

Single Pole High Amperage Connectors and Receptacles

49 Series: Rugged connections for applications up to 1135A, 1000V AC/DC

rhino-hide[®]



INTRODUCTION

Single Pole Panel Mount Receptacles



For Use on Land-Based Oil Drilling Rigs and Other High-Amperage Power Generation Applications

49 Series single pole connectors and receptacles are designed to deliver up to 1,000 Volts AC or DC and up to 1,135 Amps of continuous power under the most extreme conditions with cables ranging in size from 313 MCM to 777 MCM. Designed to mate with other manufacturers' high-amperage single pole connectors and receptacles, 49 Series single pole devices can be installed on both existing power houses and generator stations or on new oil and gas rig construction.

49 Series Panel Mounted Receptacles

49 Series receptacles include bus bar termination in male or female versions. Insulators are molded in a thermoplastic vulcanizate (TPV) insulator and are protected by a powder coated metal housing and TPV dust cap. A clevis pin (included) and padlock shackle secure the plug into the receptacle.

Bus bars are available with single or double holes and each is compatible with the full cable range, 313 MCM to 777 MCM. Choose a male bus bar for the power side of the circuit or a female bus bar for the motor load side of the circuit. Receptacle housings are available in two styles: one for standard applications and one for applications requiring mounting of multiple receptacles in very close proximity.

Available colors: Black (E), White (W), Red (R), Blue (B), Green (G), Yellow (Y), Orange (O), Brown (H), Purple (P) & Gray (GY)*. See pages 9 & 10 for technical and ordering information.

INTRODUCTION

Single Pole Connectors



49 Series Connectors

49M (Male Contacts) and 49F (Female Contacts)

Rhino-hide connectors include a male or female contact with a TPV insulator and dust cap. Choose male contacts for the power side of the circuit or female contacts for the motor load side of the circuit. To prevent separation of the connectors, select a color-coded in-line coupler from Rhino-hide accessories.

Available colors: Black (E), White (W), Red (R), Blue (B), Green (G), Yellow (Y), Orange (O), Brown (H), Purple (P) & Gray (GY)*. See pages 7 & 8 for technical and ordering information.



49 Series Accessories

Couplers, dust caps, ground pins and replacement parts such as contacts, insulators and housings are available for both connectors and panel mounted receptacles. For complete details, see the Rhino-Hide accessories and replacement parts section.

See page 11 for ordering information.

* Not all colors available in all configurations, see ordering information page

FEATURES & BENEFITS

Male and Female Connectors



■ Color-coded connector insulator for quick, visual identification of circuit and phase connections. Available colors include: Black, White, Red, Blue, Green, Yellow, Orange, Purple, Gray¹ and Brown*

■ UV stable, TPV insulator resists fading and cracking for greater service life

■ Contacts machined from a high conductivity copper alloy and silver-plated for corrosion resistance and superior conductivity

■ Ideal for replacement; connectors mate with other manufacturers' high-amperage single pole connectors and receptacles for fast, easy change-out

■ Connectors deliver up to 1,135 Amps continuous duty

■ Male contact tip is over-plated with gold

■ TPV dust cap protects contacts when disconnected

■ Contacts offered by cable size for the most secure connection. Each contact is designed for a specific cable size ranging from 313 MCM through 777 MCM

* For additional colors, consult factory.
¹Select configurations only.
 See ordering information for details

Coupler

■ Color-coded, metal in-line coupler prevents separation of connectors and identifies phase

FEATURES & BENEFITS

Panel Mounted Receptacles



- Ideal for replacement; receptacles mate with other manufacturers' high-amperage single pole connectors and receptacles for fast, easy change-out
- Receptacles deliver up to 1,135 Amps continuous duty
- Cast aluminum powder-coated receptacle housing is color-coded for quick visual identification of circuit and phase connections
- "X" version receptacle housings feature a 45° angle stainless steel clevis pin that permits ganging of multiple receptacles in very close proximity to each other (as close as 1/4") for installation on smaller panels
- Captive stainless steel clevis bracket
- Detent pin allows clevis pin to stay secure in either open or closed position
- With thermal stability ranging from -60°C to 135°C (-76°F to 275°F) the Santoprene™ TPV bus bar insulator resists cracking for greater service life
- TPV cap prevents contamination when receptacle is not in use
- Stainless steel clevis bracket accepts industry standard lockout
- Color-coding the devices minimizes errors due to miswiring, and saves time during assembly and trouble-shooting, especially on dusty and dirty oil rigs.

