

# Single Pole Cam-Type Connectors

15, 16 & 18 Series: For applications up to 400A, 600V AC/DC

rhino-hide<sup>®</sup>

**UL/CSA 1691  
Compliant  
Devices**



## Overview



Rhino-Hide Single Pole Cam-Type Connectors from Leviton supply temporary electrical power distribution for multiple indoor and outdoor applications.

### Features and Benefits

- Plugs are available in set screw or crimp tube termination, taper nose and ball nose configurations
- Intermateable and compatible with competitive cam-type products — can be retrofitted to existing locations and power distribution systems
- Shatter and crack proof – high durometer thermoplastic vulcanizate (TPV) or neoprene rubber
- Color-coded insulating sleeves provide fast and easy phase identification
- Self compensating for wear – slit in male contact provides spring action for longer usage
- Quick connect/disconnect
- High conductivity – positive, vibration-proof connection provided by cam design
- Wide range of applications – usable with a wide range of cable and amperage ratings
- Meets NEC requirements and is UL Listed and CSA Certified; NEMA 3R-Rated for use in outside locations

### Experience the Difference

Rhino-Hide Single Pole Cam-Type Connectors are designed for easy assembly and disassembly without special tools. A thermoplastic screw is used to tightly secure the contact inside the insulating sleeve, making assembly, disassembly and field repairs effortless. The plugs use plastic locking and reinforcement rings molded into insulating sleeves and receptacles ensuring the integrity of the connection. Under severe stress and load conditions, these rings will not melt, break or crack.





**UL/CSA 1691 Compliant**

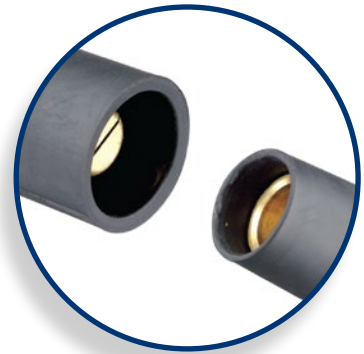
# rhino-hide<sup>®</sup> Single Pole Cam-Type Connectors

For applications up to 400A, 600V AC or DC

Color-coded insulating sleeves for easy phase identification



High conductivity—positive, vibration-proof connection provided by double cam design



Self compensating for wear—slit in male contact provides spring action for longer usage

Shatter and crack proof—high durometer thermoplastic elastomer (TPV) or neoprene rubber

Hard thermoplastic assembly screw provides strength and durability

Intermateable with competitive cam-type products—can be retrofitted to existing locations and power distribution systems

## Common Applications

- Sports, Entertainment and Movie Industry
- Theme Parks and Carnival Equipment
- Concert Venues and Convention Centers
- Motor and Generator Splices
- Mining Operations
- Welding and Construction Sites
- Commercial and Navy Shipbuilding/Repair
- Petrochemical and Manufacturing Plant Turnarounds
- Numerous Other Temporary Power Applications

## Ordering Information

### 15 Series: Single Set Screw or Crimp Tube Termination

### NEMA 3R Rated for Indoor/Outdoor Use

The 15 Series Taper Nose mini-cam plugs, receptacles and connectors are tough and reliable. Primary applications include carnivals and theme parks, as well as other entertainment applications.



15D21-UG



15R21-UR



15S31-UR



15R22-UH



15D22-UY

### CAM-TYPE PLUGS

Single Set Screw Termination <sup>®</sup> <sub>®</sub>		
Cable Size: #8 - #2 Max Ampacity: 150A	Male Plug	Female Plug
	15D21-U*	15D22-U*
Replacement Contacts	15D21-UC	15D22-UC
Crimp Tube Termination <sup>®</sup> <sub>®</sub>		
Cable Size: #8 - #4 Max Ampacity: 140A	Male Plug	Female Plug
	15D23-U*	15D24-U*
Replacement Contacts	15D23-UC	15D24-UC

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

### REPLACEMENT SLEEVES

Male Plug	Female Plug
15SDM-1U*	15SDF-1U*

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

### CAM-TYPE PANEL MOUNT RECEPTACLES

Cable Size: #8 - #2 Max Ampacity: 150A	.5" Threaded Stud Term. <sup>®</sup> <sub>®</sub>		.75" Threaded Stud Term. <sup>®</sup> <sub>®</sub>		Enclosure Male/Female
	Male Plug	Female Plug	Male Plug	Female Plug	
	15R21-U*	15R22-U*	15R21-1U*	15R22-1U*	15S31-U*

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

Note: Some items may require extended lead times; always consult with your local sales representative for current availability.

