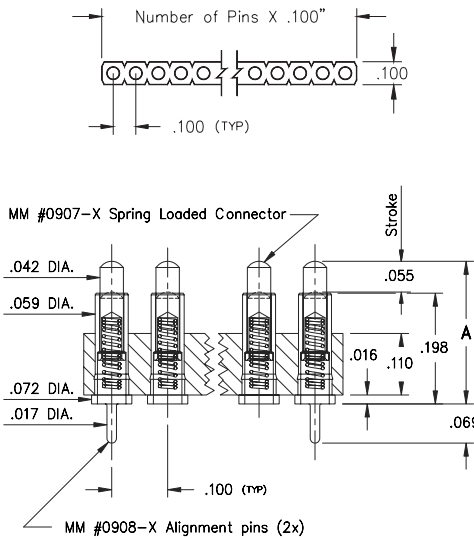
SPRING LOADED CONNECTORS
Surface Mount with Alignment pins
Single and Double Row Strips

Series 812...01X101
814...01X101

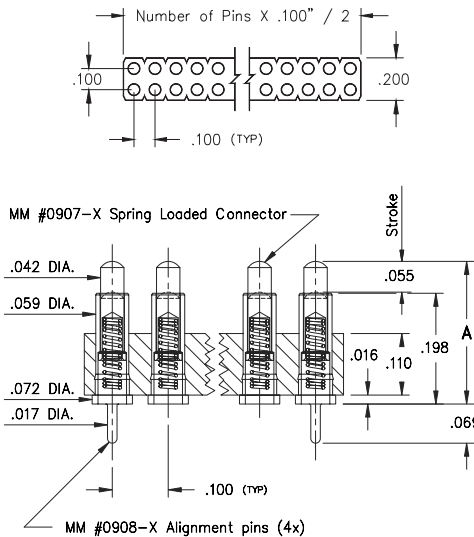
- Modular contacts for use on .100" grid, available in ten heights from .255" to .430", supplied in single and double row contact strips.
- Precision machined piston / base and gold plated components assure a 1,000,000 min. cycle life.
- Pistons have a .0275 mid stroke & .055 max stroke.
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak.
- High temperature thermoplastic insulators are suitable for surface mount processes.
- 812 & 814 series contact strips are designed for manual placement into Ø .023±.003" plated-throughs in the circuit board prior to intrusive reflow soldering.



Single Row Series 812...01X101



Double Row Series 814...01X101



Ordering Information

Single Row Series 812...01X101

812-22-0XX-30-01X-101

Specify # of contacts → 03-64
 Specify contact style 0-9

Double Row Series 814...01X101

814-22-XXX-30-01X-101

Specify # of contacts → 006-100
 Specify contact style 0-9

CONTACT STYLE	INITIAL HEIGHT A	CONTACT STYLE	INITIAL HEIGHT A
0	.255	5	.350
1	.275	6	.370
2	.295	7	.390
3	.315	8	.410
4	.335	9	.430

Technical Specifications

Materials:

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

Mechanical:

Spring force @ initial height (A): 25 grams
 Spring force @ mid stroke (B/2): 60 grams
 Spring force @ full stroke (B): 95 grams
 Durability: 1,000,000 cycles min.

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.

