

Elcon RA12S21 DRAWER Connector

Straight-to-right angle blind mating DRAWER connector with support for AC current interruption as defined by safety regulatory agencies, and AC cable option.

tyco

Electronics

Full PCB mount or PCB plus AC cable

The power supply side right angle housing of the RA12S21 connector comes in two versions: one for full PCB mount and the other with an AC cable option for applications that require cable-terminated AC input.



AC cable option



Elcon RA12S21 DRAWER connector

High-performance contact technology



Elcon Crown Band contacts

The RA12S21 DRAWER connector uses Crown Band technology to achieve a maximum of 45A per contact (see chart below). The Crown Band has more points of contact at the mating interface for lower contact resistance, temperature rise, and insertion forces.

AC true hot plug support



Elcon true hot plug socket

The RA12S21 DRAWER connector can use Elcon's hot plug socket contacts. Using these contacts—designed for current interruption as defined by safety regulatory agencies—provides AC hot plug support. Consult Elcon for details.

Multiple board mounting options

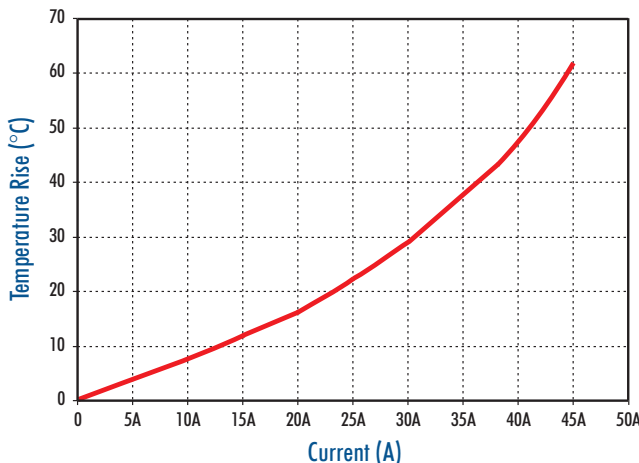
The right angle housing comes with solder tails in 3 different lengths to support different PCB thicknesses. The socket housing can be float mounted with cable termination on crimp or solder cup, or mounted to a board using PCB or compliant press fit tails.



Elcon uses eye of the needle compliant press-fit tails for optimum interface to the board.

High power contact current ratings

The chart below shows that the maximum current per contact is 45A, while 30A per power contact can be achieved with a temperature rise no higher than 30°C.



The graph shows the temperature rise of the RA12S21 connector when different current levels are applied to the size #12 power contacts in a fully loaded configuration.

KEY FEATURES

- Up to 45A per power contact
- Contacts: 12 × #12 and 21 × #20
- AC cable option on power supply side
- PC tail and press-fit terminations
- Can use Elcon true hot plug sockets
- Built-in guides for blind mating
- Built-in mating polarization
- Fully-shrouded insulator design

TYPICAL APPLICATIONS

- N+1 power delivery systems for high-reliability, high-availability equipment
- Blind mating pluggable power supplies
- SMPS/PFC power supplies
- Power supplies requiring true hot plugging (current interruption)

ORDERING INFORMATION

Part numbers for all RA12S21 DRAWER standard configurations are shown under BASIC DIMENSIONS AND PART NUMBERS on the back page. Selectively loaded configurations are possible and will be assigned a unique part number by Elcon.

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

www.elconproducts.com

Elcon is a Tyco Electronics brand. To find out more about other Tyco Electronics brands, products and services, visit the Tyco Electronics website at:

www.tycoelectronics.com

PRODUCT SPECIFICATIONS

MATERIALS			
Insulators (pin and socket)		Thermoplastic, glass reinforced, color black, UL 94V-0 flammability rated	
Contacts	Socket body	Body	Copper alloy
		Crown Band	Beryllium copper
	Pin	Size #12	Tellurium copper alloy
		Size #20	Brass
FINISHES			
Contacts	Size #12 non-hot plug		Silver over nickel
	Size #12 hot plug		Gold over nickel
	Size #20		Gold over nickel
ENVIRONMENTAL/MECHANICAL			
Operating temperature range		-40°C to +130°C	
Mating forces of fully loaded connector		Typical 25 lbs	
Tooling		Press fixture recommended for press-fit socket. Consult Elcon for details.	
ELECTRICAL			
Contact current rating		45A/power contact max.; 30A/power contact at a temperature rise of 30°C or less	
Voltage ratings		Power: 380V; signal: 250V	
Insulation resistance		5000MW min. at 500V DC for 2 minutes, per MIL-STD 1344, Method 3003	
Dielectric strength		Power 1760VAC, signal 1500VDC; for 1 minute, per MIL-STD 1344, Method 3001	

BASIC DIMENSIONS AND PART NUMBERS

Dimensions for reference only. Contact Elcon to obtain the corresponding Customer Use Drawing (drawing numbers shown below) with complete dimensions, solder tail length options, panel cutouts, PCB hole patterns and mounting information.

