ELCON
PRODUCTS INTERNATIONAL COMPANY

SERVERPAK True Hot Plug Power Connectors

SERVERPAK connectors are an offspring of the FLATPAQ board-to-board family, specifically designed as a cost-effective, hot-pluggable power interconnect for high-end PC servers. SERVERPAK connectors enjoy all the benefits of the Elcon Crown Band contact, including consistent insertion and extraction forces, low voltage drop and minimum heat generation.

SERVERPAK are cost-effective board-to-board power connectors designed for high-end PC servers

SERVERPAK CONNECTORS PRODUCT OVERVIEW

Key Features

- 35A true hot plug power contacts
- UL 1950/IEC 950 probe-proof power sockets
- Compliant press-fit or solder tails
- Versatile power arrangements
- UL (USR and CNR) and TÜV evaluations

Flexible Expandability

For more design flexibility, SERVERPAK connectors can be extended by the addition of FLATPAQ modules in case increased power capability is required.

High Power in a Small Design

The standard SERVERPAK connector has 8 power blades, 24 signal lines, and molded guide pins that provide reliable blind mating, all within a length of just 3.5" (90mm).

True Hot Pluggability

Both UL recognitions and the TÜV certification allow for use of SERVERPAK connectors in power applications that require true hot pluggability, that is, current interruption under load as defined by these regulatory agencies.

Mounting Options

SERVERPAK connectors can be mounted to the board or backplane using compliant press-fit or solder tails. Solder tails are available in two lengths, and can also use a *retentive feature* that holds the connector during soldering.

Agency Recognitions & Certifications

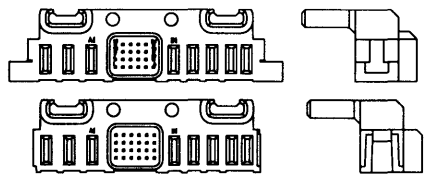
SERVERPAK connectors have been evaluated by Underwriters Laboratories to the U.S. standard UL1977 and to the Canadian standard C22.2 No. 182.3-M1987, and by TÜV to the European standard EN60950 .

c UL us

TÜV PRODUCT SERVICE

AVAILABLE HOUSING CONFIGURATIONS

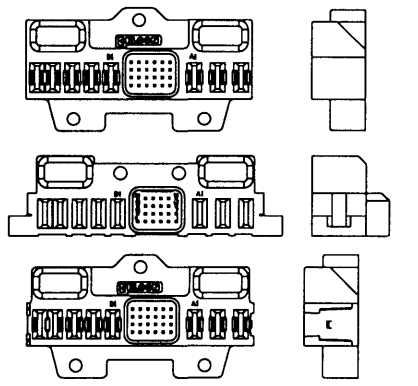
PIN INSULATORS



FP701 — Right angle pin side with end caps

FP703 — Right angle pin side with dove tails to allow the addition of FLATPAQ modules

SOCKET INSULATORS



FP700 — Straight socket side with flat ends

FP702 — Right angle socket side with end caps

FP704 — Straight socket side with dove tails to allow the addition of FLATPAQ modules

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LEADERS IN CURRENT THINKING

■ PRODUCT SPECIFICATIONS

MATERIALS		
Insulators		Thermoplastic, UL 94-V-0 flammability rated, color black
Signal Contacts		Solder termination brass alloy per ASTM-B-36; compliant termination phosphor bronze alloy per ASTM-B-103, selectively plated with gold per MIL-G-45204, Type II, Grade C, Class 0 (30µin minimum) and bright tin/lead per MIL-T-10727, Type 1 (100µin minimum) on terminations, all over nickel per QQ-N-290, Class 2 (50µin minimum)
Crown Bands		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 (50µin minimum)
Power Socket Contacts		Phosphor bronze alloy per ASTM-B-103, selectively plated with bright tin/lead per MIL-T-10727, Type 1 (100µin minimum) on terminations, over nickel per QQ-N-290
Power Blade Contacts		Copper alloy per ASTM-B-152, selectively plated with gold per MIL-G-45204, Type II, Grade C, Class 0 (30µin minimum), over nickel per QQ-N-290, Class 2 (50µin minimum)
ELECTRICAL		
Current Ratings	**Power Contact**	35A at 250V (50 cycles, hot plug module) 20A at 250V (50 cycles, hot plug module)
	Signal Contact	Up to 3A
Contact Resistance	**Power Contact**	2mΩ maximum initial, (3mΩ maximum after 500 cycles durability), at 35A per MIL-STD 1344, Method 3004
	Signal Contact	15mΩ maximum initial, (30mΩ maximum after 500 cycles durability), at 100mA, 20mV, per MIL-STD 1344, Method 3002
Insulation Resistance	**Power Contact**	5,000MΩ minimum at 500VDC for 2 minutes, per MIL-STD 1344, Method 3003
	Signal Contact	
Dielectric Strength	**Power Contact**	1,500VDC for 1 minute, per MIL-STD 1344, Method 3001
	Signal Contact	
MECHANICAL		
Insertion Force	**Power Contact**	4.0lbf maximum
	Signal Contact	5.0ozf maximum using .0305" (.775mm) diameter steel test pin
Extraction Force	**Power Contact**	1.0lbf minimum
	Signal Contact	0.5ozf minimum using .0295" (.749mm) diameter steel test pin
Durability	**Power Contact**	500 cycles, per MIL-STD-1344, Method 2016
	Signal Contact	
Contact Retention	**Power Contact**	10.0lbf minimum
	Signal Contact	5.0lbf minimum
Tooling		Press fixture recommended for compliant press fit assemblies. Consult ELCON for details.
Marking		Connectors are marked with manufacturer's logo, part number and lot code.
ENVIRONMENTAL		
Temperature Rating		-40°C to +105°C
Vibration		MIL-STD 1344, Method 2005, Test Condition II
Shock		MIL-STD 1344, Method 2004, Test Condition I
Humidity		MIL-STD 1344, Method 1002, Type 1, Test Condition B
Temperature Life		MIL-STD 1344, Method 1005, Test Condition 4D (105 ±2°C, 1,000 hours)
Solderability		MIL-STD 202, Method 208

All information and specifications subject to change without notice.

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