

**MLX™ Series**

**2.13mm (.084") Pin and Socket**

**Power Connector System**



## FEATURES AND SPECIFICATIONS

# molex® 2.13mm (.084") Pitch MLX Series Pin and Socket Power Connector System

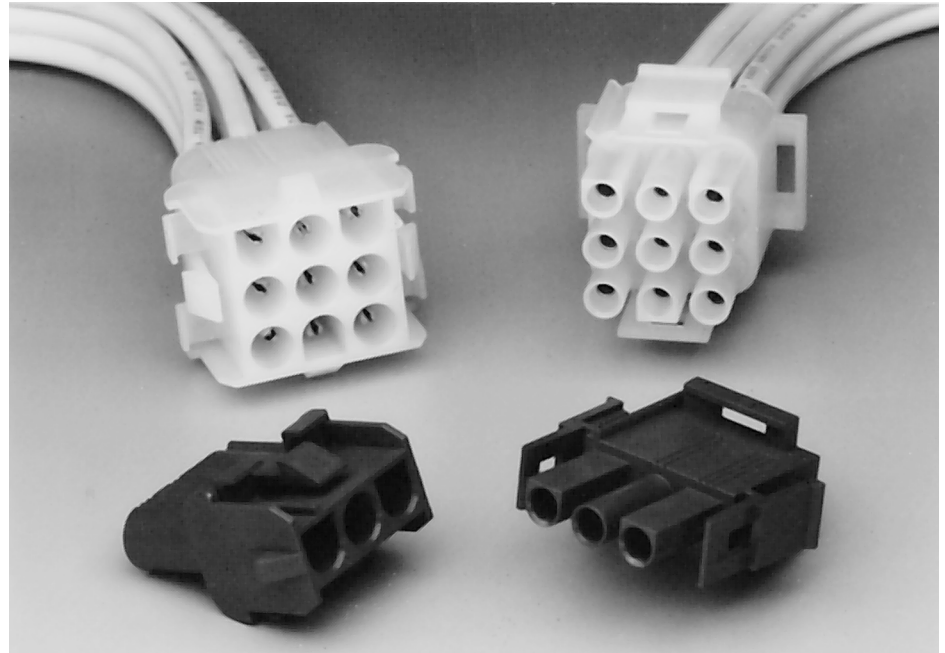
The MLX Series is an industry compatible line of 2.13mm (.084") diameter plug and cap power connections. The MLX Series is interchangeable, intermateable and intermountable with industry standard products. This allows for greater flexibility in mating with existing wire harnesses, connectors, or PCB headers. The connectors are recognized by UL and certified by CSA.

**Housings:** The MLX Series is offered in a variety of popular configurations. Housings are molded in Nylon 6/6 material in either UL 94V-2 rating (white), UL 94V-0 rating (brick red), or UL 94V-0 rating (white). The housings are designed for both male and female Molex terminals. Additionally the housings will accept industry compatible terminals. As an added convenience, Molex has provided circuit identification grooves for circuits 2 and 3 along with the industry standard identification rib for circuit 1.

**Terminals:** The pin (male) and socket (female) terminals are each available in a variety of material and plating options. Both terminals are designed to run in Molex application tooling and in other commercially available, compatible equipment.

### Features and Benefits

- Cross tested to assure industry compatibility
  - Housing-to-housing
  - Terminal-to-terminal
  - Terminal retention
  - Crimp strength
  - Panel retention
  - Electrical properties
- Utilizes Molex and/or industry compatible termination equipment
- UL recognized File No. E-29179
- CSA certified File No. LR-19980



## SPECIFICATIONS

### Electrical

Voltage\*: 600V

Current†: 13.5A max.

Temperature Rise: +30°C max. (carrying rated current load)

### Mechanical

Mating Force: 1.5 lbs. (0.7 Kg) per circuit

Panel Retention Strength: 75 lbs. (34.1 Kg) min.

Positive Latch Retention Strength: 35 lbs. (15.9 Kg) min.