Socket housings – Elcon Drawing No. 499-086

- 416-0001-00100 All crimp contacts
- 416-0002-00100 All PC tail contacts
- 416-0003-00100 All press-fit contacts
- 416-0001-01100 Housing without contacts for custom configuration with selective contact loading. To specify the desired contact configuration, obtain the RA12S21 DRAWER Customization Form from Elcon.

Pin housings – Elcon Drawing No. 499-073

Full PCB mount

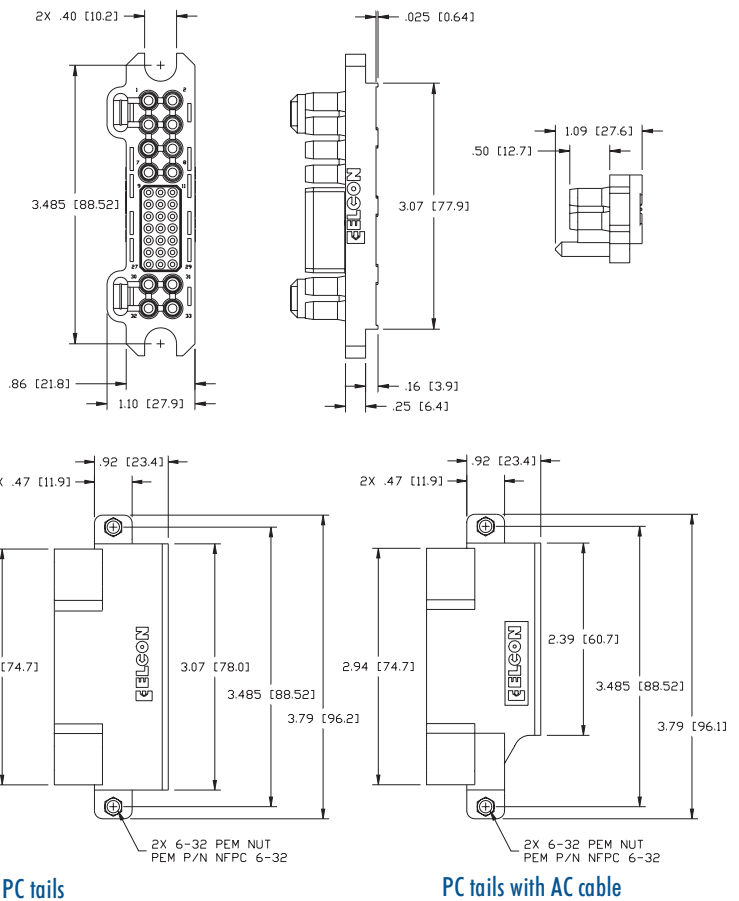
- 415-0002-00100 All .27" long PC tail contacts
- 415-0002-00300 All .20" long PC tail contacts
- 415-0002-00500 All .13" long PC tail contacts

PCB mount with AC cable support

- 415-0001-00100 .27" long PC tails and 4 × AC crimp contacts
- 415-0001-00300 .20" long PC tails and 4 × AC crimp contacts
- 415-0001-00500 .13" long PC tails and 4 × AC crimp contacts

Hot plug configurations

Consult Elcon for details about housing configurations with support for AC hot plug contacts.



Units: inches (mm)

To find out more about this or any other Elcon product, visit the Elcon website at www.elconproducts.com or simply contact the Elcon office nearest you:

tyco
Electronics

ELCON
PRODUCTS INTERNATIONAL COMPANY

Worldwide Headquarters — elcon.sales@tycoelectronics.com
42700 Lawrence Place, Fremont, CA 94538
Tel: 510.490.4200 · Fax: 510.490.3740

European Head Office — elcon.sales-uk@tycoelectronics.com
Tel: +44.1296.331855 · Fax: +44.1296.331856

Spain Office — elcon.sales-sp@tycoelectronics.com
Tel: +34.91.655.5007 · Fax: +34.91.655.7607

Nihon Elcon KK (Japan) — elcon.sales-jp@tycoelectronics.com
Tel: +81(0)3.5385.7781 · Fax: +81(0)3.5385.7786

Your Authorized Representative/Distributor: