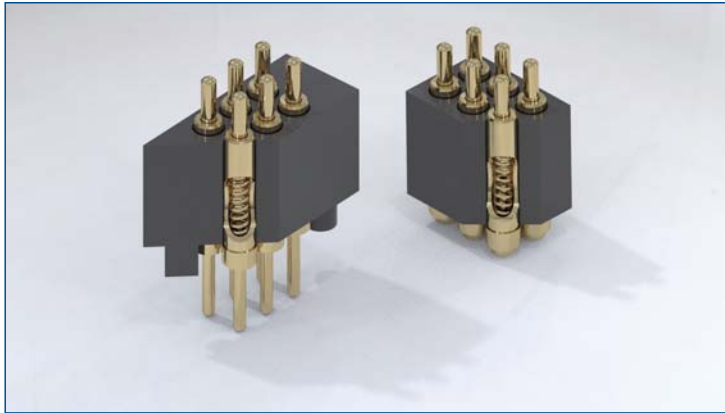


MAXIMUM SOLUTIONS

Mill-Max Series 854 Single Row and 855 Double Row .050" Pitch Surface Mount and Through-Hole Spring-Loaded Connectors and Mating Target Connectors



Mill-Max has developed high density, .050" (1,27 mm) pitch through-hole and surface mount spring-loaded connectors (SLC) available in single and double-row strip packaging.

Each precision-machined spring pin component is plated 20u" hard gold and assembled in a high temperature thermoplastic insulator suitable for wave and reflow soldering processes. Every Mill-Max SLC is RoHS compliant.

Series [854-22-OXX-10-001101](#) and [855-22-OXX-10-001101](#) through-hole insulators feature molded standoffs to improve soldering and cleaning beneath the connector. Tail diameters of .016" (0,41 mm) require minimal diameter plated holes for connector mounting, maximizing signal routing between pins.

Series [854-22-OXX-30-001101](#) and [855-22-OXX-30-001101](#) surface mount spring connectors are low profile, standing less than .230" (5,84 mm) tall when engaged mid-stroke (.0275" -- 0,69 mm.) Each SMT spring pin features a base geometry of .030" (0,76 mm) round by .010" (0,25 mm) tall to maximize soldering surface area and promote solder joint fillet.

(7/14 -- PR606)

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



Applications

Mill-Max Spring-Loaded Contacts are button type contacts interconnecting two parallel conductive surfaces inside an electronic device or instrument. The stroking movement of the spring pin piston accommodates uneven, non-parallel conditions due to mechanical tolerances in the assembly.

Mill-Max SLC's are often used as the internal battery connection in portable instruments, or as the external battery connection for charging these instruments (docking stations.)

Another popular application is stacking printed circuit boards in an assembly. Spring pin connectors are excellent for mezzanine-tiered board modules that require blind mate assembly.

Mill-Max also offers through-hole and surface mount .050" pitch Target Connectors to provide a gold-plated, flat and conductive mating surface. Mill-Max Target Connector Pins are precision-machined and assembled into thermoplastic insulators. Mill-Max Target Connectors are RoHS compliant and suitable for reflow soldering.

Mill-Max Spring Pin Connector and its Mating Target Connector

854-22-020-10-001101	SIP (1x20)	SLC	Through-hole	2 to 20
856-10-020-10-051000	SIP (1x20)	Target	Through-hole	2 to 20
854-22-020-30-001101	SIP (1x20)	SLC	Surface Mount	2 to 20
856-10-020-30-051000	SIP (1x20)	Target	Surface Mount	2 to 20
855-22-040-10-001101	STRIP (2x20)	SLC	Through-hole	4 to 40
857-10-040-10-051000	STRIP (2x20)	Target	Through-hole	4 to 40
855-22-040-30-001101	STRIP (2x20)	SLC	Surface Mount	4 to 40
857-10-040-30-051000	STRIP (2x20)	Target	Surface Mount	4 to 40

Mechanical for Spring Pins:

Spring force @ initial height: 25 grams

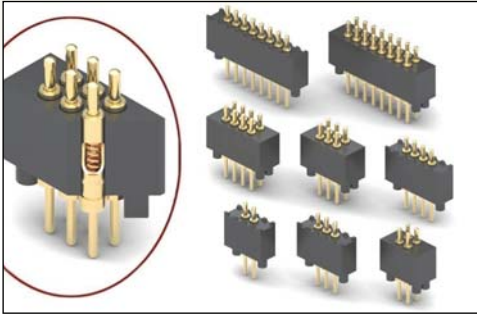
Spring force @ mid stroke (.0275"): 60 grams

For best mechanical result and longest product life, please design to spring mid-stroke parameter of .0275."

For more information on these parts, please visit: www.mill-max.com/PR606.

