Amphenol

COMMUNICATIONS SOLUTIONS

Power Solutions

BarKlip® Solutions



Amphenol Power Solutions

BarKlip® Portfolio

Increasing Current Rating

Power Solutions Amphenol COMMUNICATIONS SOLUTIONS

BarKlip® 12V


BK50 I/O


BK75 I/O


BK100 I/O


BK200 I/O


BK300 I/O


BK420 I/O

BarKlip® 48V


BK150 I/O Nano

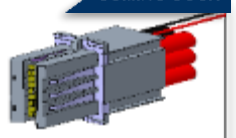

BK150 I/O


BK220 I/O Nano


BK220 I/O

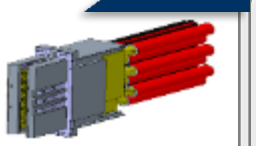

BK250 I/O

COMING SOON


BK350 I/O Nano


BK350 I/O

COMING SOON


BK450 I/O Nano


BK500 I/O


BK600 I/O


BK1000 HD I/O


BK1200 HD I/O

COMING SOON


BK1200 HD I/O

COMING SOON


BK2000 HD I/O

COMING SOON


BK5000 HD I/O

BarKlip® HV

COMING SOON


BKHV65 I/O 400V

COMING SOON


BKHV65 I/O 800V

COMING SOON


BKHV250 I/O 400V

COMING SOON


BKHV250 I/O 800V


BKHV300 I/O 800V

BarKlip® Board-Mount


BK25


BK125


BK150


BK200


BK250


BK300


BK300


BK450


BK500


BK1000

Amphenol Power Solutions
Powershelf Roadmap





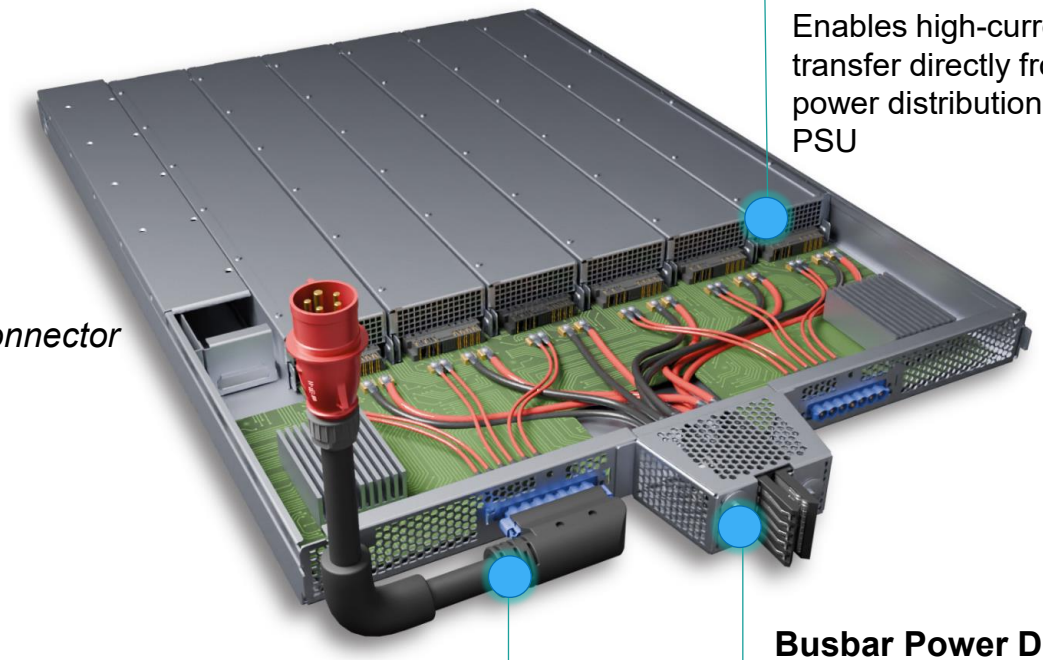

Facility Power to Data Center | ***AC Power Distribution*** | ***IT Gear Input Solutions*** | ***Power Supply Inside the Shelf***



20 – 32 A AC Whip Connector



60 A AC Whip



1 **AC Whip Input**

Convenient routing solution from overhead busway to power shelf application

Transfer of Power **2**

Enables high-current electrical transfer directly from the server's power distribution network into a PSU



PwrBlade® ULTRA



PwrBlade® ULTRA HD+

PwrBlade® Series

- 36A – 200A
- Modular Tooling
- Ultra-low End-of-Life Resistance

48V BarKlip®

- 150A – 1200A
- High-Power Efficiency
- Scalable Power

Busbar Power Distribution **3**

BarKlip® Solutions power shelves and deliver efficient, low resistance, power to busbars, cables and circuit boards with ease



