

# Rebling Datasheet: Battery Swap Panel-mounted Connectors

This Battery Swap Connector brings Rebling’s high current, high voltage, avionics-reliable contact design to a drawer style connector suitable for battery swap and stackable modular power applications. Both high current DC connector halves are panel-mounted and the rugged, high current pin contacts of the male connector act as the guide pins which mate with the socket contacts of the female connector.

## Electrical

**Current**

Current Profile #1	Continuous Rated Current (CRC) (per UL 1977)	-----	500 amps
Current Profile #2	50% CRC for 60min + 1 sec peak + 50% CRC for 60 min		3,000 amps
Current Profile #3	50% CRC for 60min + 10 sec peak + 50% CRC for 60 min	-----	2,000 amps
Current Profile #4	50% CRC for 60min + 30 sec peak + 50% CRC for 60 min		1,500 amps
Current Profile #5	50% CRC for 60min + 60 sec peak + 50% CRC for 60 min	-----	1,000 amps

## Voltage & Resistance

Continuous Rated Voltage	UL1977 Section 17	1,000 volts
Minimum Dielectric Withstanding Voltage	UL1977 Section 17	4,000 volts
Insulation Resistance	MIL-PRF-18148D Section 3.12.6	500 mega-ohms
Maximum Contact Resistance	MIL-STD-202H Method 307	70 micro-ohms

## Mechanical & Environmental

Flammability Rating:	-----	UL 94	V-0	
Environmental Sealing with Optional Gasket	Pin Connector	-----	IEC 60529	IP68
	Socket Connector		IEC 60529	IP66
Operating Temperature:	-----		-40 to +140 C°	
Mechanical Shock		MIL-STD-202H Method 213 Condition A	50 Gs – 3 axes	
Vibration		MIL-STD-202H Method 204 Condition A	10 Gs – 3 axes	
Mating Cycles		No Electrical Load	5,000	
Maximum Wire Size:	-----		250 MCM (130 mm <sup>2</sup> )	
Maximum Bus Bar Cross Sectional Area			0.33 in <sup>2</sup> (210 mm <sup>2</sup> )	
Maximum Bus Bar Width			1.30" (33 mm)	
Maximum Cable Crimp Lug Tongue Width			1.30" (33 mm)	

## Compliance & Conformance

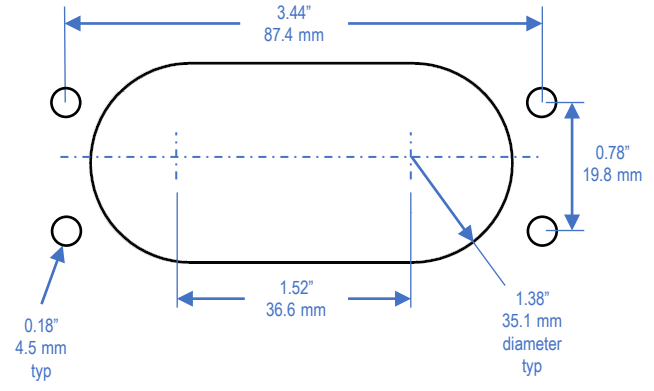
RoHS, REACH, CMRT/3TG      All parts listed on this datasheet are RoHS, REACH and CMRT/3TG Compliant  
 UL and CE Conformance      Declarations of UL and CE Conformity can be downloaded from [Rebling.com](http://Rebling.com)

## Mounting and Assembly

Mounting Hole Pattern		See diagram at right	
Recommended Torque:	Electrical Connection Bolts	-----	30-40 in-lbs (3.4-4.5 Nm)
	Material Failure:		80 in-lbs (9 Nm)

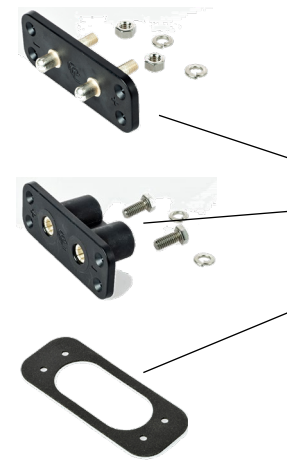
## Application Notes

- #8 or M4 flathead 82 degree screws are recommended for mounting connectors to the panel