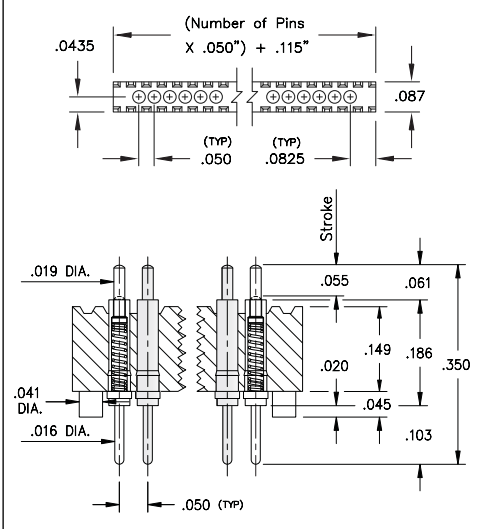
SPRING-LOADED CONNECTORS

SERIES 854 & 855 • .050" GRID THROUGH-HOLE MOUNT • SINGLE AND DOUBLE ROW STRIPS

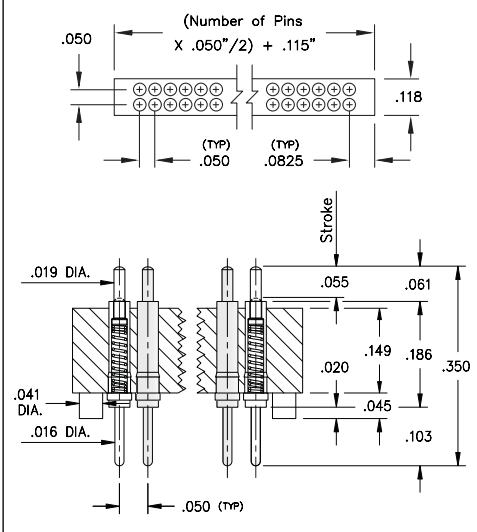


- Modular contacts for use on .050" grid, supplied in single and double row contact strips
- Precision-machined piston / base and gold-plated components assure a 1,000,000 cycle life durability
- Pistons have a .0275" mid. stroke and a .055" max. stroke
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak
- High temperature thermoplastic insulators are suitable for wave and reflow processes
- Both 854 & 855 series contact strips are designed for manual placement into $\varnothing .023 \pm .003$ " plated through-holes in the circuit board prior to hand, wave or reflow soldering

SINGLE ROW Series 854



DOUBLE ROW Series 855



ORDERING INFORMATION

Single Row Series 854

854-22-0XX-10-001101

Specify number of contacts 02-20

Double Row Series 855

855-22-0XX-10-001101

Specify number of contacts 04-40

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: 1,000,000 cycles

Electrical:

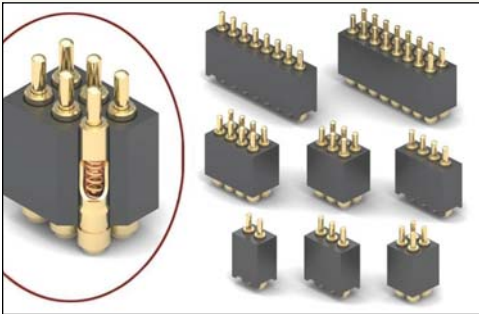
Voltage rating: 100Vrms/150Vdc
 Current rating: 2A (continuous), 3A (peak) per contact
 Contact resistance: $20m\Omega$ max.
 Insulation resistance: $10,000M\Omega$ min.
 Dielectric strength: 700Vrms min.
 Capacitance: 1pF max.

RoHS-2
2011/65/EU



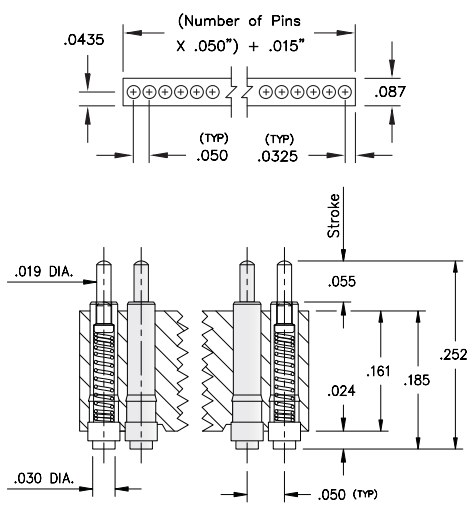
SPRING-LOADED CONNECTORS

SERIES 854 & 855 • .050" GRID SURFACE MOUNT, HIGH DENSITY • SINGLE AND DOUBLE ROW STRIPS

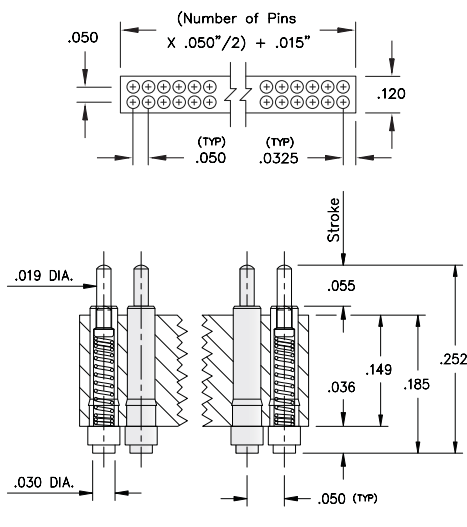


- Modular contacts for use on .050" grid, supplied in single and double row contact strips
- Precision-machined piston / base and gold-plated components assure a 1,000,000 cycle life durability
- Pistons have a .0275" mid. stroke and a .055" max. stroke
- Low resistance, high current contacts are rated at 2 amps continuous, 3 amps peak
- High temperature thermoplastic insulators are suitable for surface mount processes
- 854 & 855 series contact strips are designed for manual placement onto .040" Ø solder pads