## 16 Series: Single or Double Set Screw or Crimp Tube Termination NEMA 3R Rated for Outdoor Use

The 16 Series Taper Nose products are the connectors of choice for power distribution for construction sites, mining operations, concerts, sound stages, movie-making, television production, sporting events and conventions.



### CAM-TYPE PLUGS

Cable Size: #6 - #2 Max Ampacity: 190A	<b>Double Set Screw Termination</b> ®			
	Male Plug		Female Plug	
	16D44-U*		16D45-U*	
Cable Size: #2 - #1 Max Ampacity: 220A	<b>Crimp Tube Termination</b> ®			
	Male Plug		Female Plug	
	16D25-U*		16D34-U*	
Cable Size: #2 - 2/0 Max Ampacity: 300A	<b>Single Set Screw Termination</b>		<b>Double Set Screw Termination</b> ®	
	Male Plug	Female Plug	Male Plug	Female Plug
	16D21-U*	16D29-U*	16D22-U*	16D31-U*
Replacement Contacts	—	—	16D22-UC	16D31-UC
Cable Size: 1/0 - 2/0 Max Ampacity: 300A	<b>Crimp Tube Termination</b> ®			
	Male Plug		Female Plug	
	16D26-U*		16D35-U*	
Cable Size: 2/0 - 4/0 Max Ampacity: 400A	<b>Single Set Screw Termination</b>		<b>Double Set Screw Termination</b> ®	
	Male Plug	Female Plug	Male Plug	Female Plug
	16D23-U*	16D32-U*	16D24-U*	16D33-U*
Replacement Contacts	—	—	16D24-UC	16D33-UC
Cable Size: 3/0 - 4/0 Max Ampacity: 400A	<b>Crimp Tube Termination</b> ®			
	Male Plug		Female Plug	
	16D28-U*		16D37-U*	

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

### REPLACEMENT SLEEVES (TPV)

	<b>For Plugs 1/0 to 4/0</b>		<b>For Plugs #2 - 2/0</b>	
	Male Plug	Female Plug	Male Plug	Female Plug
	16SDM-1U*	16SDF-1U*	16SDM-2U*	16SDF-2U*

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

### CAM-TYPE PLUGS

Cable Size: 2/0 - 4/0 Max Ampacity: 400A Flame Retardant	<b>Double Set Screw Termination</b> ®	
	Male Plug	Female Plug
	16D40-U	16D41-U

These devices available in White only.

Note: Some items may require extended lead times; always consult with your local sales representative for current availability.

## Ordering Information

**16 Series: Single or Double Set Screw or Crimp Tube Termination** **NEMA 3R Rated for Outdoor Use**



16R21-UR

16R24-UW

16S28-UB

16A32-UR

16A26-UG

### CAM-TYPE PANEL MOUNT RECEPTACLE

Cable Size: 2/0 - 4/0 Max Ampacity: 400A	Double Set Screw Termination ™ ®			
	Male, 90°	Female, 90°	Male, 45°	Female, 45°
	16R21-U*	16R22-U*	16R27-U*	16R28-U*
Cable Size: #2 - 4/0 Max Ampacity: 400A	.75" L Threaded Stud** Termination ™ ®			
	Male, 90°	Female, 90°	w/microwitch	Male, 45°
	16R23-U*	16R24-U*	16RSW-U*	16R29-U*
				Female, 45°
				16R30-U*
Cable Size: #2 - 4/0 Max Ampacity: 400A	1.125" L Threaded Stud** Termination ™ ®			
	Male, 90°	Female, 90°	Self-Clinching Nut	
	16R23-1U*	16R24-1U*	Male, 90°	Female, 90°
			16R25-1U*	16R26-1U*
Cable Size: #2 - 4/0 Max Ampacity: 400A	Half Round w/Tapped Hole ™ ®			
		Male, 90°		Female, 90°
		16R19-U*		16R20-U*

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

\*\*Threaded stud termination type receptacles are available with custom stud lengths, from .75" L to 3.00" L.

Please contact your local sales representative for ordering information and availability.