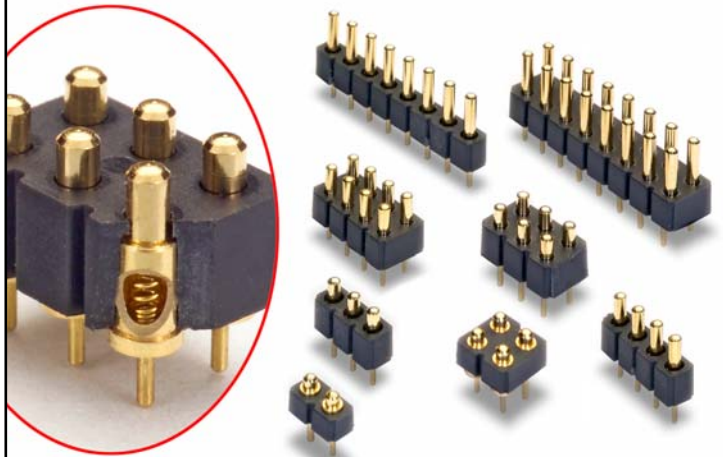




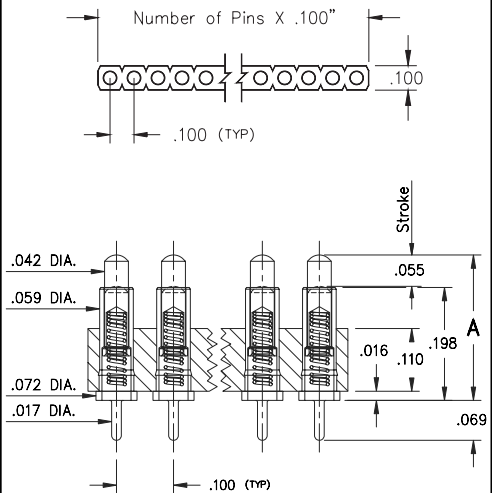
SPRING LOADED CONNECTORS
Thru Hole Mount
Single and Double Row Strips

Series 816...00X101
818...00X101

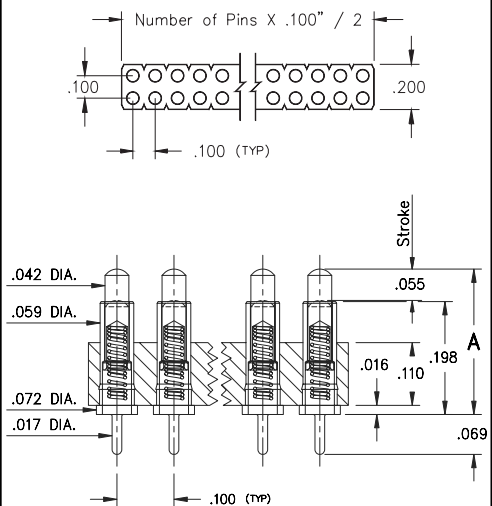
- Modular contacts for use on .100" grid, available in ten heights from .255" to .430", supplied in single and double row contact strips.
- Precision machined piston / base and gold plated components assure a 1,000,000 min. cycle life.
- Pistons have a .0275 mid stroke & .055 max stroke.
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak.
- High temperature thermoplastic insulators are suitable for surface mount processes.
- 816 & 818 series contact strips are designed for manual placement into Ø .023±.003" plated-throughs in the circuit board prior to intrusive reflow soldering.



Single Row Series 816...00X101



Double Row Series 818...00X101



Ordering Information

Single Row Series 816...00X101

816-22-0XX-10-00X-101

Specify # of contacts → 02-64
 Specify contact style 0-9

Double Row Series 818...00X101

818-22-0XX-10-00X-101

Specify # of contacts → 04-72
 Specify contact style 0-9

CONTACT STYLE	INITIAL HEIGHT A	CONTACT STYLE	INITIAL HEIGHT A
0	.255	5	.350
1	.275	6	.370
2	.295	7	.390
3	.315	8	.410
4	.335	9	.430

Technical Specifications

Materials:

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

Mechanical:

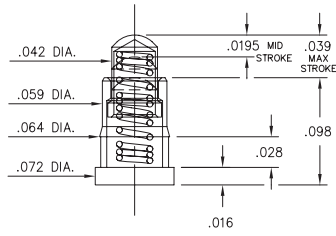
Spring force @ initial height (A): 25 grams
 Spring force @ mid stroke (B/2): 60 grams
 Spring force @ full stroke (B): 95 grams
 Durability: 1,000,000 cycles min.

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.