Available colors include:
Black, White, Red, Blue, Green, Yellow, Orange, Brown, Purple and Gray.
For additional colors, consult factory.

FEATURES & BENEFITS

Locking Ground Pin for Panel Mount Receptacles



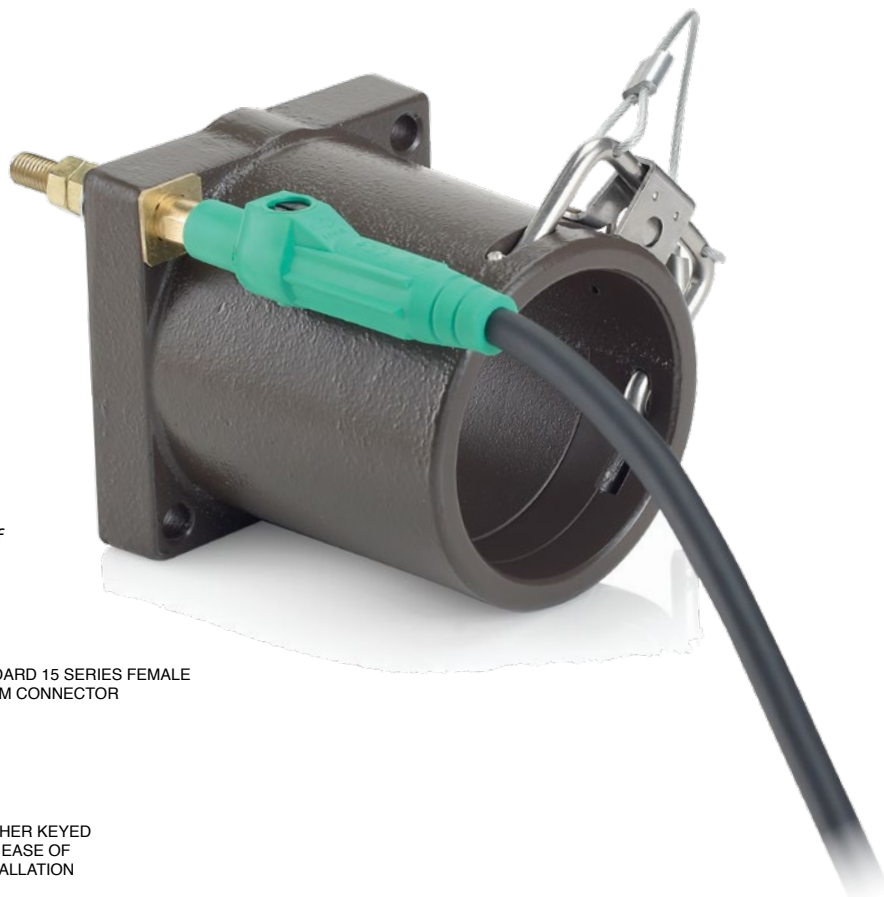
Use the 49 Series Locking Ground Pin to reduce electrical noise on land-based oil rigs or with semi-portable generator stations.

The locking ground pin, 15GND-UM, is easy to install and designed to fit both new and existing 49 Series panel mount applications. Simply replace one mounting receptacle bolt with the 15GND-UM. Connect to the downstream equipment using a standard Leviton 15 Series cam-type female connector.

