High Power ELCON Drawer Connectors

Tyco Electronics

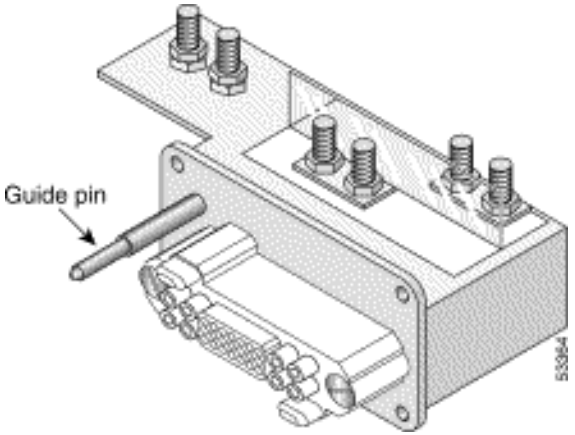
True Hot-Plug, Blind-Mate Power Connectors

Extensive family of hot-plug, blind-mate connectors with power, signal and logic contacts in numerous sizes to meet a wide array of design requirements.

- AC/DC power, signal and logic
- 35A to 200A per power contact
- High-performance CROWN BAND contact
- True hot-plug contacts support current interruption as defined by safety regulatory agencies
- Crimp, solder cup, PCB tail, thread and press-fit terminations
- Float mount for blind-mating
- Guide pin options

Sample Application

- 10G Internet Router
- Uses ELCON Lower Drawer Connector on AC and DC PDU

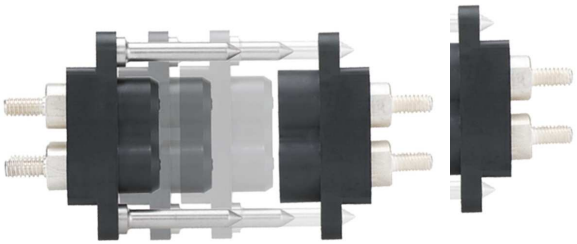


Lower Drawer shown on
DC power distribution unit

Primary Market

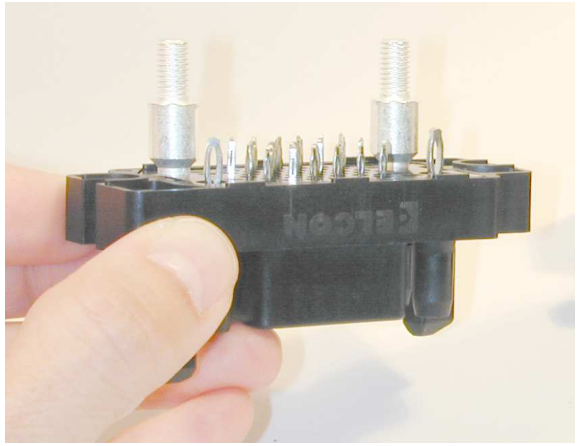
- Power Distribution Systems:
  - Used mainly for power supply to chassis interconnect in large scale servers, routers, & data storage units
  - Provides blind-mate, hot-pluggable, N+1 redundant power in high reliability 'Fault Tolerant' systems
  - Smaller drawer connectors used in applications such as fan trays.

Technology



Blind-Mating

- Optional or built-in guides
- Enhanced gatherability
- Protects from lateral mass forces



Standard Contacts

- Choice of termination (PC tail, press-fit, thread, crimp)
- Multiple lengths for sequencing requirements
- Probe-proof sockets