BarKlip® BK600



BarKlip® BK1200 HD

Amphenol Power Solutions
BarKlip® Board-Mount Roadmap



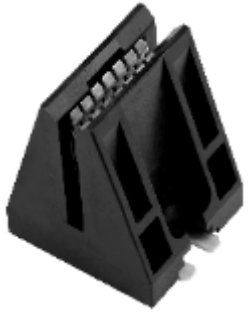
BK25
Up to 25A



BK150
Up to 150A



BK250
Up to 250A



BK300
Up to 300A



BK450
Up to 450A

25A — **500A** — **1000A+**

BarKlip®
XP Series



BK XP200
Up to 200A



BK XP250
Up to 250A



BK XP300
Up to 300A



BK XP500
Up to 500A



BK XP1000
Up to 1000A

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BarKlip® I/O Roadmap

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COMMUNICATIONS SOLUTIONS

12V



BK200 I/O
Up to 200A



BK300 I/O
Up to 300A



BK350 I/O
Up to 350A

48V



BK75 I/O
Up to 75A



BK150 I/O
Up to 150A



BK350 I/O
Up to 350A



BK600 I/O
Up to 700A



BK1200 HD I/O
Up to 1250A



BK100 I/O
Up to 100A



BK220 I/O
Up to 220A



BK500 I/O
Up to 500A



BK1000 HD I/O
Up to 1000A

50A ***100A*** ***200A*** ***500A*** ***1000A+***

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Amphenol Power Solutions
BarKlip® Notable Features

BarKlip® BK220 I/O
- *Rated up to 220A*
- *48V Solution*

OCP IT Gear Connector

BarKlip® BK350 I/O
- *Rated up to 350A*
- *48V Solution*

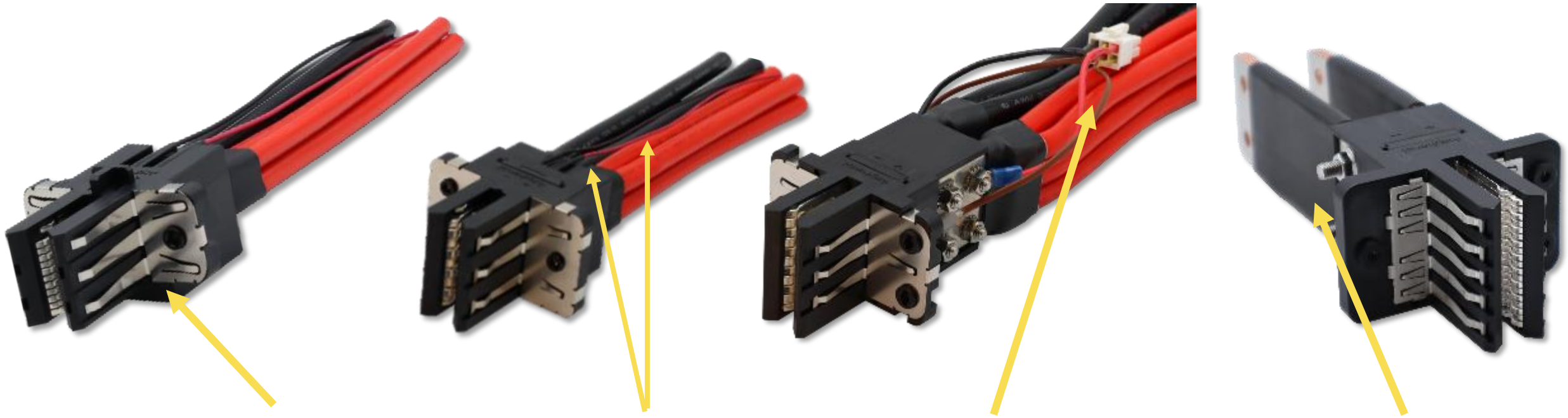
OCP IT Gear Connector

BarKlip® BK600 I/O
- *Rating up to 700A*
- *48V Solution*

OCP 1OU Power Shelf

BarKlip® BK1200 HD I/O
- *Rating up to 1200A*
- *48V Solution*

OCP 2OU Power Shelf



Chassis Grounding Contacts
Safely provides supplemental grounding for system fault protection

Sense Pins
Enables mate last-first break capability

Thermal Sensor
Continuous, real-time temperate monitoring for added safety

Flex Busbar
High current-carrying capabilities while increasing space conservation

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Amphenol Power Solutions
BarKlip® Notable Features

Features:

- High current carrying capabilities: ***500 – 2000A+***
- Round and flat braided wire provides ***space conservation***
- ***Easy*** installation and maintenance

Added Capabilities

- Insulated and uninsulated versions
- Multiple copper sheet stack availability
- Flex / rigid combined solution with welding