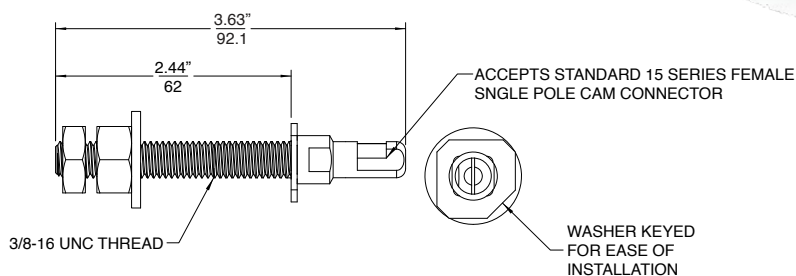
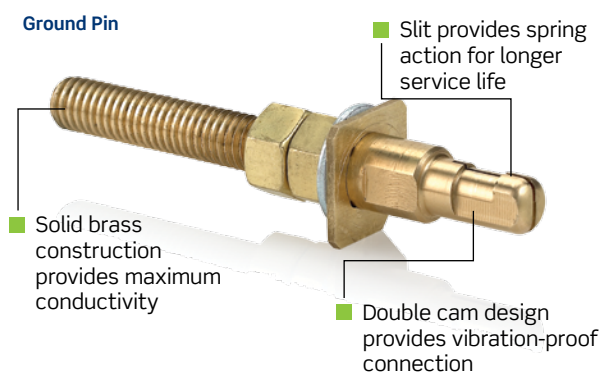
The Locking Ground Pin and mating 15 Series Cam-Type Female Connector are designed to reduce electrical noise and to mount on a panel or panel mount receptacle. The maximum current carrying capacity is 150 Amps. It is not intended to be used above 150A for fault current.

The Leviton 15 Series cam type connectors feature:

- TPV housing with superior UV resistance to reduce fading and cracking
- Solid-brass construction for highest conductivity
- Double cam design for vibration-proof connection
- Spring action slit that compensates for wear and extends service life



Ground Pin



SPECIFIER INFORMATION

Male and Female Connectors

49M (Male) and 49F (Female) Series



Application

These devices are suitable for high-amperage AC or DC loads. Typical uses are for power delivery on off-shore and land-based oil and gas rigs. Rhino-hide devices are used by SCR drive manufacturers and top drive manufacturers to distribute power from the SCR to mud pumps and top drives.

Material Specifications	
Component	Description
Connector Insulator	Thermoplastic vulcanizate (TPV)
Male Contact	Silver-plated high conductivity copper alloy. Tip is over-plated with gold.
Female Contact	Silver-plated high conductivity copper alloy.
Connector Retention Ring	Anodized Aluminum
Cable Clamp	Stainless Steel
Dust Cap	Thermoplastic vulcanizate (TPV)
Performance Specifications	
Electrical	
Maximum Working Voltage:	1,000 Volts AC or DC
Amperage	Up to 1,135 Amps
Connector Termination:	Crimp or Solder

Ampacity Ratings @ Ambient 40°C (104°F)		
Cable Size	90°C (194°F)	125°C (257°F)
313 MCM	513 AMPS	636 AMPS
444 MCM	642 AMPS	796 AMPS
535 MCM	724 AMPS	898 AMPS
646 MCM	814 AMPS	1,009 AMPS
777 MCM	916 AMPS	1,135 AMPS

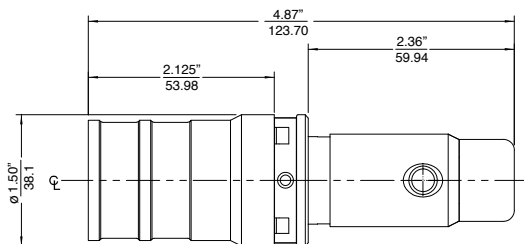
Environmental Specifications	
Recyclability	No-lead added thermoplastic vulcanizate (TPV) is fully recyclable
Minimum and Maximum Continuous Use Temperatures	From -60°C to 135°C (-76°F to 275°F)

Standards and Certifications

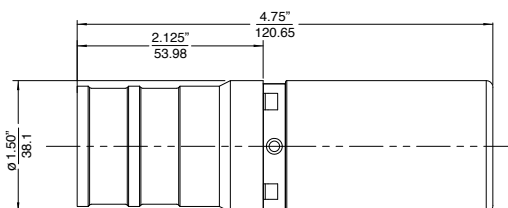


Rhino-hide 49 Series single pole connectors are cURus Recognized Components eligible for sales in Canada and the US. They meet the requirements of UL standard 486 AB for Wire Connectors. They are also in compliance with the essential health and safety requirements of the European Union Low-Voltage Directive (2006/95/EC).