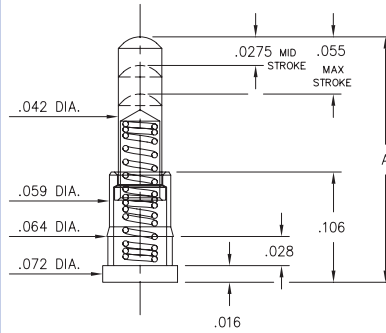


0900-0



0900-0-00-00-00-00-11-0
Short stroke, Surface mount
Lowest profile

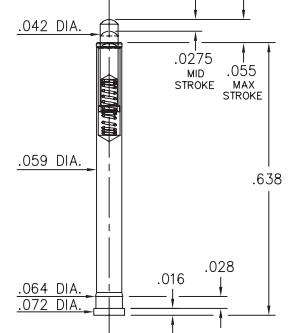
0900-1⇒4



0900-X-00-00-00-00-11-0
Standard stroke, Surface mount
Low profile

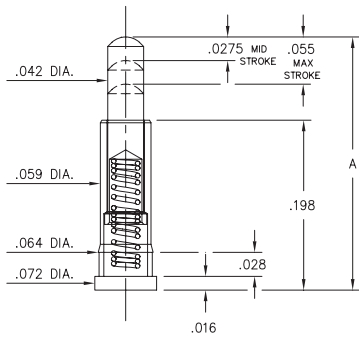
Basic Part Number	Length A
0900-1	.177
0900-2	.197
0900-3	.217
0900-4	.236

0905



0905-0-00-00-00-00-11-0
Standard stroke, Surface mount
Highest Profile

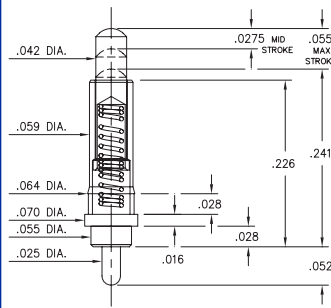
0907-X



0907-X-15-20-75-14-11-0
Standard stroke, Surface mount
High profile

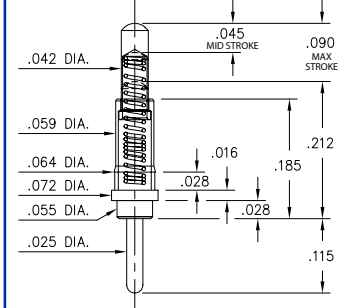
Basic Part Number	Length A
0907-0	.255
0907-1	.275
0907-2	.295
0907-3	.315
0907-4	.335
0907-5	.350
0907-6	.370
0907-7	.390
0907-8	.410
0907-9	.430

0901



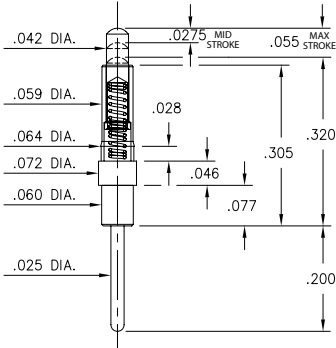
0901-0-00-00-00-00-11-0
Standard stroke
Solder mount in .027 min. mounting hole

0914



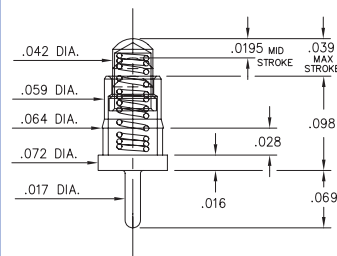
0914-0-15-20-77-14-11-0
Long stroke.
Solder mount in .027 min. mounting hole

0922



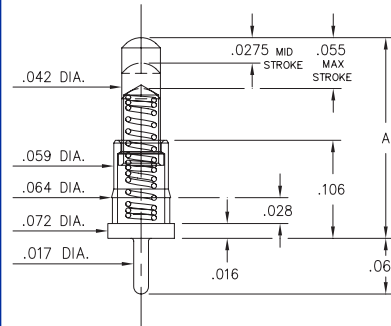
0922-0-15-20-75-14-11-0
Standard stroke
Solder mount in .027 min. mounting hole

0906-0



0906-0-15-20-76-14-11-0
Short stroke
Solder mount in .018 min. mounting hole

0906-1⇒4



0906-X-15-20-75-14-11-0
Standard stroke
Solder mount in .018 min. mounting hole

Basic Part Number	Length A
0906-1	.177
0906-2	.197
0906-3	.217
0906-4	.236

SPECIFICATIONS

SLEEVE & PLUNGER MATERIAL: Copper Alloy
SPRING MATERIAL: Beryllium Copper
CURRENT RATING: 2A continuous, 3A peak
CONTACT RESISTANCE: 20mΩ max.
DURABILITY: 1,000,000 cycles min.
DIMENSION IN INCHES
TOLERANCES ON: LENGTHS: ±.005
 DIAMETERS: ±.002
 ANGLES: ± 2°

