EXTREME LOW PROFILE HYBRID (LPH) CONNECTORS

The addition of the 2 power RA receptacles/plugs to the LPH family allows customers to explore further configurations in the LPH family.

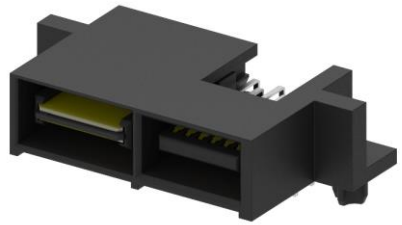
NPI EXTENSION

AUGUST 2024

creating connections for life

EXTreme LPH Connectors

Designed with power blades parallel to the PC board, EXTreme LPH Connectors are a mixed, high-current power and signal connector system that picks up where traditional connectors leave off. The recent addition of the 2 power RA receptacles/plugs to the LPH family allows customers to explore further configurations in the LPH family.



Key Product Information

Category: High Power Connectors

Current (at 30°C temperature rise):

Power: 30.0A (max.)
Signal: 1.0A (max.)

Voltage (max.): 250V

Mating Force (max. per circuit):

Power Contacts: 6.87N (1.54 lb.)
Signal Contacts: 1.08N (0.24 lb.)

View Product Landing Page

Download Datasheet

Series

45984	LPH RA RECPT ASSY
45985	LPH RA PLUG ASSY

Vital Product Information

EXTreme LPH Connectors

What makes this product different from the competition?

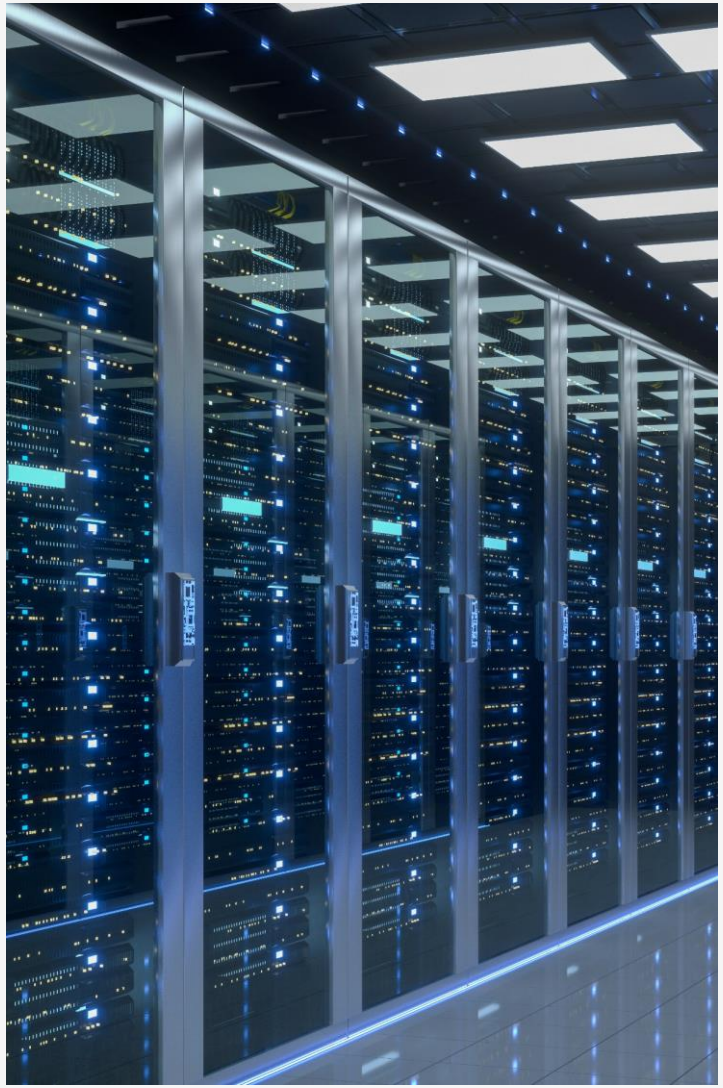
Designed with power blades parallel to the PC board, this mixed high-current power and signal connector system delivers up to 127.0A per linear inch, features a low-profile height for enhanced system airflow, and offers flexible mating options.

How does this product/solution create value for our customers?