### Physical

Contact: Brass or Phosphor Bronze

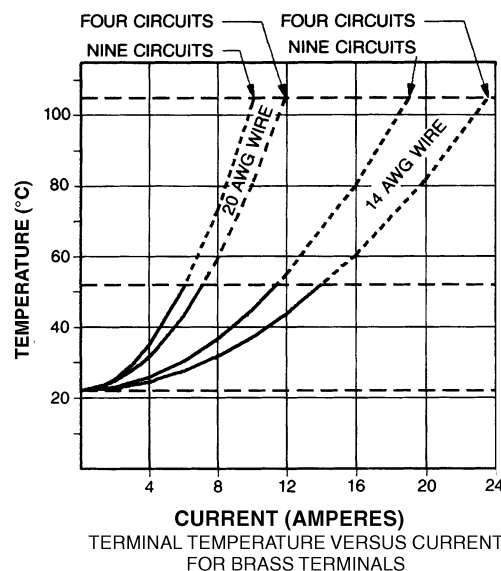
Plating: Tin or Gold (30µ")

Housing: UL 94V-2—White 6/6 nylon

UL 94V-0—Brick Red or White 6/6 nylon

\*Per circuit, based on fully loaded housings, using 14 AWG wire

†Based on socket (female) terminal mated to split pin (male) terminal



Housing Temperature Index 105°C for Standard Housings

+30°C Rise over Ambient Temperature

Ambient Temperature +22°C for Standard Heat

NOTE: Graph shows average performance and is not to be used as a specification of product capability in a specific application

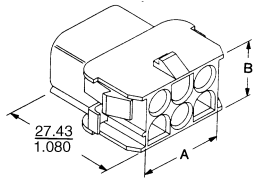
## FEATURES AND SPECIFICATIONS

### Features and Benefits

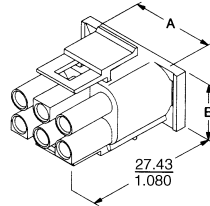
- Systems are intermateable, intermountable, and interchangeable with industry standard versions
- Cross compatible tested to assure industry compatibility

- Positive lock
- Fully isolated contacts
- Housing will accept male or female terminals

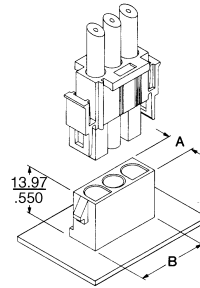
# molex® 2.13mm (.084") Pitch MLX Series Pin and Socket Power Connector System