BarKlip® BK600



BarKlip® BK500



BarKlip® BK1200 HD



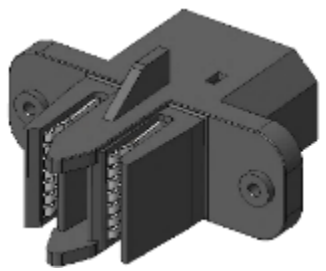
Amphenol Power Solutions

BarKlip® Cable IO Connectors for OCP Open-Rack Standard ORv2 & ORv3 IO Connectors for Vertical Busbar

OCP ORv2 Specification (12V & 48V)

BK200 IO

12V IT Gear Connector
200A per pole
Contact Plating: Silver
ORv2 Compliance: Full

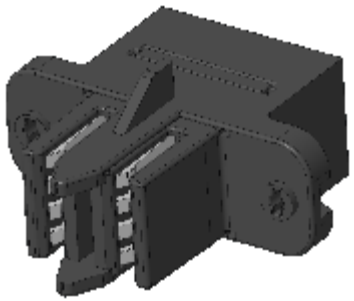


Cable Assy P/N 10129052-*

Status: Available &Tooled

BK300 IO

12V IT Gear Connector
300A per pole
Contact Plating: Silver
ORv2 Compliance: Inspired

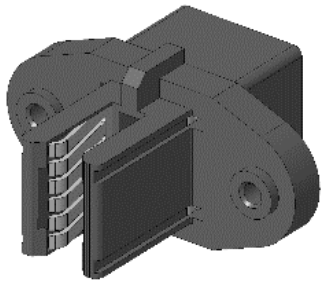


Cable Assy P/N -10158287*

Status: Available &Tooled

BK100 IO

48V IT Gear Connector
100A per pole
Contact Plating: Silver
ORv2 Compliance: Full



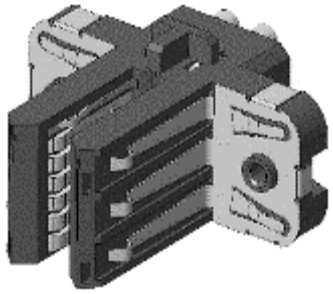
Cable Assy P/N 10143890-*

Status: Available &Tooled

OCP ORv3 Specification (48V)

BK150 IO

IT Gear Connector
150A per pole
Contact Plating: Silver
ORv3 compliance: Full

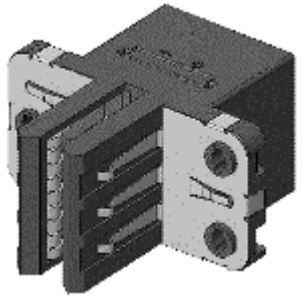


Cable Assy P/N 10162876-*

Status: Available & Tooled

BK500 IO

Power Output Connector
500A per pole
Contact Plating: Silver
ORv3 compliance: Full

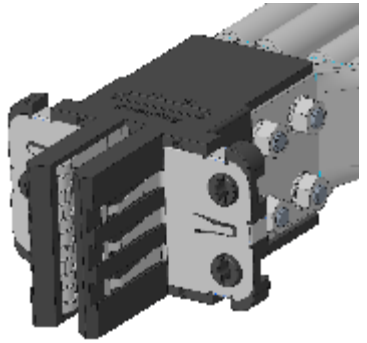


Cable Assy P/N 10156914-*

Status: Available & Tooled

BK600 IO

Power Output Connector
700A per pole
Contact Plating: Silver
ORv3 compliance: Inspired