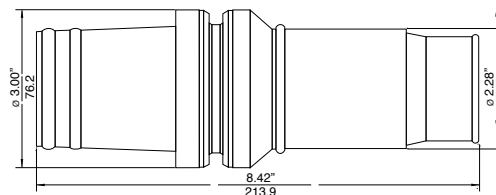
Male Contact



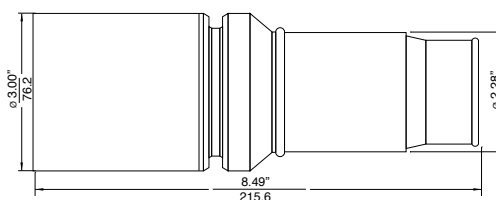
Female Contact



Male Connector Insulator



Female Connector Insulator



SPECIFIER INFORMATION

Male and Female Connectors

49M (Male) and 49F (Female) Series

Specifications

Rhino-hide 49 Series high amperage single pole connectors are CE Certified and cURus Recognized Components engineered to exceptional standards for high-amperage power delivery on land-based oil and gas rigs.

Features and Benefits

- Ideal for replacement; connectors mate with other manufacturers' high-amperage single pole connectors and receptacles for fast, easy change-out.
- UV stable, TPV insulators resist fading and cracking for greater service life.
- Contacts machined from high conductivity copper alloy and silver-plated for corrosion resistance and superior conductivity.
- Color-coded, metal in-line coupler prevents separation of connectors.
- Attach stripped cable to male or female contact with standard crimp tools.
- Color-coded connector insulator for quick, visual identification of circuit and phase connections.

Ordering Information

Complete connector includes: male or female contact, thermoplastic vulcanizate (TPV) insulator and dustcap. Replacement connector housings and replacement contacts may be ordered separately.

Complete Male Connector by Cable Size

Color	313 MCM Cable	444 MCM Cable	535 MCM Cable	646 MCM Cable	777 MCM Cable
Black	49M31-E	49M44-E	49M53-E	49M64-E	49M77-E
White	49M31-W	49M44-W	49M53-W	49M64-W	49M77-W
Red	49M31-R	49M44-R	49M53-R	49M64-R	49M77-R
Blue	49M31-B	49M44-B	49M53-B	49M64-B	49M77-B
Green	49M31-G	49M44-G	49M53-G	49M64-G	49M77-G
Yellow	49M31-Y	49M44-Y	49M53-Y	49M64-Y	49M77-Y
Orange	49M31-O	49M44-O	49M53-O	49M64-O	49M77-O
Brown	49M31-H	49M44-H	49M53-H	49M64-H	49M77-H
Purple	-----	49M44-P	49M53-P	-----	-----
Gray	49M31-GY	49M44-GY	-----	49M64-GY	49M77-GY

Complete Female Connector by Cable Size

Color	313 MCM Cable	444 MCM Cable	535 MCM Cable	646 MCM Cable	777 MCM Cable
Black	49F31-E	49F44-E	49F53-E	49F64-E	49F77-E
White	49F31-W	49F44-W	49F53-W	49F64-W	49F77-W
Red	49F31-R	49F44-R	49F53-R	49F64-R	49F77-R
Blue	49F31-B	49F44-B	49F53-B	49F64-B	49F77-B
Green	49F31-G	49F44-G	49F53-G	49F64-G	49F77-G
Yellow	49F31-Y	49F44-Y	49F53-Y	49F64-Y	49F77-Y
Orange	49F31-O	49F44-O	49F53-O	49F64-O	49F77-O
Brown	49F31-H	49F44-H	49F53-H	49F64-H	49F77-H
Purple	-----	-----	49F53-P	-----	49F77-P
Gray	-----	49F44-GY	49F53-GY	49F64-GY	49F77-GY