The EXTreme LPH Power connector has two isolated power blades in each housing bay and can be mated in a right-angle, co-planar or vertical orientation. EXTreme LPH Power can be mated in a traditional two-piece connector system, or as a one-piece receptacle-to-card edge/busbar application.

What is the Molex advantage?

With our established product line, flexible design configurations, and our ability to second source, Molex's EXTreme LPH product is a great option for next generation technologies.



Product Overview

EXTreme LPH Connectors

Hybrid Power/Signal Design

The EXTreme LPH Connectors are designed to allow power and return in the same bay to accommodate common DC power requirements.

Flexible Design Configurations

LPH receptacles mate to either LPH plug or industry standard 1.57mm card edge providing greater flexibility amongst multiple industries and applications.

Low-Profile Design

Low-profile power contacts enhance system airflow with power contacts that are parallel to the PC board, permitting an overall connector height of 7.50mm

Markets and Applications

EXTreme LPH Connectors

Servers

POWER FOR DATA CENTER

- 1U rack box
- Backplanes
- Power supplies
- Routers and switches
- Servers

Industrial Controls

INDUSTRIAL AUTOMATION

- Industrial Controls

Workstations

TELECOMMUNICATIONS

- Test equipment
- Workstations

Product Advantages and Features

EXTreme LPH Connectors

Enables customers to explore further configurations in the LPH family

The two circuit addition of the EXTreme LPH Connectors allows customers to suit their needs more accurately as it provides extra space-savings and more cost for irrelevant benefit.

Meets system power requirements

LPH receptacles mate to either LPH plug or industry standard 1.57mm card edge providing greater flexibility in multiple industries and applications.

Reduces the potential for stubbing or damage

The rugged signal and power contacts of the Hybrid Vertical Receptacle of EXTreme LPH Connectors help prevent damage.

Enhances system airflow and provides 127.0A per linear inch

The EXTreme LPH Connectors have a low-profile design that enhances system airflow with power contacts that are parallel to the PC board, permitting an overall connector height of 7.50mm.

Allows power and return signals in the same bay for a total of 60.0A per power bay

The hybrid power/signal design solution with two isolated power contacts per housing bay (top and bottom) allows power and return in the same bay to accommodate common DC power requirements.

Key Specifications		
Category	High Power Connectors	
Current (at 30°C temperature rise)	Power (Max.)	30.0A
	Signal (Max.)	1.0A
Voltage (Max.)	250V	
Mating Force (max. per circuit)	Power Contacts	6.87N (1.54 lb.)
	Signal Contacts	1.08N (0.24 lb.)

Product Specifications

EXTreme LPH Connectors

Reference Information

Packaging: Tray or tube
UL File No.: E29179
CSA File No.: LR19980
Designed In: Millimeters
EU RoHS Compliant: Yes
Halogen: Low halogen
Glow Wire Compliant: No

Mechanical

Mating Force (max. per circuit):
- Power Contacts – 6.87N (1.54 lb.)
- Signal Contacts – 1.08N (0.24 lb.)

Un-mating Force (min per circuit):
- Power Contacts – 1.47N (0.33 lb.)
- Signal Contacts – 0.15N (0.03 lb.)

Durability: 250 cycles (receptacle and plug)

Electrical

Voltage: 250V max.
Current (at 30°C temperature rise):
- Power: 30.0A max.
- Signal: 1.0A max.

Contact Resistance (per contact):

	Min	Max
Power (milliohms):	-0.11	0.02
Signal (milliohms):	0.35	0.47

Dielectric Withstanding Voltage: 1,500V
Insulation Resistance (Min.): 5,000 Megohms
Current interruption:
- Power – 30.0A and 48V DC
- Signal – 1.0A at 30V

Physical

Housing: LCP
Contact:
- Power Contacts - Copper (Cu) alloy
- Signal Contacts – Copper (Cu) Alloy

Plating:
- Contact Area — Select Gold
- Solder Tail Area — Tin
- Underplating — Nickel

Flammability Rating: UL 94V-0
Operating Temperature: -40 to +105°C

Additional Resources	
Web Overview Page	EXTreme Power Products | Molex
Datasheet	987650-3001.pdf
Global Product Manager	Reuben Irizarry, CCS, PSBU

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