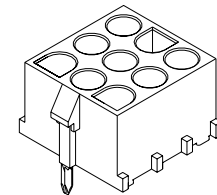
4202 Series



4201 Series



4200 Vertical Header Series



43255 Series  
Vertical Polarization Header

## ORDERING INFORMATION

Circuit I.D. Shown is Mating Side of Plug Wire Side of Cap									
Circuits		1	2	3	4	6	9	12	15
Current (max.)*		13.5	13.5	13.5	13.5	11	11	11	11
Voltage (max.)*		600	600	600	600	600	600	600	600
<b>Plug Housing - 42021 Series</b>									
94V-2 (White)		50-84-1010	•50-84-1020	•50-84-1030	•50-84-1040	•50-84-1060	•50-84-1090	50-84-1120	50-84-1150
94V-0 (Brick Red)		50-84-1011	•50-84-1021	•50-84-1031	•50-84-1041	•50-84-1061	•50-84-1091	50-84-1121	50-84-1151
94V-0 (White)		50-84-1015	•50-84-1025	•50-84-1035	•50-84-1045	•50-84-1065	•50-84-1095	50-84-1125	50-84-1155
Dimension A		7.37 (2.90)	7.62 (.300)	7.62 (.300)	7.62 (.300)	20.32 (.800)	20.32 (.800)	20.32 (.800)	20.32 (.800)
Dimension B		7.37 (2.90)	13.97 (.550)	20.32 (.800)	26.67 (1.050)	13.97 (.550)	20.32 (.800)	26.67 (1.050)	33.02 (1.300)
<b>Cap Housing - 42022 Series</b>									
94V-2 (White)		50-84-2010	•50-84-2020	•50-84-2030	•50-84-2040	•50-84-2060	•50-84-2090	50-84-2120	50-84-2150
94V-0 (Brick Red)		50-84-2011	•50-84-2021	•50-84-2031	•50-84-2041	•50-84-2061	•50-84-2091	50-84-2121	50-84-2151
94V-0 (White)		50-84-2012	•50-84-2022	•50-84-2032	•50-84-2042	•50-84-2062	•50-84-2092	50-84-2122	50-84-2152
Dimension A		9.65 (.380)	7.62 (.300)	7.62 (.300)	7.62 (.300)	20.32 (.800)	20.32 (.800)	20.32 (.800)	20.32 (.800)
Dimension B		9.65 (.380)	13.97 (.550)	20.32 (.800)	26.67 (1.050)	13.97 (.550)	20.32 (.800)	26.67 (1.050)	33.02 (1.300)
Panel Cutout C†			8.64 (.340)	8.64 (.340)	8.64 (.340)	12.19 (.480)	12.19 (.480)	12.19 (.480)	12.19 (.480)
Panel Cutout D			2.41 (.095)	2.41 (.095)	2.41 (.095)	6.99 (.275)	6.99 (.275)	6.99 (.275)	6.99 (.275)
Panel Cutout E			6.35 (.250)	6.35 (.250)	6.35 (.250)	6.35 (.250)	6.35 (.250)	8.89 (.350)	8.89 (.350)
Panel Cutout F			13.46 (.530)	13.46 (.530)	13.46 (.530)	26.16 (1.030)	26.16 (1.030)	26.16 (1.030)	26.16 (1.030)
Panel Cutout G			14.35 (.565)	20.70 (.815)	27.05 (1.065)	14.35 (.565)	20.70 (.815)	27.05 (1.065)	33.40 (1.315)
<b>Vertical Header Assembly - A-42002 Series (Contacts are Phosphor Bronze)</b>									
94V-2 (White)	Tin	Male	•10-84-4020	•10-84-4030	•10-84-4040	•10-84-4060	•10-84-4090	10-84-4120	10-84-4150
		Female	•10-84-4022	•10-84-4032	•10-84-4042	•10-84-4062	•10-84-4092	10-84-4122	10-84-4152
	Select Gold	Male	10-84-4024	10-84-4034	10-84-4044	10-84-4064	10-84-4094	10-84-4124	10-84-4154
		Female	10-84-4026	10-84-4036	10-84-4046	10-84-4066	10-84-4096	10-84-4216	10-84-4156
94V-0 (Brick Red)	Tin	Male	•10-84-4021	•10-84-4031	•10-84-4041	•10-84-4061	•10-84-4091	10-84-4121	10-84-4151
		Female	10-84-4023	10-84-4033	10-84-4043	10-84-4063	10-84-4093	10-84-4123	10-84-4153
	Select Gold	Male	10-84-4025	10-84-4035	10-84-4045	10-84-4065	10-84-4095	10-84-4125	10-84-4155
		Female	10-84-4027	10-84-4037	10-84-4047	10-84-4067	10-84-4097	10-84-4217	10-84-4157
94V-0 (White)	Tin	Male	•10-84-5020	•10-84-5030	•10-84-5040	•10-84-5060	•10-84-5090	10-84-5120	10-84-5150
		Female	10-84-5021	10-84-5031	10-84-5041	10-84-5061	10-84-5091	10-84-5121	10-84-5151
	Select Gold	Male	10-84-5022	10-84-5032	10-84-5042	10-84-5062	10-84-5092	10-84-5122	10-84-5152
		Female	10-84-5023	10-84-5033	10-84-5043	10-84-5063	10-84-5093	10-84-5123	10-84-5153
<b>Vertical Header Assembly - A-43255 Series (Contacts are Phosphor Bronze)</b>									
94V-2 (White)	Tin	Male	•43255-0113	•43255-0121	•43255-0129	•43255-0137	•43255-0145	43255-0153	43255-0161
		Female	43255-0115	43255-0123	43255-0131	43255-0139	43255-0147	43255-0155	43255-0163
	Select Gold	Male	43255-0114	43255-0122	43255-0130	43255-0138	43255-0146	43255-0154	43255-0162
		Female	43255-0116	43255-0124	43255-0132	43255-0140	43255-0148	43255-0156	43255-0164
94V-0 (Brick Red)	Tin	Male	43255-0001	43255-0009	43255-0017	43255-0025	43255-0033	43255-0041	43255-0049
		Female	43255-0057	43255-0065	43255-0073	43255-0081	43255-0089	43255-0097	43255-0105
	Select Gold	Male	43255-0002	43255-0010	43255-0018	43255-0026	43255-0034	43255-0042	43255-0050
		Female	43255-0058	43255-0066	43255-0074	43255-0082	43255-0090	43255-0098	43255-0106
94V-0 (White)	Tin	Male	•43255-0059	•43255-0067	•43255-0075	•43255-0083	•43255-0091	43255-0099	43255-0107
		Female	43255-0003	43255-0011	43255-0019	43255-0027	43255-0035	43255-0043	43255-0051
	Select Gold	Male	43255-0060	43255-0068	43255-0076	43255-0084	43255-0092	43255-0100	43255-0108
		Female	43255-0004	43255-0012	43255-0020	43255-0028	43255-0036	43255-0044	43255-0052
Dimension A			7.62 (.300)	7.62 (.300)	7.62 (.300)	20.32 (.800)	20.32 (.800)	20.32 (.800)	20.32 (.800)
Dimension B			13.97 (.550)	20.32 (.800)	26.67 (1.050)	13.97 (.550)	20.32 (.800)	26.67 (1.050)	33.02 (1.300)