Cable Assy P/N 10164745-*

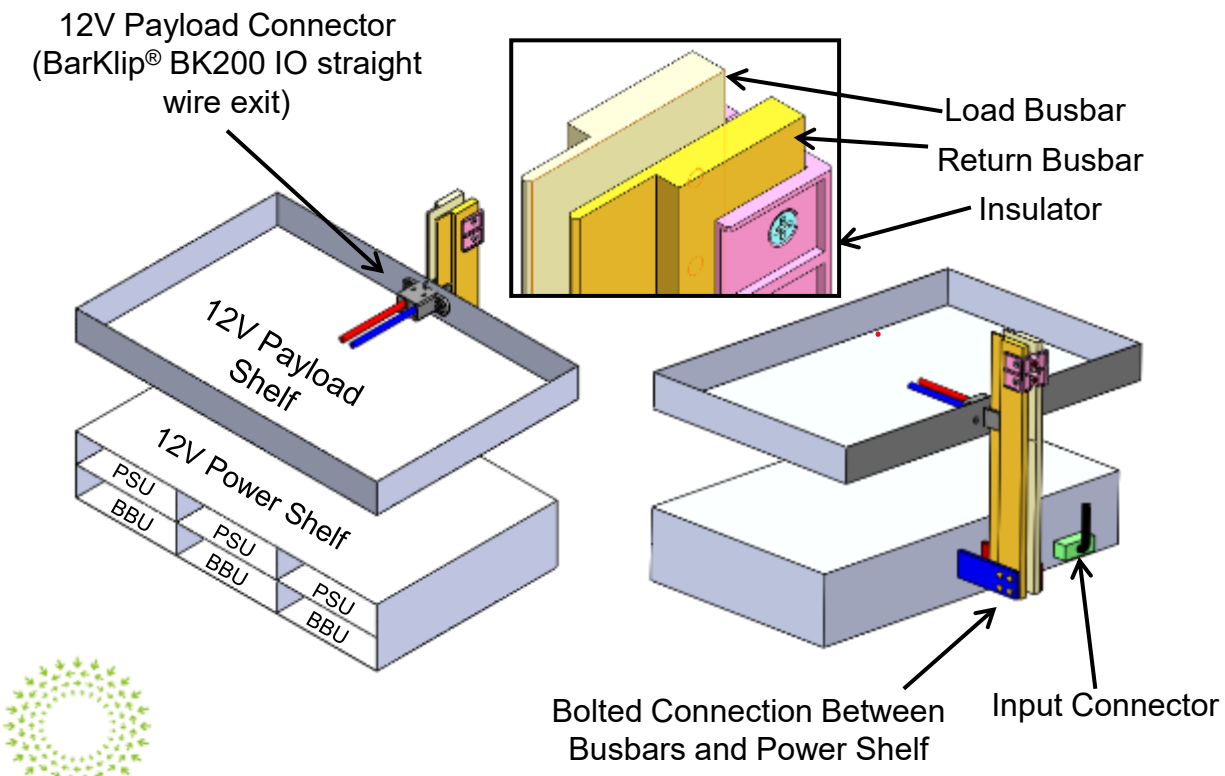
Status: Available & Tooled

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Amphenol Power Solutions
OCP ORv2 & ORv3 Rack Architectures

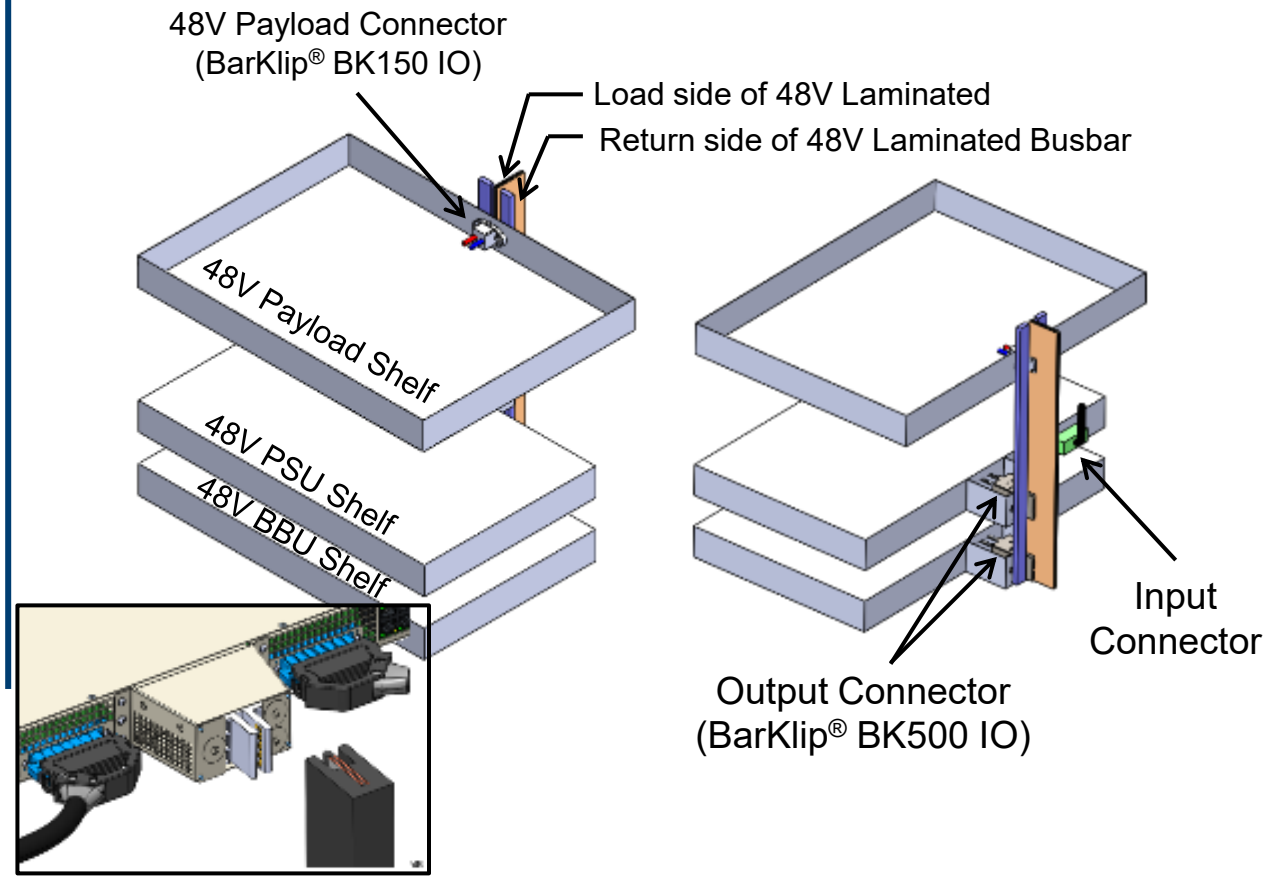
OCP ORv2 12V Rack

- *Fixed (bolted) Power Distribution System (No Modularity)*
- *Combines BBU & PSU Boxes*
- *Two Power Zones 12V Output*