### TERMINAL CONNECTORS

Cable Size: #2 - 4/0 Max Ampacity: 400A	Bus Bar Mount ™ ®		
	Male Angle	Female Angle	Offset
	16M21-2U*	16F21-U*	16F22-U*

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

### COVERS

	Enclosure Male/Female	Caps	
		Male	Female
	16S31-U*	16P21-U*	16P22-U*

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

### CAM-TYPE ADAPTERS

Max Ampacity: 400A	Paralleling Tee ™ ®	Tapping Tee ™ ®	3-Fer ™ ®	Reverse 3-Fer ™ ®
	F-M-M	F-F-M	M-F-F-F	F-M-M-M
	16A21-U*	16A22-U*	16A23-U*	16A26-U*
Max Ampacity: 400A	Double Male ™ ®		Double Female ™ ®	
	16A25-U*		16A24-U*	

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

Assembled Adapters Cable Size: 4/0 Max Ampacity: 400A	Paralleling Tee ™ ®	Tapping Tee ™ ®	3-Fer ™ ®	Reverse 3-Fer ™ ®
	F-M-M	F-M-F	M-F-F-F	F-M-M-M
	16A31-U*	16A32-U*	16A33-U*	16A36-U*

Replace \* with the following: W (White), E (Black), R (Red), B (Blue), G (Green).

Note: Some items may require extended lead times; always consult with your local sales representative for current availability.

## 18 Series: Single or Double Set Screw Termination

NEMA 3R Rated for Outdoor Use



18D21-UG



18R21-UB



18F21-UW



18R24-UG



18D26-UG

The 18 Series Ball Nose plugs, receptacles and connectors are used by the broadcast industry in Canada, as well as the welding industry in the United States.

### CAM-TYPE PLUGS

Cable Size: #2 - 2/0 Max Ampacity: 300A	Single Set Screw Termination ®		Double Set Screw Termination ®	
	Male Plug	Female Plug	Male Plug	Female Plug
	18D21-U*	18D29-U*	18D22-U*	18D31-U*
Cable Size: 2/0 - 4/0 Max Ampacity: 400A	Single Set Screw Termination ®		Double Set Screw Termination ®	
	Male Plug	Female Plug	Male Plug	Female Plug
	18D23-U*	18D32-U*	18D24-U*	18D33-U*

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

### CAM-TYPE PANEL MOUNT RECEPTACLES

Cable Size: #2 - 4/0 Max Ampacity: 400A	.75"L Threaded Stud** Termination ®	
	Male, 90°	Female, 90°
	18R21-U*	18R22-U*
Cable Size: 2/0 - 4/0 Max Ampacity: 400A	Double Set Screw Termination ®	
	Male, 90°	Female, 90°
	18R23-U*	18R24-U*

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

\*\*Threaded stud termination type receptacles are available with custom stud lengths, from .75"L to 3.00"L.

Please contact your local sales representative for ordering information and availability.

### FEMALE TERMINAL CONNECTORS

### COVERS

Cable Size: #2 - 4/0 Max Ampacity: 400A	Bus Bar Mount ®		Caps	
	Angle	Offset	Male	Female
	18F21-U*	18F22-U*	18P21-U*	18P22-U*

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

### CAM-TYPE ADAPTERS

Max Ampacity: 400A	Paralleling Tee ®	Tapping Tee ®	3-Fer ®
	F-M-M	F-F-M	M-F-F-F
	18A21-UW	18A22-UW	18A23-UW
Max Ampacity: 400A	Double Male ®		Double Female ®
	18A25-UW		18A24-UW

Replace \* with the following: W (White), E (Black), H (Brown), R (Red), B (Blue), O (Orange), G (Green), Y (Yellow).

Note: Some items may require extended lead times; always consult with your local sales representative for current availability.