Replacement Connector Insulators

Color	Male Housing	Female Housing	Cable Size	Male Contact	Female Contact
Black	49MSL-E	49FSL-E	313 MCM	49M31-C	49F31-C
White	49MSL-W	49FSL-W	444 MCM	49M44-C	49F44-C
Red	49MSL-R	49FSL-R	535 MCM	49M53-C	49F53-C
Blue	49MSL-B	49FSL-B	646 MCM	49M64-C	49F64-C
Green	49MSL-G	49FSL-G	777 MCM	49M77-C	49F77-C
Yellow	49MSL-Y	49FSL-Y			
Orange	49MSL-O	49FSL-O			
Brown	49MSL-H	49FSL-H			
Purple	49MSL-P	49FSL-P			
Gray	49MSL-GY	49FSL-GY			

Replacement Contacts

SPECIFIER INFORMATION

Panel Mounted Receptacles

49MR (Male) and 49FR (Female) Series

Application


These devices are suitable for high-amperage AC or DC loads. Typical uses are for power delivery on off-shore and land-based oil and gas rigs. 49 Series devices are used by SCR drive manufacturers and top drive manufacturers to distribute power from the SCR to mud pumps and top drives.

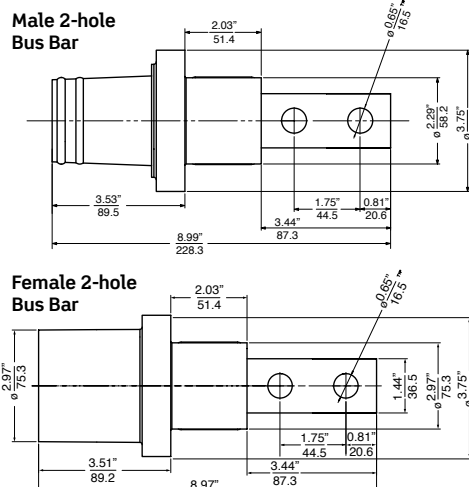
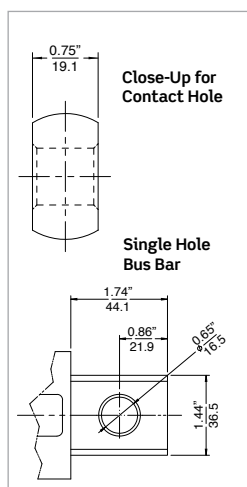


Material Specifications	
Component	Description
Bus Bar Insulator	Thermoplastic vulcanizate (TPV)
Receptacle Housing	Powder-coated cast aluminum
Bus Bar Contact	Silver-plated high conductivity copper alloy
Clevis Pin	Stainless steel
Padlock Bracket	Stainless Steel
Housing Gasket	Rubber
Receptacle Dust Cap	Thermoplastic vulcanizate (TPV)
Performance Specifications	
Electrical	
Maximum Working Voltage:	1,000 Volts AC or DC
Amperage	Up to 1,135 Amps
Connector Termination:	Bus Bar - Single Hole or Double Hole (0.65 ø)

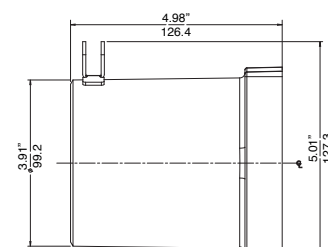
Ampacity Ratings @ Ambient 40°C (104°F)		
Cable Size	90°C (194°F)	125°C (257°F)
313 MCM	513 AMPS	636 AMPS
444 MCM	642 AMPS	796 AMPS
535 MCM	724 AMPS	898 AMPS
646 MCM	814 AMPS	1,009 AMPS
777 MCM	916 AMPS	1,135 AMPS

Environmental	
Recyclability	No-lead added thermoplastic vulcanizate (TPV) is fully recyclable
Minimum and Maximum Continuous Use Temperatures	From -60°C to 135°C (-76°F to 275°F)