ORDER CODE: XXXX - X - 15 - 20 - 7X - 14 - 11 - 0

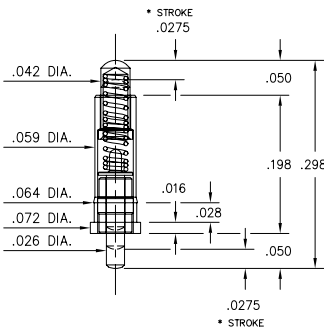
BASIC PART # →
SLEEVE & PLUNGER FINISH:
 20 20μ" GOLD OVER NICKEL

SPRING FINISH:
 14 10μ" GOLD OVER NICKEL

SPRING
 75 Standard Stroke (.055): { 25 grams@min stroke
 76 Short Stroke (.039): { 60 grams@mid stroke
 77 Long Stroke (.090): { 95 grams@max stroke

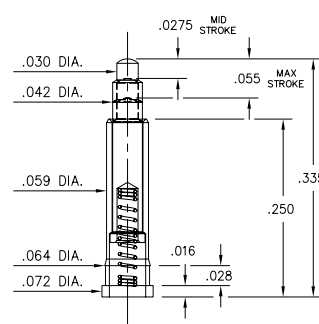


0980



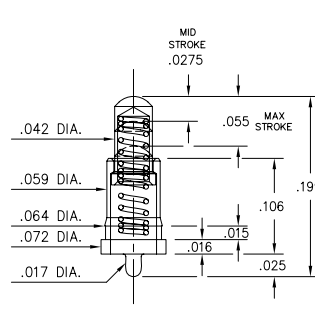
0980-0-15-20-75-14-11-0
Double action, *.055 Combined Stroke
Mount between parallel circuit boards

0925



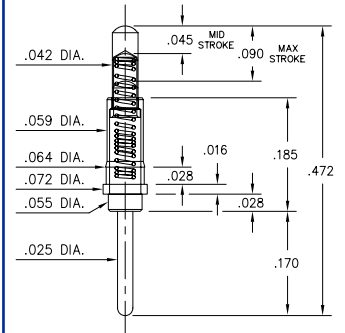
0925-0-15-20-73-14-26-0
Standard Stroke
Surface Mount

0930



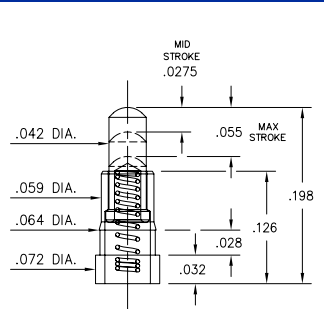
0930-0-15-20-75-14-11-0
Standard Stroke
Solder Mount in .018 min. mounting hole

0932



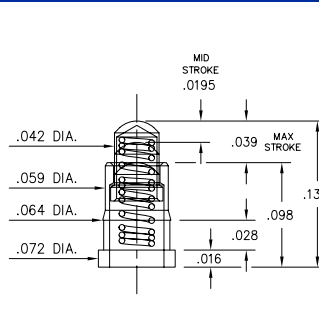
0932-0-15-20-77-14-11-0
Long Stroke
Solder Mount in .027 min. mounting hole

0934



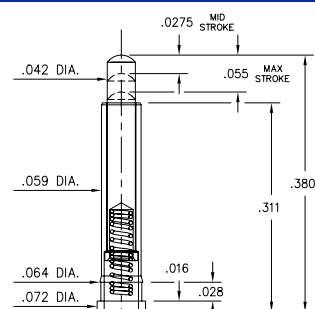
0934-0-15-20-74-14-26-0
Standard Stroke
Surface Mount

0923



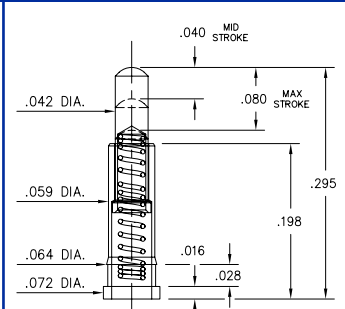
0923-0-15-20-78-14-11-0
Short Stroke
Surface Mount

0927



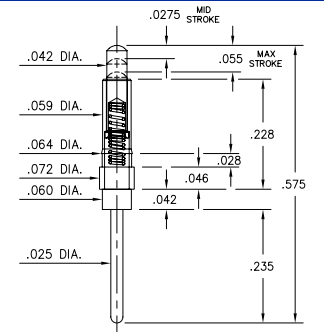
0927-0-15-20-75-14-11-0
Standard Stroke
Surface Mount