## Accessories



### 15 SERIES DEVICES

"Com-A-Long" Assembly Tools	15CLM-U for Female Plug	15CLF-U for Male Plug
Lubricating Spray (16 Fl. oz. can)		C0001
Copper Shims (Sold 10 per package)		A0006
Strain Relief Wire (Sold 10 per package)		A0007
Set Screws (Sold 10 per package)		A0001
Plastic Screws (Sold 10 per package)		A0011

### 16 AND 18 SERIES DEVICES

"Com-A-Long" Assembly Tools	16CLM-U for Female Plug	16CLF-U for Male Plug
Lubricating Spray (16 Fl. oz. can)		C0001
Copper Shims (Sold 10 per package)		A0004
Strain Relief Wire (Sold 10 per package)		A0003
Set Screws (Sold 10 per package)		A0002
Plastic Screws (Sold 10 per package)		A0010



16CLM-U



C0001



16CLF-U

## Specifications

### Material Specifications

Insulator:	TPV
Contact:	Solid Brass
Strain Relief:	Copper Wire
Assembly Screw:	Thermoplastic

### Standards and Certifications

NEMA:	3R
UL:	1691
CSA:	C22.2 No. 1691-12

### Ampacity Table

Cable Size	Ampacity
#8	80
#6	105
#4	140
#2	190
#1	220
1/0	260
2/0	300
3/0	350
4/0	405

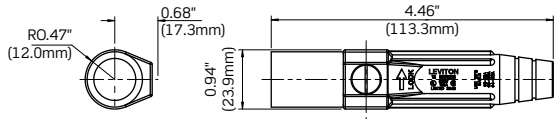
Excerpted from NEC Article 400, Table 400.5(A)(2), 90° column



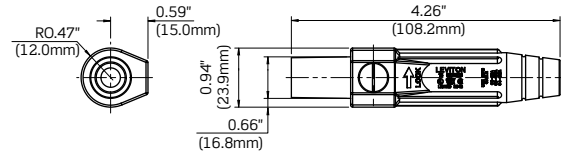
## Dimensional Diagrams

### 15 Series Devices

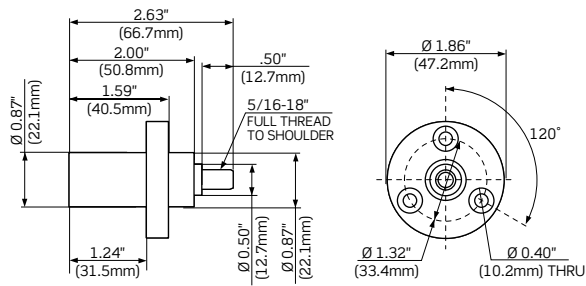
Male Plug



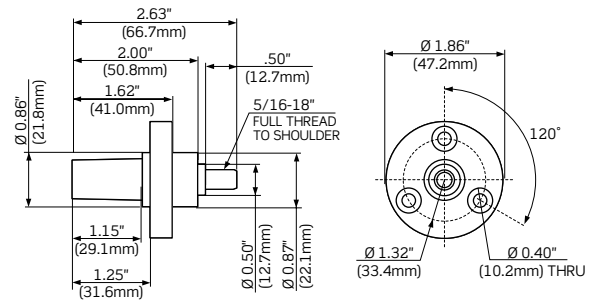
Female Plug



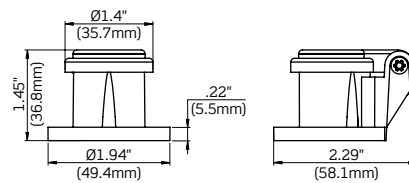
Male Panel Receptacle



Female Panel Receptacle



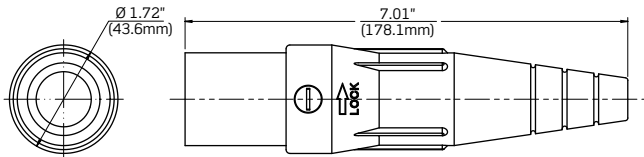
NEMA 3R Enclosure for Male and Female Panel Receptacles



