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Electronics

The Elcon Dual CROWN CLIP is a dual-pole, true hot plug socket connector for high current bus bar power distribution. Using Elcon's high performance Crown Band™ contact element, Dual CROWN CLIP can deliver high current in a very small package. It has a dual-pole design that allows mating to a laminated bus bar for feed and return in a single socket, plus it features a feed-thru structure for added design flexibility.

KEY FEATURES

- Compact design, high currents to 350A¹
- Supports true hot plug (current interruption)²
- Mates with solid blade, or with laminated bus bar for feed and return
- High performance Crown Band
- Feed-thru socket design
- Meets UL (USR and CNR) safety requirements³

TARGET APPLICATIONS

- Bus bar high current power distribution
- Power racks
- Rack mounted switching power supplies

ORDERING INFORMATION

Part number: 538-0061-00100

For more information about this or any other Elcon product, visit the Elcon website at:

www.elconproducts.com

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Hot Plug, High Current Dual CROWN CLIP™ Socket Connector

Leaders in Current Thinking™

ELCON
PRODUCTS INTERNATIONAL COMPANY

Elcon socket connector delivers high current and current interruption capabilities for bus bar type power delivery applications

High-performance Elcon Crown Band

At the heart of the Dual CROWN CLIP is the Crown Band, Elcon's high-performance contact system. The Crown Band has multiple points of contact that ensure maximum surface contact area for low voltage drop and heat generation, plus excellent mechanical characteristics for consistent insertion and extraction forces. The maximum current rating for Dual CROWN CLIP is 350A using a solid bus bar tab¹, or 130A per circuit for a total of 260A when using a laminated bus bar.

True hot plug for current interruption

Dual CROWN CLIP has true hot plug capabilities as defined by safety regulatory agencies. Current interruption ratings are 100A at 60V and 200A at 5V, both using a gold-plated solid tab.

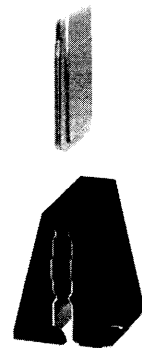
Safety regulatory agency compliance

Dual CROWN CLIP has been evaluated and found to comply with the UL1977 standard and the CSA standard C22.2 No. 182.3-M1987. This socket connector also complies with the safety regulatory requirements for current interruption². Elcon will work with customers to obtain application-specific regulatory certifications if needed.



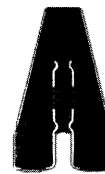
Feed & return with single socket

In addition to mating with a solid bus bar tab for its maximum current carrying capability, Dual CROWN CLIP can mate to a two-pole laminated bus bar or a double-sided PCB, adding further design flexibility by providing feed and return using a single socket.

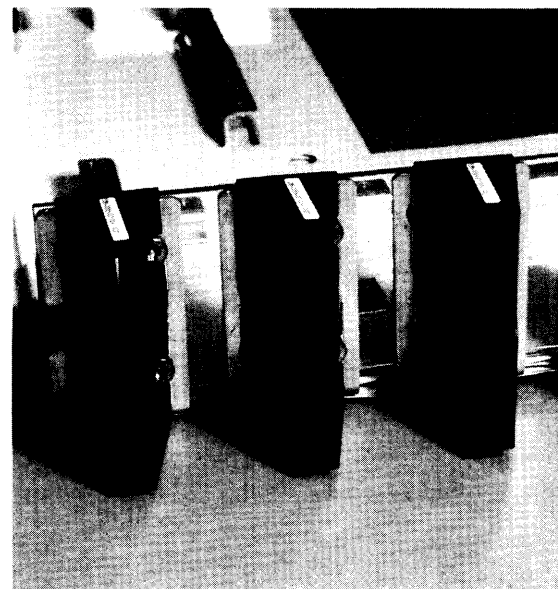


Feed-thru socket design

Dual CROWN CLIP has a feed-thru socket design, allowing the insertion of the mating blade from the bottom of the socket, or even mating multiple sockets mounted on stacked planes with a single long bus bar. This gives the design engineer more choices at the time of laying out power distribution circuits.



