



**THE DATASHEET OF  
10146092-555444PLF**



# AirMax® POWER CONNECTOR MODULES

Part of the AirMax® Connector Family

Amphenol  
FCi

## HIGH PERFORMING AND DURABLE CONNECTORS

Hard Metric high power connectors are a perfect complement to AFCI's ExaMAX®, AirMax®, ZipLine® and Millipacs® signal connectors. These power connectors mount alongside their signal counterparts and are used in applications where bulk current is delivered by backplane or midplane to power consuming components on a mating daughter card.

- Multiple points of contacts– made of high conductivity copper alloy
- Unique housing design allows airflow
- 1x2 version carries 40Amps per contact for a total of 80Amps per module
- 2x2 and 2x3 versions carry 20Amps per contact
- UL 60950 compliant (Finger Safe)

### FEATURES

- High conductivity alloys plus air venting in the housings
- Hard Metric equipment practice
- Options for first-mate/last-break sequencing with 2 pin heights
- Finger safe backplane receptacles
- Press-fit termination
- High Temperature housings suitable for reflow process



### TARGET MARKETS



### BENEFITS

- Enables up to 80Amps in a 1x2 or 2x2 module only 12mm wide
- Assures compatibility with any Hard Metric signal connectors
- Enables hot pluggable designs assuring very high system up times
- Assures operator safety
- Fits any manufacturing process

## TECHNICAL INFORMATION

### MATERIAL

- Housing: High Temperature Thermoplastic (UL94V-0)
- Contact Base Metal: Copper Alloy
- Contact Finish
  - Separable Interface: Performance-based plating over Nickel
- Termination Area: Tin or Tin-lead over Nickel

### MECHANICAL PERFORMANCE

- Durability: 200 mating cycles

### APPROVALS AND CERTIFICATIONS

- UL 60950 & IEC 60950-1 Prevention of Operator Access to Energized Parts
- Telcordia GR-1217-CORE Central Office

### PACKAGING

- Tubes

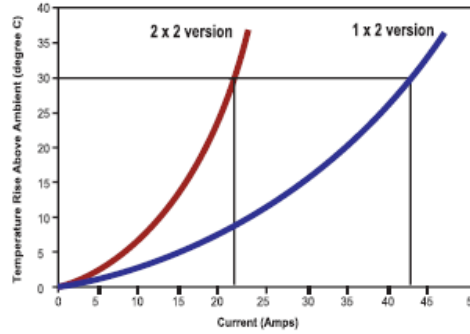
### ELECTRICAL PERFORMANCE

- Current Rating: See table for maximum amps per contact for test configurations with dual (double sided) external copper pads of noted weight
- Operating Voltage: 150V max.
- Dielectric Withstanding Voltage: 1500V
- Insulation Resistance: >10,000MΩ min.
- Contact Resistance: ≤1.0mΩ initially and after environmental exposure

### SPECIFICATIONS

- Product Specification: GS-12-220
- Application Specification: GS-20-023

### TEMPERATURE RISE CURVE



Current information is in still air (no air flow) with multiple contacts energized unless otherwise noted

### TARGET MARKETS/APPLICATIONS



Switches  
Router  
Access  
Optical Transmission  
Wireless Base Station



Server  
Switches  
Storage



Test & Measurement



Medical

Receptacle Type	Number of Connectors Fully Powered	Copper Pad Weight	Maximum Current Per Contact	
			1 X 2	2 X 2
Vertical Receptacle (2X2)	1	5oz	40A	20A
	Up to 5 adjacent	5oz	32A	14A
	1	2oz	32A	15A
	Up to 5 adjacent	2oz	27A	12A
R/A Receptacle (2X2)	1	2oz	37A	18A
	Up to 5 adjacent	2oz	29A	14A

#### Disclaimer

Please note that the above information is subject to change without notice.

## PART NUMBERS

### AirMax VS® POWER CONNECTORS

Application	Number of Contacts	Contact Array	Height above PCB	Product Variation	
				Vertical Receptacle	Right Angle Header
Backplane	2	1x2	14.7mm	10028916-xxxxP00LF**	10028918-001LF
	4	2x2	14.7mm	10028916-xxxxP00LF**	10028917-001LF
	4	2x2*	11.5mm	10028916-xxxxP00LF**	10073379-001LF
	6	2x3*	11.5mm	10061290-xxxxxxPLF**	10061289-001LF

\* indicates the connector set matches the above-board height of an AirMax VS® 3-pair signal connector

\*\* xxxx and xxxxxx are placeholders for contact mating length combinations. Reference the product drawings for available options.

