

## FEATURES AND SPECIFICATIONS



# Power Dock™ Modular Plug and Socket Configured Assemblies

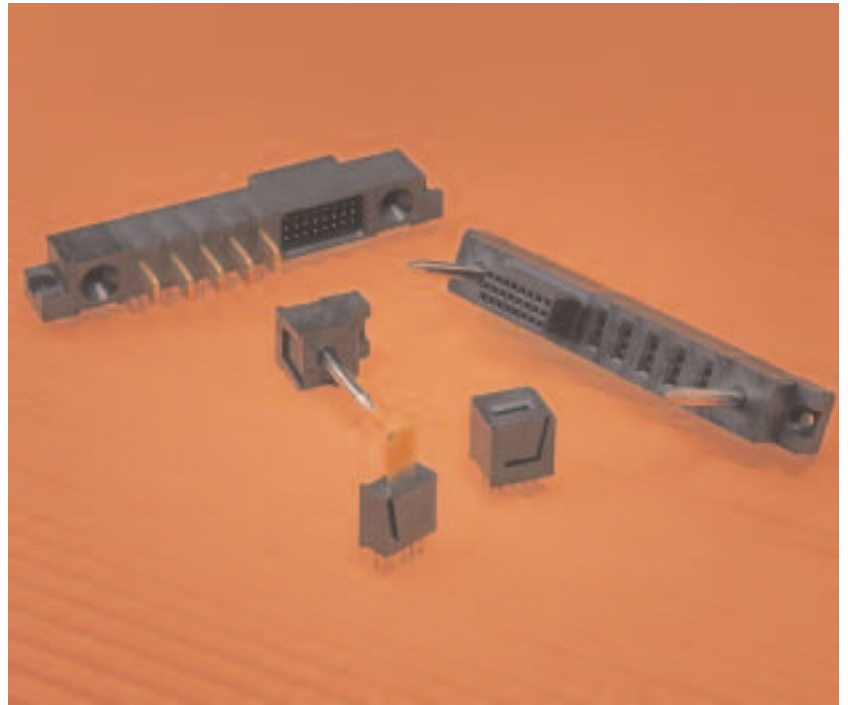
### Reliable Custom Solutions for Board-to-Board Power Interconnects

Power Dock is a modular connector system offering a broad range of options to provide custom solutions for AC and DC power requirements. Features include vertical or right angle board orientations and sequential mating. They are ideal for connecting power supplies used in high-end computer and telecom equipment. Power Dock connectors are drop-in replaceable and interchangeable with existing popular power connectors, now giving customers a valuable second source.

Selecting the exact Power Dock connector system will be easy using the Power Dock configurator website. The website enables customers to choose the module components and the module sequence they need and then instantly receive a price, part number, drawing with basic dimensions and the option to order samples.

### Features and Benefits

- Vertical or right angle styles for parallel or perpendicular board mating orientations
- Rated up to 35.0A for a variety of power applications
- Three mating sequence options for hot pluggability
- Press-fit (compliant pin) or solder through hole termination for use with a range of PCB thicknesses
- Signal modules available in 6 or 24 circuits to facilitate customization
- Guiding pins enable self-aligning of mated assemblies



### Specifications

#### Electrical

Voltage: 250V or 600V

Current: Power Contacts — 35.0A per mated contact  
Signal Contacts — 3.0A per mated contact

Contact Resistance:

Power Contacts — 2 milliohms max.

Signal Contacts — 15 milliohms max.

Dielectric Strength: No Breakdown

Insulation Resistance: 5000 Megohms min.

#### Mechanical

Mating Force: Power Contact — 17.8N (4.0 lbf) max.

Signal Contact — 1.4N (5 ozf) max.

Unmating Force: Power Contact — 4.4N (1.0 lbf) min.

Signal Contact — 0.1N (0.5 ozf) min.