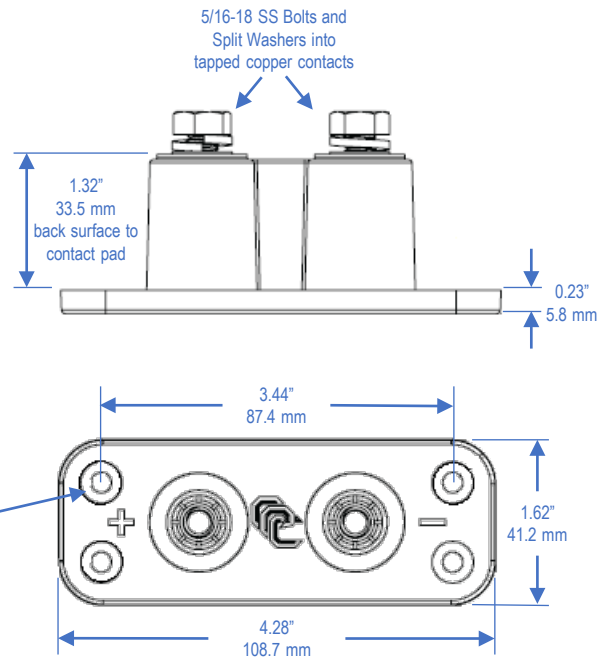
Mounting Hole Pattern

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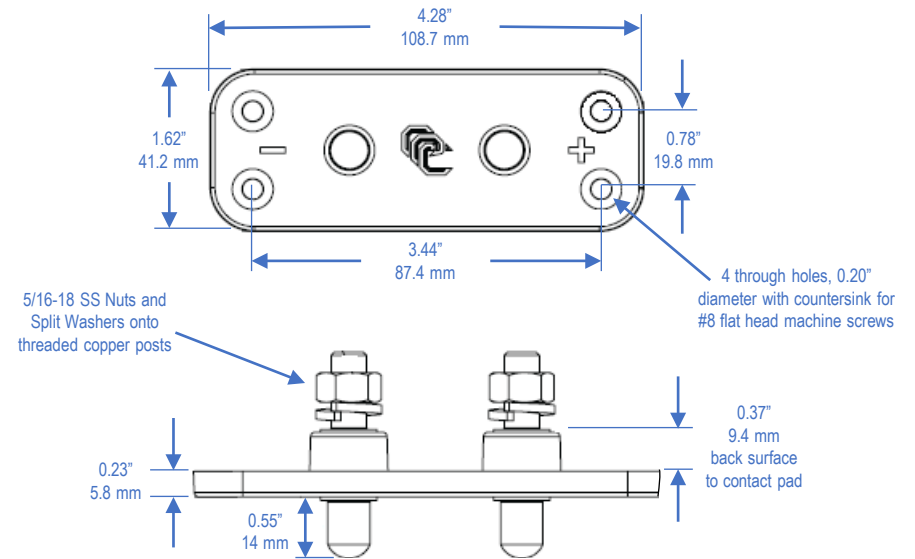


P/N	Description	Plastic Color	Weight (Grams)	Min Thick (mm)	UL 94 Rating	UL Material Yellow Card # **
654A1679	Battery Swap Pin Connector Kit*	Black	105	2.0	V-0	E95746-102108324
654A1680	Battery Swap Socket Connector Kit*	Black	155	2.0	V-0	E95746-102108324
100A1112	Gasket for Pin or Socket Connector	Black	0.8	1.5	HBF	N/A

\*Pin and Socket connector kits must be ordered in matching quantities (pairs)  
 \*\*UL Material Yellow Cards can be downloaded from [ULprospector.com](http://ULprospector.com)



Socket Connector



Pin Connector

For complete dimensions, download 3D Step files of Connectors and Accessories at [Rebling.com](http://Rebling.com)