### RIGHT ANGLE APPLICATION

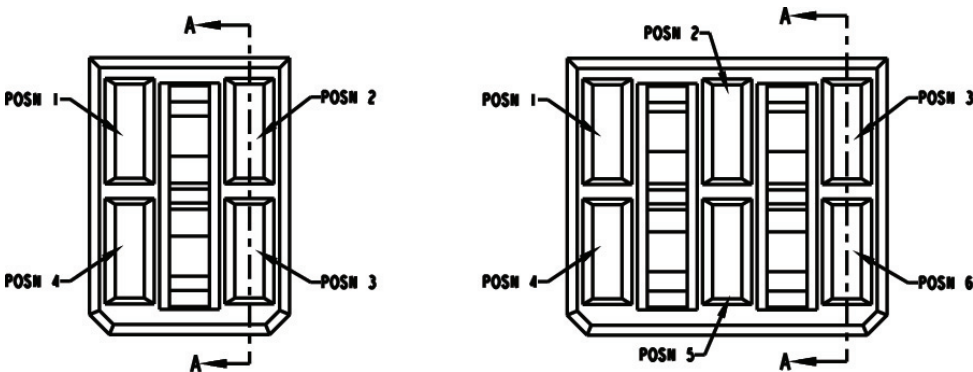
Receptacle Type	Number of Columns fully powered	Copper Pad Weight	Max. Current Per Contact	
			Mated to a 1x2 R/A Header	Mated to a 2x2 / 2x3 R/A Header
Vertical Receptacle	2	5oz	40A	20A
	Up to 10 adjacent	5oz	32A	14A
	2	5oz	32A	15A
	Up to 10 adjacent	5oz	27A	12A

**Disclaimer**

**HARD METRIC BACKPLANE/MIDPLANE POWER MODULES**

Minimum Card Slot Spacing (mm)	Contacts		Power Rating		Number of Columns	Column Pitch (mm)	Module Width Along Card Edge (mm)	Product Variation	
	Total	Per Column	Amps Per Contact	Amps per Module				Backplane/Midplane	Daughter Card
								Vertical Receptacle	Right Angle Header
20	2	1	40	80	2	6	12	10028916-4444P00LF	10028918-001LF
20	2	1	40	80	2	6	12	10028916-4554P00LF	10028918-001LF
20	2	1	40	80	2	6	12	10028916-5555P00LF	10028918-001LF
20	4	2	20	80	2	6	12	10028916-4444P00LF	10028917-001LF
20	4	2	20	80	2	6	12	10028916-4455P00LF	10028917-001LF
20	4	2	20	80	2	6	12	10028916-4554P00LF	10028917-001LF
20	4	2	20	80	2	6	12	10028916-4555P00LF	10028917-001LF
20	4	2	20	80	2	6	12	10028916-5554P00LF	10028917-001LF
20	4	2	20	80	2	6	12	10028916-5555P00LF	10028917-001LF
17	4	2	20	80	2	6	12	10028916-4444P00LF	10073379-001LF
17	4	2	20	80	2	6	12	10028916-4455P00LF	10073379-001LF
17	4	2	20	80	2	6	12	10028916-4554P00LF	10073379-001LF
17	4	2	20	80	2	6	12	10028916-4555P00LF	10073379-001LF
17	4	2	20	80	2	6	12	10028916-5554P00LF	10073379-001LF
17	4	2	20	80	2	6	12	10028916-5555P00LF	10073379-001LF
17	6	2	20	120	3	6	18	10061290-554555PLF	10061289-001LF
17	6	2	20	120	3	6	18	10061290-555444PLF	10061289-001LF
17	6	2	20	120	3	6	18	10061290-545555PLF	10061289-001LF

Note: For the receptacle modules, the first four or six positions following the dash in the part number specify the contact length in each contact position: 4 = short contact for last mate/first break; 5 = long contact for first mate/last break. Reference the product drawings for additional information.



Listed part numbers designate the standard lead-free offering. Contact AFCL to request options with tin-lead finish in termination areas.

## ▶ AirMax® POWER CONNECTOR MODULES



### HCI® BACKPLANE/MIDPLANE HIGH POWER MODULES

Minimum Card Slot Spacing (mm)	Contacts		Power Rating		Number of Columns	Column Pitch (mm)	Module Width Along Card Edge (mm)	With Molded Center Guide	Product Variation	
	Total	Per Column	Amps Per Contact	Amps per Module					Backplane/Midplane	Daughter Card
									Vertical Receptacle	Right Angle Header
25	2	1	83	166	2	14.6	22.9	Yes	10087939-001LF	10087937-001LF
24	2	1	83	166	2	7.3	15.6	No	10078768-001LF	10078770-001LF
24	3	1	75	225	3	7.3	22.9	No	10078902-001LF	10078904-001LF

Note: For right angle headers with one first mate/last break contact, please use the -002LF dash number option.

## Looking for pricing, stock, or lifecycle information?

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