Feed-thru view



Notes:

¹ Steady-state rating using nickel-plated solid mating tab. Ratings for tabs with different platings may vary.

² Current interruption requires a solid gold-plated mating tab and is not currently supported using a mating laminated bus bar.

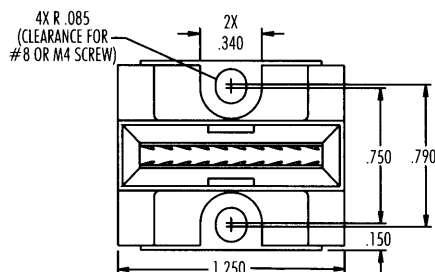
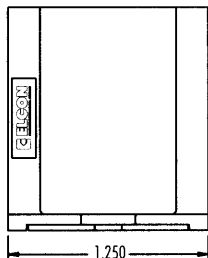
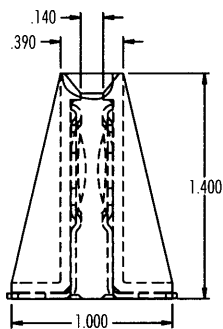
³ TUV certification pending.

ELCNS00080

■ GENERAL DIMENSIONS

Dual CROWN CLIP Customer Use Drawing (CUD) number 399-015 available upon request.

Part number: 538-0061-00100



■ PRODUCT SPECIFICATIONS

MATERIALS

| | |
|--------------|---|
| Insulator | Polyester, UL 94-V-0 |
| Crown Band | Beryllium copper alloy per ASTM-B-194, selectively plated with gold per MIL-G-45204, Type II, Grade C, Class 0 (30μin minimum), over nickel per QQ-N-290, Class 2 (40μin minimum) |
| Crown Holder | Copper alloy |

ELECTRICAL

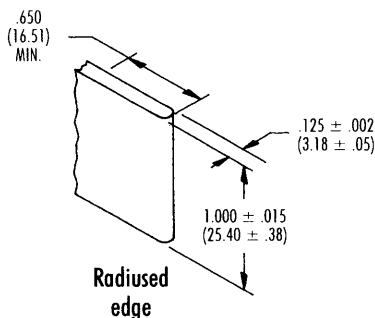
| | | | | |
|-----------------|--------------|-------------------|---------------|--|
| Current Ratings | Steady State | Solid tab | Nickel-plated | 350A maximum 225A with 30°C maximum temperature rise |
| | | Laminated bus bar | Gold-plated | 130A per side (260A total) 75A per side (150A total) with 30°C maximum temperature rise |
| | Hot plug | Solid tab | Gold-plated | 200A maximum |

MECHANICAL

| | | |
|--------|------------|-----------------------|
| Forces | Insertion | 20lb (9.08kg) maximum |
| | Extraction | 13lb (5.9kg) minimum |

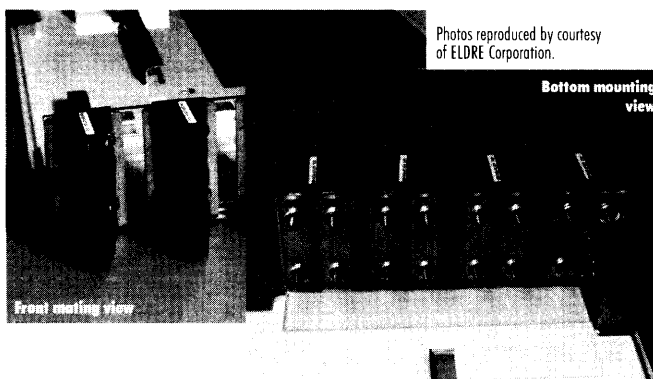
■ MATING BLADES

Shown below are the suggested dimensions of the customer-supplied mating blade for use with Dual CROWN CLIP. Chamfered-edged tabs such as the one shown below can also be used.



■ SAMPLE APPLICATION

Elcon Dual CROWN CLIP connectors mounted directly onto a laminated power distribution bus bar in a large server application.



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