SINGLE ROW Series 854



DOUBLE ROW Series 855



ORDERING INFORMATION

Single Row Series 854

854-22-0XX-30-001101

Specify number of contacts 02-20

Double Row Series 855

855-22-0XX-30-001101

Specify number of contacts 04-40

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: 1,000,000 cycles

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 856, 857 • .050" GRID TARGET CONNECTORS FOR SPRING-LOADED ASSEMBLIES • SINGLE AND DOUBLE ROW STRIPS

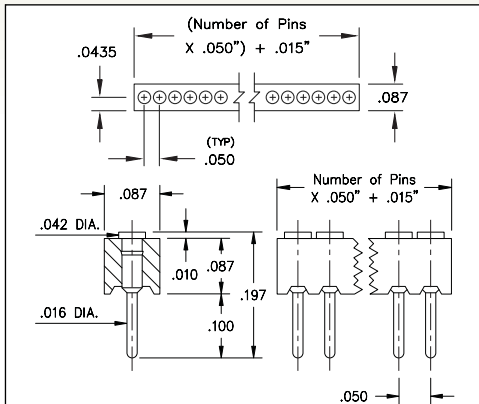


FIG. 1

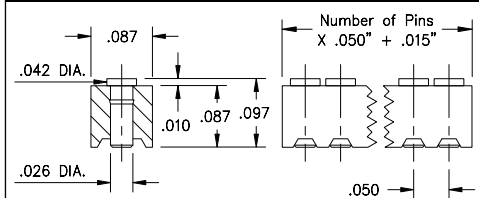


FIG. 2

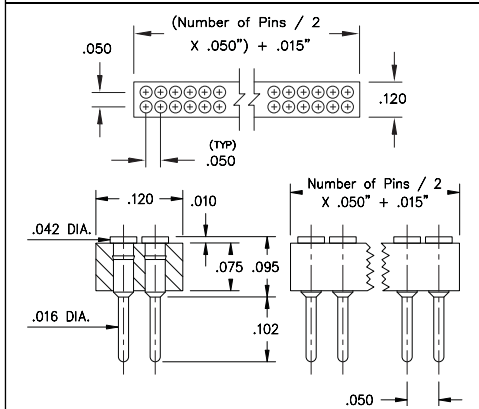


FIG. 3

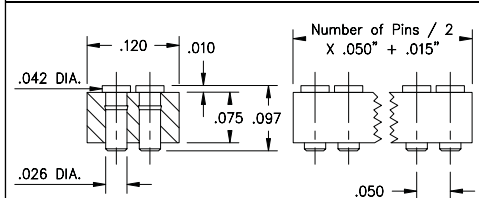
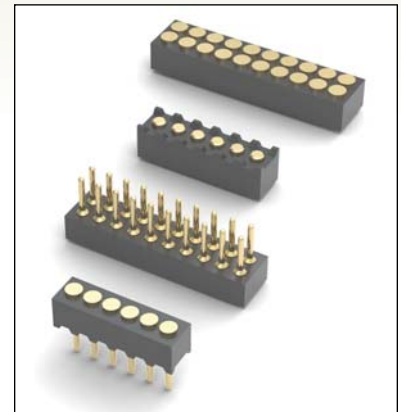


FIG. 4

- Series 856 and 857 Spring Target Connectors, supplied in single and double row strips
- Spring Target Connectors present a large flat surface for making contact with our standard .019" dia. spring pin plungers. The target connectors provide an excellent gold-plated conductive path back to the board-mounted spring pin connector
- Target connectors use MM #1933 and #1935 pins. See page 213 for details
- Insulators are high temperature thermoplastic



ORDERING INFORMATION

	Series 856...051	Standard Solder Tails
FIG. 1	856-10-0	-10-051000
	Specify number of pins	01-20
FIG. 2	Series 856...051	Surface Mount
	856-10-0	-30-051000
	Specify number of pins	02-20
FIG. 3	Series 857...051	Standard Solder Tails
	857-10-0	-10-051000
	Specify number of pins	04-40
FIG. 4	Series 857...051	Surface Mount
	857-10-0	-30-051000
	Specify number of pins	04-40
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; background-color: #90EE90;">RoHS-2 2011/65/EU</div> <div style="border: 1px solid black; border-radius: 50%; padding: 5px;">XX=Plating Code See Below</div> <div style="border: 1px solid black; border-radius: 50%; padding: 5px;">For Electrical, Mechanical & Environmental Data, See page 264</div> </div>		
SPECIFY PLATING CODE XX=	10	◆
Pin Plating	10 μ" Au	