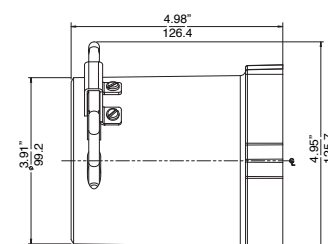
Standards and Certifications	
	<p>Rhino-hide 49 Series single pole connectors are cURus Recognized Components eligible for sales in Canada and the US. They meet the requirements of UL standard 486 AB for Wire Connectors. They are also in compliance with the essential health and safety requirements of the European Union Low-Voltage Directive (2006/95/EC).</p>



Panel Receptacle Housing Standard Clevis Pin "-C Series"



Panel Receptacle Housing 45° Clevis Pin "-X Series"



SPECIFIER INFORMATION

Panel Mounted Receptacles

49MR (Male) and 49FR (Female) Series

Specifications

49 Series single pole panel mounted receptacles are CE Certified and cURus Recognized Components engineered to exceptional standards for high-amperage power delivery on land-based and off-shore oil and gas rigs.

Features and Benefits

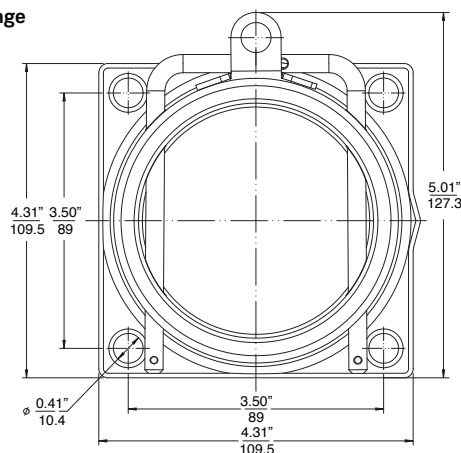
- Ideal for replacement; receptacles mate with other manufacturers' high-amperage single pole connectors and receptacles for fast, easy change-out.
- Color-coded receptacle housing and bus bar insulator for quick, visual identification of circuit and phase connections.
- With thermal stability ranging from -60°C to 135°C (-76°F to 275°F), the Thermoplastic Vulcanizate (TPV) bus bar insulator resists cracking for greater service life.

Ordering Information

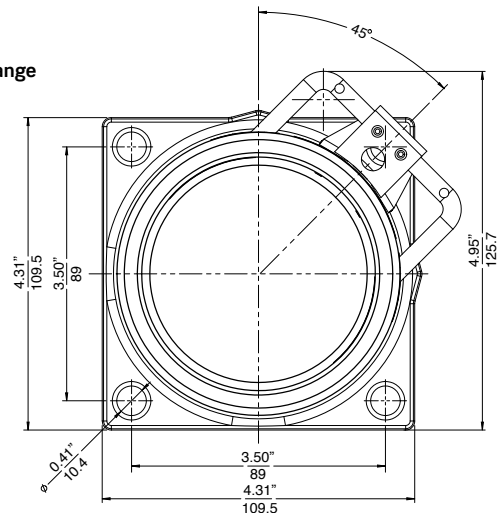
Complete Panel Mounted Receptacle includes bus bar with insulator, powder coated metal housing, clevis pin, gasket, and dust cap.