Durability: 250 mating cycles

Housing Contact Retention: 22.2N

#### Physical

Contact: Copper Alloy

Plating: Select Gold over Nickel

Operating Temperature: -40 to +105°C

### Applications

- Telecommunications Equipment
- High-End Computer Servers
- Power Distribution Systems
- Low Noise Power Supplies
- Switched Mode Power Supplies (SMPS)
- Power Factor-Correcting Power Supplies
- Uninterruptible Power Supplies (UPS)

## ORDERING INFORMATION

Series	Description	Termination
45481	Vertical Plug Assembly	Solder
45482	Vertical Plug Assembly	Press-fit
45483	Vertical Socket Assembly	Solder
45484	Vertical Socket Assembly	Press-fit
45485	Right Angle Plug Assembly	Solder



# Molex Power Dock™ Connector Assembly Design Form

Use this form to configure a Power Dock connector. Simply follow the step-by-step instructions below and fax this form to 630-512-8620. Once Molex has received this form, a drawing will be created and sent to you for final approval.

Fax to Molex at 630-512-8620

Company		Location	
Contact Name		Title	
Telephone ( )		Fax ( )	
Signature		Email Address	
Date		Quantity Required	

## STEP 1

Choose from the following modules to create an assembly.

### Mounting, Spacer and Guide Modules

#### Flange Modules



PD500  
Left Flange Mount



PD501  
Right Flange Mount

#### Spacer Modules (without contacts)



PD511  
Vertical or Right Angle 250 V Spacer



PD513  
Vertical or Right Angle 600 V Spacer

#### Guide Modules



PD503 Passive  
PD515 Active, M3 Threads  
PD517 Active, 4-40 Threads  
Vertical Guide Pins



PD507  
Passive Right Angle Guide Pin



PD502  
Passive Vertical Guide Socket



PD506 Passive  
PD516 Active  
Right Angle Guide Sockets

### Solder Terminated Modules

#### 250V Power Modules (Vertical)



PD100  
Socket



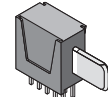
PD101  
Standard



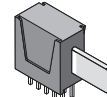
PD102  
Pre-mate



PD103  
Post-mate



PD105  
Standard



PD106  
Pre-mate



PD107  
Post-mate

#### 600V Power Modules (Vertical)



PD116  
Socket



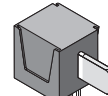
PD117  
Standard



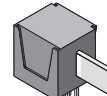
PD118  
Pre-mate



PD119  
Post-mate



PD121  
Standard



PD122  
Pre-mate



PD123  
Post-mate

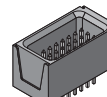
#### Signal Modules (Vertical)



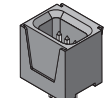
PD301 24 Pin Socket



PD313  
6 Pin Socket

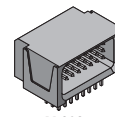


PD300 24 Pin Standard

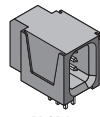


PD312  
6 Pin Standard

#### Signal Modules (Right Angle)



PD302  
24 Pin Standard



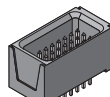
PD314  
6 Pin Standard

### Press-Fit Terminated Modules For 2.36mm (.093") or greater board thickness

#### Signal Modules (Vertical)



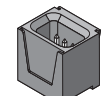
PD401  
24 Pin Socket



PD400  
24 Pin



PD413  
6 Pin Socket



PD412  
6 Pin

#### 250V Power Modules (Vertical)



PD200  
Socket



PD201  
Standard



PD202  
Pre-mate



PD203  
Post-mate

#### 600V Power Modules (Vertical)



PD216  
Socket



PD217  
Standard



PD218  
Pre-mate



PD219  
Post-mate

## STEP 2

Place your chosen module numbers in the boxes at right (left to right) with the mating side facing. For right angle modules, the tails are to face downward.

**First Assembly**

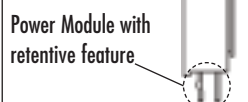
PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
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**Mating Assembly**

PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
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## STEP 3 - (Use for Solder Modules Only)

Place an "X" for the board thickness or solder tail length of each assembly. Place an "X" for retentive feature (see right for more information).



Board Thickness	1.57mm (.062")	2.36mm (.093")	3.17mm (.125")	Retentive Feature
Solder Tail Length	2.92mm (.115")	3.60mm (.143")	4.50mm (.177")	
First Assembly				
Mating Assembly				

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Visit the Power Dock configurator website at [www.power-dock.com](http://www.power-dock.com)