OCP ORv3 48V Rack

- *Flexible & Modular Power Deliver System*
- *Independent BBU & PSU Boxes*
- *One Power Zone 48V Output*

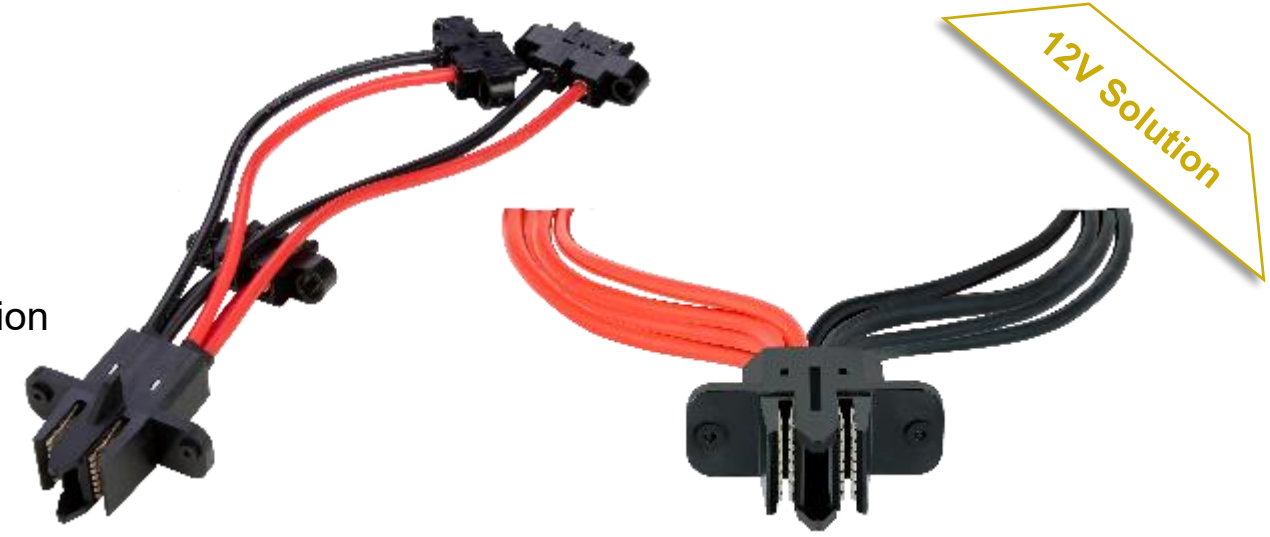


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ORv2 IT Gear Connectors

BarKlip® BK200 I/O

- Current Rating:
  - Up to 200A (30ºC T-rise in still air)
- Ultrasonically welded between wire and contact
- Fully Compliant with 12V OCP V2 Open Rack Specification
- 14 independent conducting beams
- Mating Busbar Thickness 3.0 +/- 0.1mm
- AGT® Plating Technology



BarKlip® BK100 I/O

- Current Rating:
  - Up to 100A (30ºC T-rise in still air)
- Ultrasonically welded between wire and contact
- 12 fully independent conducting beams
- Floating panel mount for blind-mate applications
- Mating Busbar Thickness 6.0 +/- 0.1mm
- Fully Compliant with 48V OCP V2 Open Rack Specification



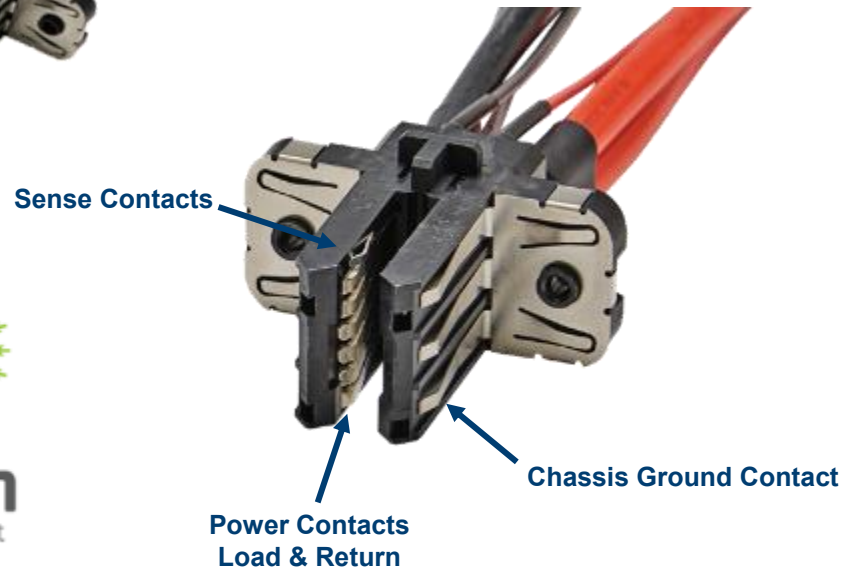
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Amphenol Power Solutions
ORv3 48V BarKlip® BK150 IT Gear Connector