Various Mounting Styles

- PCB tails
- Press-fit
- Threaded
- Crimp

CROWN BAND Contacts

High-performance CROWN BAND contact

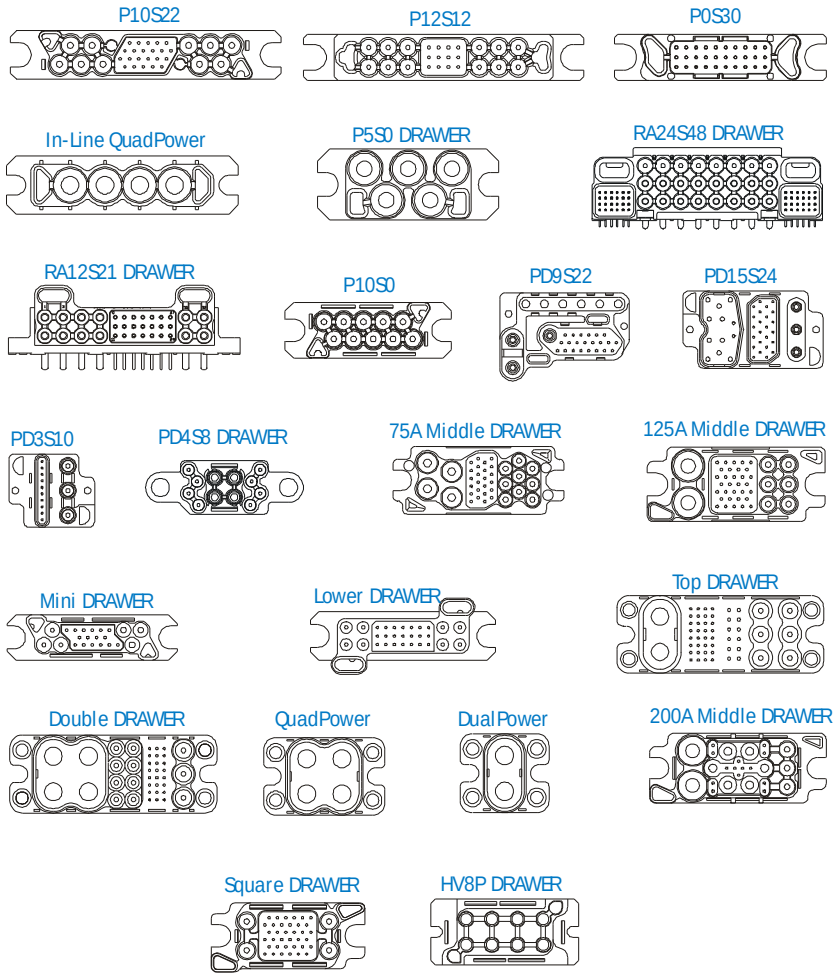
- Consistent insertion and withdrawal forces
- Maximum surface contact area
- Low voltage drop and temperature rise

True Hot-Plug contact

- Socket design protects contact interface from spark
- Allows current interruption under load
- Approved by safety agencies

Growing Family of Connector Layouts

- New layouts added every year



35 to 75 Amp Connectors

Mini Drawer

- 35A per power contact
- Available contacts:
  #12/16 × 6
  #20 × 16
- Multiple sequencing for power and signal
- True hot plug

Lower Drawer

- 35A per power contact
- Available contacts:
  #12/16 × 8
  #20 × 20
- Multiple sequencing for power and signal
- True hot plug

75A Middle Drawer

- 75A per power contact
- Available contacts:
  #8 × 4
  #12 × 9
  #20 × 24
- Float mount and PCB mount
- True hot plug

125 to 200 Amp Connectors

125A Middle Drawer

- 125A per power contact
- Available contacts:

  #4 × 2

  #12 × 6

  #20 × 32
- Float mount and PCB mount
- Probe-proof double CROWN BAND contacts

200A Middle Drawer

- Contacts: #4 × 2, #20 × 14, #8 × 6, and #12 × 3
- Cable-to-cable mounting
- AC IN, multiple DC OUT and signal contacts
- True hot plug
- Meets UL c UL us safety requirements

Higher Power Connectors

Top Drawer

- 200A per power contact
- Available contacts:
  #0 × 2
  #12 × 6
  #16 × 12
  #20 × 32
- Various guide pin configurations
- Probe-proof double CROWN BAND contacts

Double Drawer

- 200A per power contact
- Available contacts:
  #0 × 4
  #12 × 11
  #20 × 24
- Various guide pin configurations
- Probe-proof double CROWN BAND contacts

300 to 600 Amp Connectors

DualPower Drawer

- Currents to 150A, 200A on bus bar
- Available contacts: 2 × size #0
- Probe-proof double CROWN BAND contacts
- Crimp and internal/external thread terminations
- Float mount for blind-mating
- Guide pin option