		Standard Clevis Pin				45° Clevis Pin			
		Complete Male Receptacle		Complete Female Receptacle		Complete Male Receptacle		Complete Female Receptacle	
	Color	Single Hole Bus Bar	Double Hole Bus Bar	Single Hole Bus Bar	Double Hole Bus Bar	Single Hole Bus Bar	Double Hole Bus Bar	Single Hole Bus Bar	Double Hole Bus Bar
Cable Size 313 MCM Through 777 MCM Bus bar hole diameter 0.65" (16.5mm)	Black	49MR1-CE	49MR2-CE	49FR1-CE	49FR2-CE	49MR1-XE	49MR2-XE	49FR1-XE	49FR2-XE
	White	49MR1-CW	49MR2-CW	49FR1-CW	49FR2-CW	49MR1-XW	49MR2-XW	49FR1-XW	49FR2-XW
	Red	49MR1-CR	49MR2-CR	49FR1-CR	49FR2-CR	49MR1-XR	49MR2-XR	49FR1-XR	49FR2-XR
	Blue	49MR1-CB	49MR2-CB	49FR1-CB	49FR2-CB	49MR1-XB	49MR2-XB	49FR1-XB	49FR2-XB
	Green	49MR1-CG	49MR2-CG	49FR1-CG	49FR2-CG	49MR1-XG	49MR2-XG	49FR1-XG	49FR2-XG
	Yellow	49MR1-CY	49MR2-CY	49FR1-CY	49FR2-CY	49MR1-XY	49MR2-XY	49FR1-XY	49FR2-XY
	Orange	49MR1-CO	49MR2-CO	49FR1-CO	49FR2-CO	49MR1-XO	49MR2-XO	49FR1-XO	49FR2-XO
	Brown	49MR1-CH	49MR2-CH	49FR1-CH	49FR2-CH	49MR1-XH	49MR2-XH	49FR1-XH	49FR2-XH
	Purple	49MR1-CP	49MR2-CP	49FR1-CP	49FR2-CP	49MR1-XP	49MR2-XP	49FR1-XP	49FR2-XP
	Gray	49MR1-CGY	49MR2-CGY	49FR1-CGY	49FR2-CGY	49MR1-XGY	49MR2-XGY	49FR1-XGY	49FR2-XGY

Panel Receptacle Flange
Standard
Clevis Pin
"-C Series"



Panel Receptacle Flange
45° Clevis Pin
"-X Series"



SPECIFIER INFORMATION

Accessories and Replacement Parts

49MR (Male) and 49FR (Female) Series

Makes Installation and Replacement Quick, Easy and Secure

Accessories and replacement parts for receptacles and connectors are available and may be ordered separately, including: dust caps, clevis pins, metal housings, in-line couplers, contacts, and connector housings.

The Rhino-hide clevis pin fits all in-line couplers and standard configuration panel mounted receptacles. Its universal design eliminates confusion and simplifies replacement part ordering.

Leviton has added a **new** accessory to the Rhino-hide series of high-amperage panel mount receptacles: **the 15GND Locking Ground Pin**. The ground pin employs the same cam-type action found in the 15 Series Cam-Type connectors, providing a more secure connection and longer service life than other types of ground pins.

See page 6 for complete details.



Ordering Information

Connector Accessories and Replacement Parts			
Cat No.	Description	Color	Material
49PNR	Clevis pin for in-line connector coupler	Silver	Stainless Steel
49DSM	Dust cap for single pole male connector	Black	TPV
49DSF	Dust cap for single pole female connector	Black	TPV
49COP-*	In-line Coupler for Connectors	See footnote	Powder coated aluminum

Panel Mounted Receptacle Accessories and Replacement Parts			
Cat No.	Description	Color	Material
49DSR	Dust cover cap for male or female receptacle	Black	TPV
49GAS	Receptacle housing gasket	Black	Rubber
15GND-UM	Locking Ground Pin	Brass	Solid Brass
15D22-UG	15 Series Female Connector	Green	Brass Contact / TPV Insulator

To order a color, replace the * with color's suffix: Black (E), White (W), Red (R), Blue (B), Green (G), Yellow (Y), Orange (O), Brown (H), Purple (P), and Gray (GY). Not all configurations available in all colors. Features and specifications may be subject to change.

More Power Solutions for Rough Service Environments

The rhino-hide® family of products



Rhino-Hide® NEMA Wiring Devices

These devices are watertight, submersible, corrosion resistant and have threaded fittings to provide positive locking connections in physically demanding environments that suffer from exposure to weather, chemicals, vibration, and physical strain, including:

- Oil Drilling Rigs
- Mining Operations
- Shore Power
- Wind Power Turbines
- Construction Sites

Rhino-Hide® Multi-Pin Connectors

The Rhino-Hide LZ Series connectors are heavy duty, environmentally sealed plugs and receptacles used for power, control and instrumentation applications in the harshest environments. These devices meet or exceed the requirements specified in the stringent Military Specification MIL-5015, making them suitable for a variety of industrial environments. Typical applications include:

- Onshore and Offshore Drilling Operations
- Aerospace and Marine Environments
- Land Transportation
- Factories, Refineries and More



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