Key Features:

- 2 power circuits + 2 sense pins + 2 chassis ground contacts
- Power Current: 150A Load + 150A Return = 300A total
- Chassis Ground Current: (Optional) 64A for 2 minutes (32A/contact)
- New Sense Contact (Mate last- Break First)
- Mates with OCP ORv3 laminated busbar (6mm thick)
- Panel float: ±3mm float horizontally and ±2mm vertically
- Fully compliant with OCP ORv3 IT Gear connector specification
- Optional slide-to-lock toolless design
- Straight-exit, left side, right side, and dual-side cable exit options available





OPEN Compute Project

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Amphenol Power Solutions
BarKlip® BK150 Cable Exit Options

- Multiple cable exit options allows for further customization in server/storage design



Dual Side Exit



Straight Exit



Slide-to-Lock



Left Side Exit



Right Side Exit

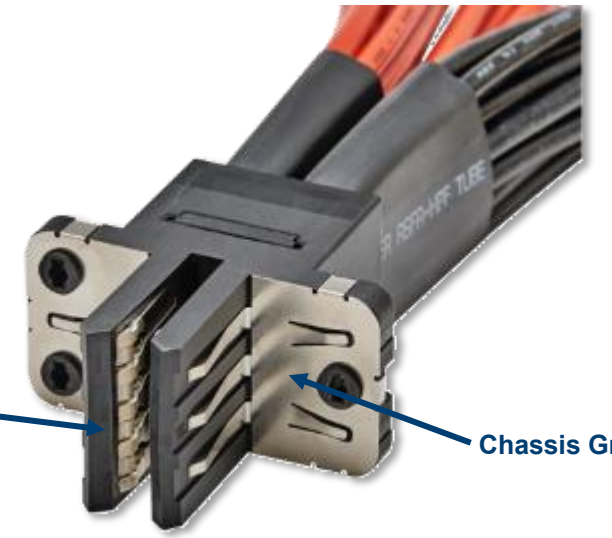
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Amphenol Power Solutions
ORv3 BarKlip® BK500 Power Shelf Connector

Features:

- 2 power circuits + 2 chassis ground contacts
- Power Current (still air): 360A Load + 360A Return = 720A total
- Power Current (45°C/300LFM airflow): 500A Load + 500A Return = 1000A total
- Chassis Ground Current: 64A for 2 minutes (total/both contacts)
- New, longer contacts provide maximum contact wipe with ORv3 busbar
- Mates with OCP ORv3 laminated busbar (6mm thick)
- Panel float: +/-3mm in X and Y directions
- Fully compliant with ORv3 Power Output connector specification