QuadPower Drawer

- Currents to 150A, 200A on bus bar
- Available contacts: 4 × size #0
- Probe-proof double CROWN BAND contacts
- Crimp and internal/external thread terminations
- Float mount for blind-mating
- Guide pin option

Other Configurations

Square Drawer

- Contacts: #12 × 4 and #20 × 36
- Fix-to-float mounting
- True hot plug
- Sequenced mating in power and signal
- Meets UL c UL us safety requirements

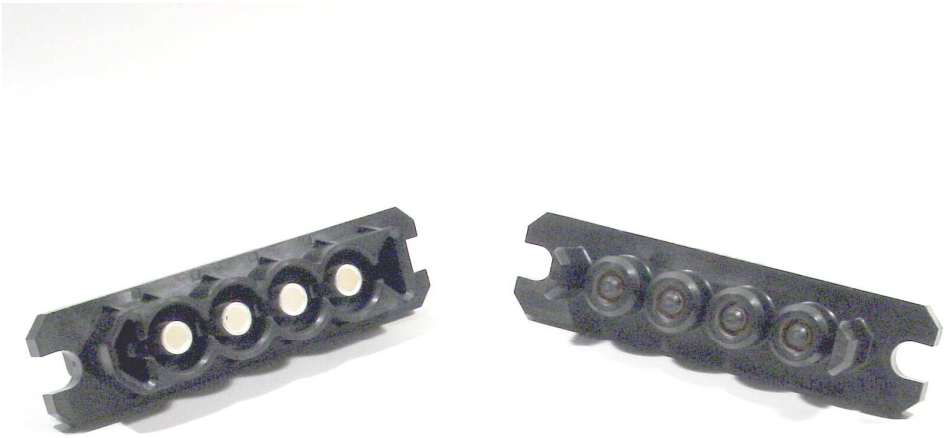
HV8P Drawer

- Contacts: #12 × 8
- PCB-to-cable mounting
- True hot plug
- Meets 600V IEC voltage spacing
- Mating and mounting polarizations built into the insulator
- Meets UL c UL us safety requirements

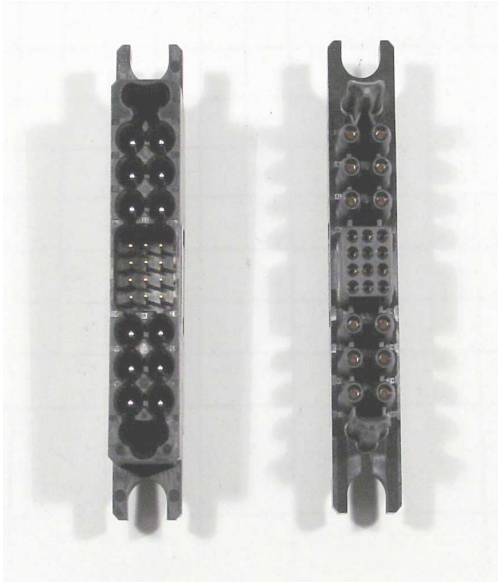
1U Form Factor Connectors

In-Line QuadPower

- 4 × #0 contacts
- Uses Drawer standard size #0 contacts
- Built-in guides for blind mating
- Built-in polarization

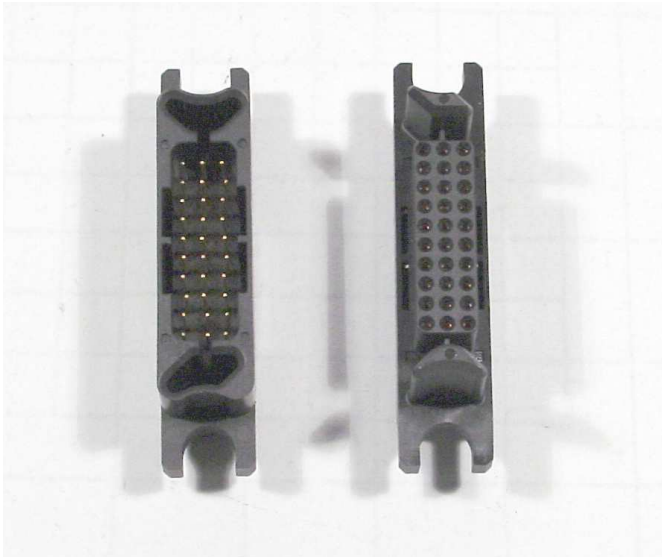


Other 1U Form Factor Connectors



P12S12 Drawer

- 12 × size #16 contacts
- 12 × size #20 contacts
- 15A power contacts
- Built-in guides for blind mating
- Built-in polarization