\*Ratings are per circuit, based on fully loaded housings

†Cap housing should be installed into panel in the same direction as the panel cutout is punched

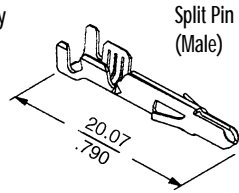
•Standard stock item

## FEATURES AND SPECIFICATIONS

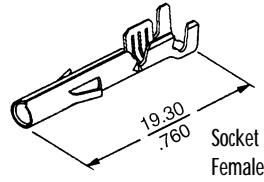
# molex® 2.13mm (.084") Pitch MLX Series Pin and Socket Power Connector System

### Features and Benefits

- Cross tested to assure industry compatibility
- Available in brass or phosphor bronze
- Tin or select gold plating
- Can be terminated with Molex or commercially available terminating equipment
- Split pin (male) for reduced mating forces



42023



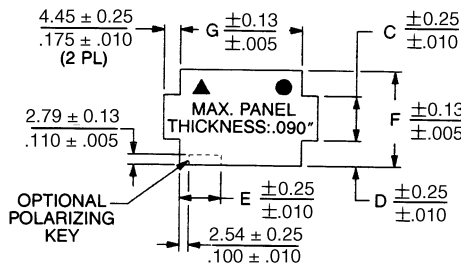
42024

## ORDERING INFORMATION

Wire Gauge	Insulation Diameter Min./Max.	Series Male / Female	Reel		Loose Bag		Application Tooling			
			Split Pin (Male)	Socket (Female)	Split Pin (Male)	Socket (Female)	Fine Adjust	T2 Terminating Die	Hand Tool	Extraction Tool
<b>STANDARD BRASS .030mm (.012")</b>										
<b>Tin Plated</b>										
14-20 AWG	1.52 (.060) min. 3.30 (.130) max.	42023 / 42024	*02-08-2003	*02-08-1001	*02-08-2004	*02-08-1002	63863-3100	63853-3100	11-01-1067	11-01-0168
13-16 AWG	5.08 (.200) max.	36536 / 36535	36536-0001	36535-0001	36536-0002	36535-0002	63863-3000	63853-3000		11-01-0168
<b>Select Gold</b>										
14-20 AWG	1.52 (.060) min. 3.30 (.130) max.	42023 / 42024	02-08-2007	02-08-1005	02-08-2008	02-08-1006	11-18-2087 (14-20 AWG)	11-40-2197 (14-16 AWG) 11-40-2198 (16-20 AWG)	11-01-1067	11-01-0168
<b>PHOSPHOR BRONZE .030mm (.012")</b>										
<b>Tin Plated</b>										
14-20 AWG	1.52 (.060) min. 3.30 (.130) max.	42023 / 42024	*02-08-2005	*02-08-1003	*02-08-2006	*02-08-1004	11-18-2087 (14-20 AWG)	11-40-2197 (14-16 AWG) 11-40-2198 (16-20 AWG)	11-01-1067	11-01-0168
<b>Select Gold</b>										
14-20 AWG	1.52 (.060) min. 3.30 (.130) max.	42023 / 42024	02-08-2009	02-08-1007	02-08-2010	02-08-1008	11-18-2087 (14-20 AWG)	11-40-2197 (14-16 AWG) 11-40-2198 (16-20 AWG)	11-01-1067	11-01-0168

## MOUNTING INFORMATION

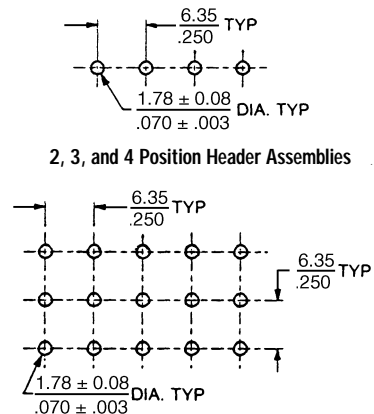
### Cap Panel Cutout (Refer to Order Chart for dimensions)



- ▲ - Circuit #1 location when using polarizing key option with 2, 3, and 4 circuit housings.
- - Circuit #1 location when using polarizing key option with 6, 9, 12 and 15 circuit housings.

Note: Cap Housing should be installed into panel in the same direction as the panel cutout is punched.

### Vertical Header PCB Layout Dimensions



6, 9, 12 and 15 Position Header Assemblies

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