0928



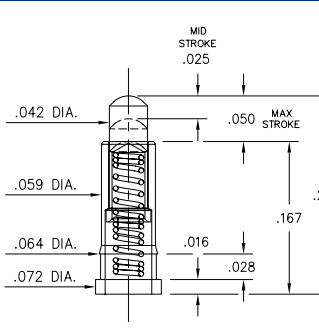
0928-0-15-20-77-14-11-0
Long Stroke
Surface Mount

0929



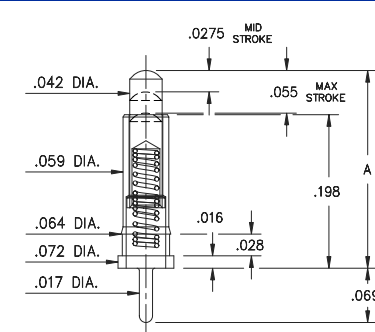
0929-0-15-20-75-14-11-0
Standard Stroke
Solder Mount in .027 min. mounting Hole

0936



0936-0-15-20-75-14-11-0
Standard Stroke
Surface Mount

0908-X



0908-X-15-20-75-14-11-0
Standard Stroke
Solder mount in .018 min. mounting hole

Basic Part Number	Length A
0908-0	.255
0908-1	.275
0908-2	.295
0908-3	.315
0908-4	.335
0908-5	.350
0908-6	.370
0908-7	.390
0908-8	.410
0908-9	.430

SPECIFICATIONS

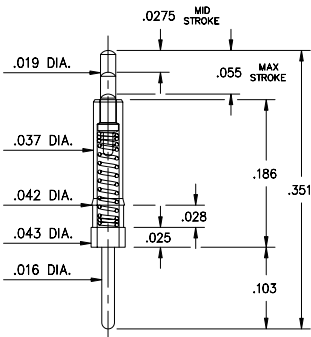
SLEEVE & PLUNGER MATERIAL: Copper Alloy
SPRING MATERIAL: Beryllium Copper
CURRENT RATING: 2A continuous, 3A peak
CONTACT RESISTANCE: 20mΩ max.
DURABILITY: 1,000,000 cycles min.
DIMENSION IN INCHES
TOLERANCES ON: LENGTHS: ±.005
 DIAMETERS: ±.002
 ANGLES: ± 2°

ORDER CODE: XXXX - X - 15 - 20 - 7X - 14 - XX - 0

BASIC PART # →
SLEEVE & PLUNGER FINISH: 20 20μ" GOLD OVER NICKEL
SPRING FINISH: 14 10μ" GOLD OVER NICKEL
SPRING
 71 Standard Stroke (.055): xx grams@min stroke
 75 Standard Stroke (.055): 25 grams@min stroke
 73/74 Standard Stroke (.055): 60 grams@min stroke
 77 Long Stroke (.090): 95 grams@min stroke
 78 Short Stroke (.039): xx grams@min stroke



0950



0950-0-15-20-71-14-11-0

Standard Stroke

Solder Mount in .018 min. mounting hole

SPECIFICATIONS

SLEEVE & PLUNGER MATERIAL: Copper Alloy

SPRING MATERIAL: Beryllium Copper

CURRENT RATING: 2A continuous, 3A peak

CONTACT RESISTANCE: 20mΩ max.

DURABILITY: 1,000,000 cycles min.

DIMENSION IN INCHES

TOLERANCES ON: LENGTHS: ±.005
DIAMETERS: ±.002
ANGLES: ± 2°

ORDER CODE: XXXX - X - 15 - 20 - 7X - 14 - XX - 0

BASIC PART # →
SLEEVE & PLUNGER FINISH:
20 20µ" GOLD OVER NICKEL

SPRING FINISH:
14 10µ" GOLD OVER NICKEL

SPRING

71 Standard Stroke (.055):	}	xx grams@min stroke
75 Standard Stroke (.055):		25 grams@min stroke
73/74 Standard Stroke (.055):		60 grams@min stroke
77 Long Stroke (.090):		95 grams@min stroke
78 Short Stroke (.039):		xx grams@min stroke