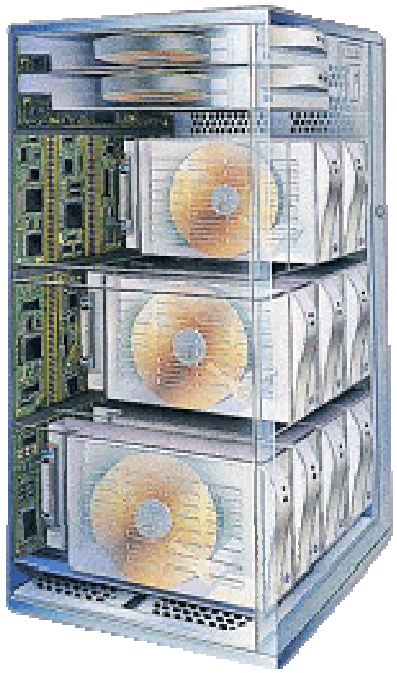
P0S30 Drawer

- 30 × signal contacts
- Uses drawer standard size #20 contacts
- Built-in guides for blind mating
- Built-in polarization

Contact Power Rating

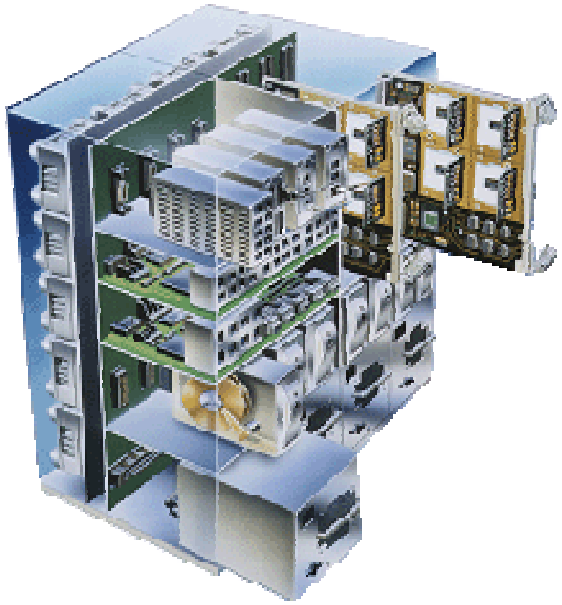
Contacts:	CSA Rating:	UL Rating:
AWG #20	4A/ 250V	5A/250V
AWG #16	10A/ 250V	15A/ 250 V
AWG #12 Top Drawer	25A/ 600V	35A/ 600V
AWG #12 Others	25A/ 250V	35A/ 250V
SIZE #8	55A/ 250V	75A/ 250V
SIZE #0	150A/ 250V	200A/ 250V
SIZE #4	100A/ 250V	125A/ 250V

Disk Storage Application



- Uses In-Line QuadPower
- Connects Power Supply to Bus Bar Power Distribution Grid

High-End Server Application



Uses Various Custom and Standard Drawer Connectors for:

- High Reliability
- Durability

High Power
ELCON Drawer Connectors

- Contacts:
  - Product Engineering
    - David Orris 717-986-3337
  - Product Management
    - Mike Blanchfield 717-986-3383

Double Drawer Shown

- Sample Availability:
  - The following products (from catalog #1773096) are stocked in the sample system:
    - Mini Drawer, Lower Drawer, Middle Drawers, Square Drawer, Top Drawer, Double Drawer, Dual Power, Quad Power, In-Line Quad, W5, P10S0, P10S22, P12S12, P0S30 and all Cataloged Crimp Contacts.
    - Mini Drawer Example: (Pin Hsg # 1648110-1, Socket Housing # 1648115-1, Power Pin #1766193-1, Power Socket #1648384-1, Signal Pin #1650155-1, Signal Socket #1648325-1)