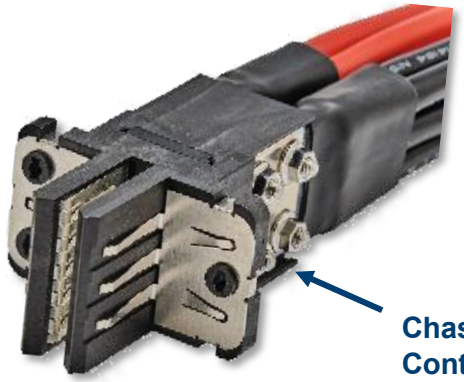
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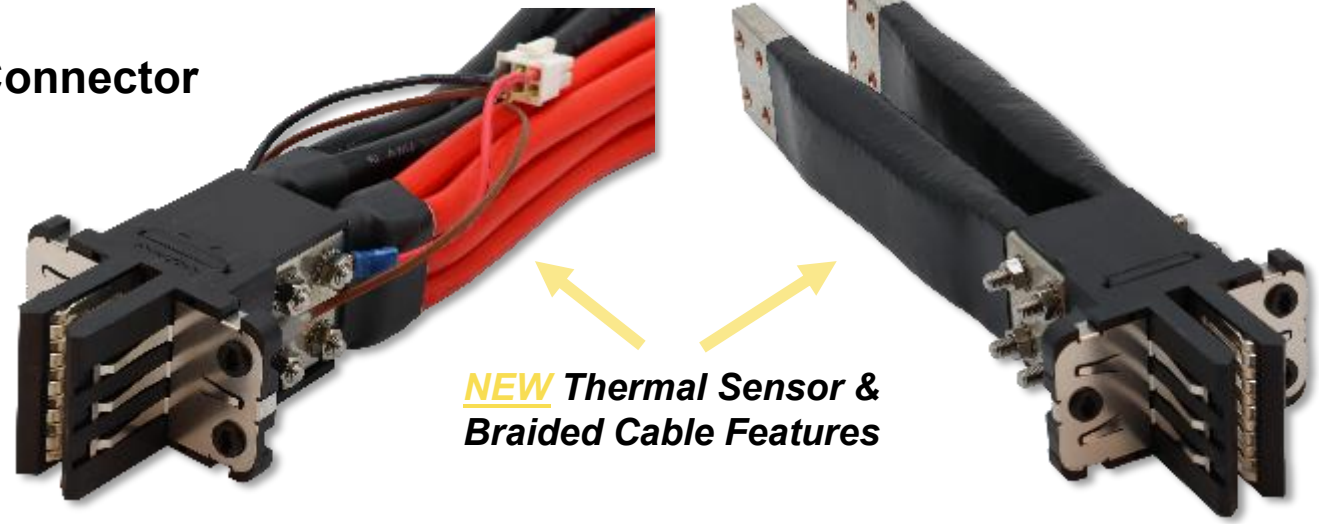
Amphenol Power Solutions
ORv3 BarKlip® BK600 I/O

Features:

- 2 power circuits + 2 chassis ground contacts
- ***Power Current (still air):*** 450A Load + 450A Return = 900A total
- ***Power Current (45°C/300LFM airflow):*** 700A Load + 700A Return = 1400A total
- New, longer contacts provide maximum contact wipe with ORv3 busbar
- Mates with OCP ORv3 laminated busbar (6mm thick)
- Panel float: +/-3mm in X and Y directions
- Fully compliant with **ORv3 Power Output Connector Specifications**







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Amphenol Power Solutions
ORv3 BarKlip® BK1000 HD I/O

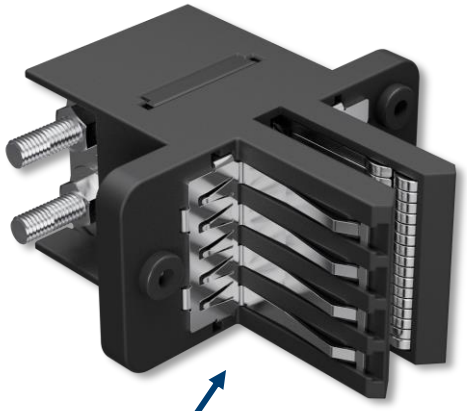
Features:

- 2 power circuits + 2 secondary chassis ground contacts
- ***Power Current (45°C/300LFM airflow):*** 1000A Load + 1000A Return = *2000A total*
- ***Power Current (still air):*** 700A Load + 700A Return = 1400A total
- ***Braided flex busbar*** provides increased flexibility and space conservation
- New longer contact design provides maximizes contact wipe with ORv3 laminated busbars (6mm thick)
- Ultrasonically welding ensures low voltage drop and high reliability
- Panel float: +/-3mm in X and Y directions
- Compliant with **ORv3 Power Output Connector Specifications**



Braided Flex Busbar

OCP Power Shelf



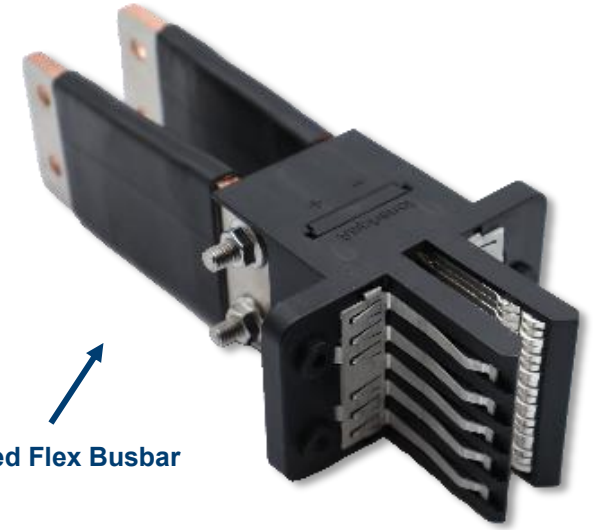
Chassis Ground Contacts

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Amphenol Power Solutions
ORv3 BarKlip® BK1200 HD I/O

Features:

- 2 power circuits + 2 secondary chassis ground contacts
- ***Power Current (45°C/300LFM airflow):*** 1250A Load + 1250A Return = *2500A total*
- ***Power Current (still air):*** 700A Load + 700A Return = 1400A total
- ***Braided flex busbar*** provides increased flexibility and space conservation
- **+6mm in height** from BarKlip® BK1000 HD IO
- New longer contact design provides maximizes contact wipe with ORv3 laminated busbars (6mm thick)
- Ultrasonically welding ensures low voltage drop and high reliability
- Panel float: +/-3mm in X and Y directions
- Compliant with **ORv3 Power Output Connector Specifications**



Braided Flex Busbar

OCP 1OU/2OU Power Shelf



NEW Longer Contact Design

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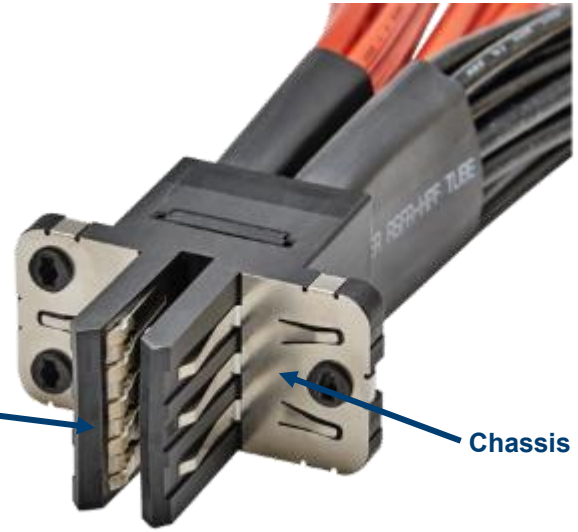
Amphenol Power Solutions

ORv3 BarKlip® BK500 I/O Power Shelf Connector

Features:

- 2 power circuits + 2 chassis ground contacts
- Power Current (still air): 360A Load + 360A Return = 720A total
- Power Current (45°C/300LFM airflow): 500A Load + 500A Return = 1000A total
- Chassis Ground Current: 64A for 2 minutes (total/both contacts)
- New, longer contacts provide maximum contact wipe with ORv3 busbar
- Mates with OCP ORv3 laminated busbar (6mm thick)
- Panel float: +/-3mm in X and Y directions
- Fully compliant with ORv3 Power Output connector specification





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Amphenol Power Solutions

ORv3 BarKlip® BK1000 I/O Power Shelf Connector

Features:

- 2 power circuits + 2 secondary chassis ground contacts
- ***Power Current (45°C/300LFM airflow):*** 1000A Load + 1000A Return = 2000A total
- ***Power Current (still air):*** 700A Load + 700A Return = 1400A total
- ***Braided flex busbar*** provides increased flexibility and space conservation
- New longer contact design provides maximizes contact wipe with ORv3 laminated busbars (6mm thick)
- Ultrasonically welding ensures low voltage drop and high reliability
- Panel float: +/-3mm in X and Y directions
- Compliant with **ORv3 Power Output Connector Specifications**



OCP Power Shelf



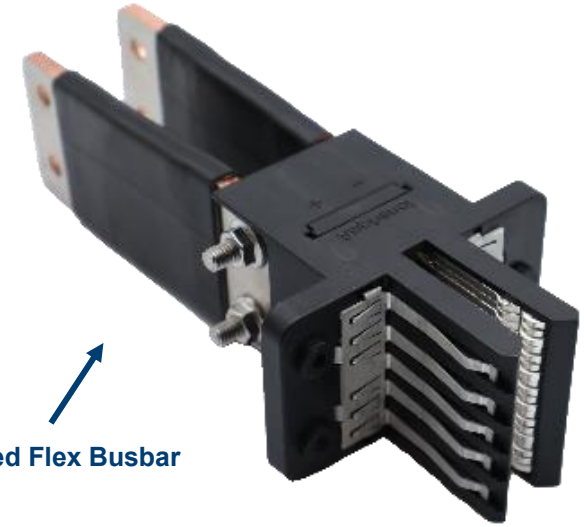
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Amphenol Power Solutions

ORv3 BarKlip® BK1200 HD I/O Power Shelf Connector

Features:

- 2 power circuits + 2 secondary chassis ground contacts
- ***Power Current (45°C/300LFM airflow):*** 1250A Load + 1250A Return = *2500A total*
- ***Power Current (still air):*** 700A Load + 700A Return = 1400A total
- ***Braided flex busbar*** provides increased flexibility and space conservation
- **+6mm in height** from BarKlip® BK1000 HD IO
- New longer contact design provides maximizes contact wipe with ORv3 laminated busbars (6mm thick)
- Ultrasonically welding ensures low voltage drop and high reliability
- Panel float: +/-3mm in X and Y directions
- Compliant with **ORv3 Power Output Connector Specifications**



Braided Flex Busbar

OCP 1OU/2OU Power Shelf



NEW Longer Contact Design

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Thank You

For more information, visit https://www.amphenol-cs.com/busbar-connectors

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