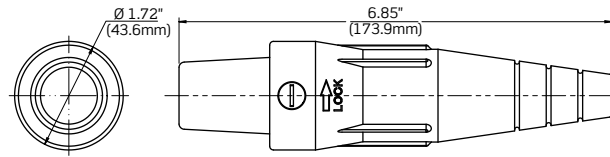
# Dimensional Diagrams

## 16 Series Devices

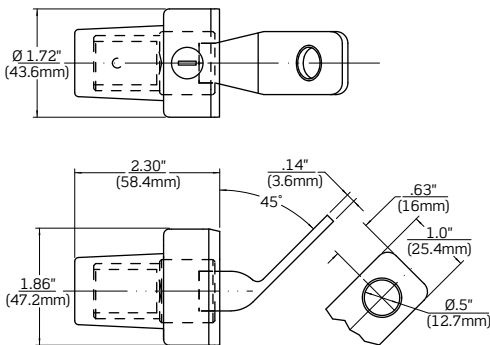
Male Detachable Plug



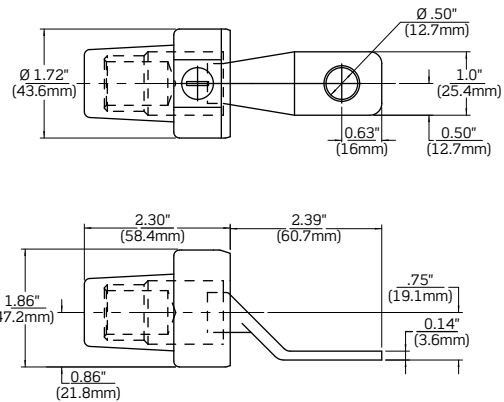
Female Detachable Plug



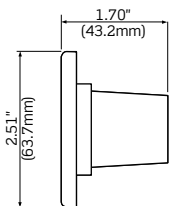
16F21 Female Terminal Connector



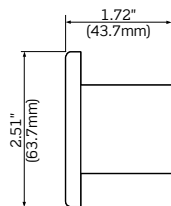
16F22 Female Terminal Connector



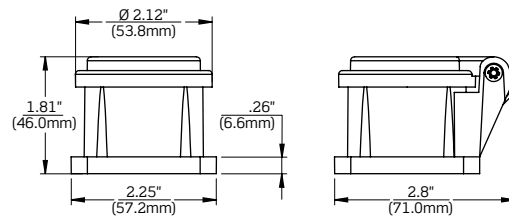
Male Protective Cap



Female Protective Cap

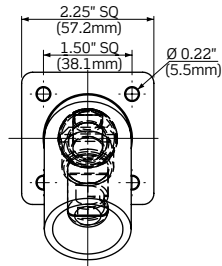


NEMA 3R Enclosure for Male and Female Panel Receptacles

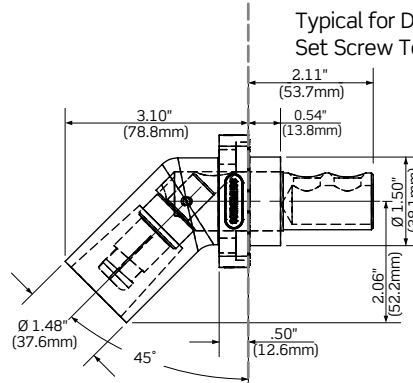


## 16 Series Devices

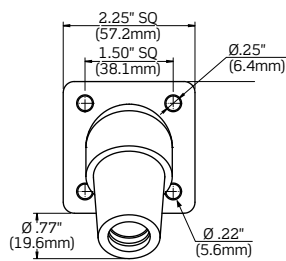
Typical Front for  
45° Male Panel Receptacle



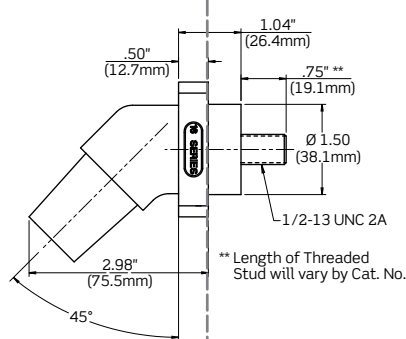
Typical for Double  
Set Screw Termination



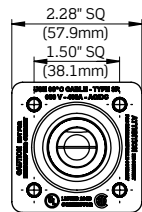
Typical Front for  
45° Female Panel Receptacle



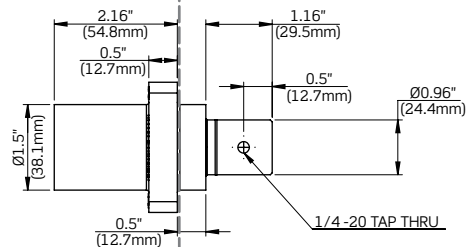
Typical for Threaded  
Stud Termination



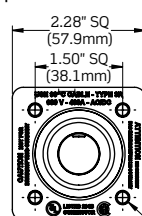
Typical Front for  
Male Panel Receptacle



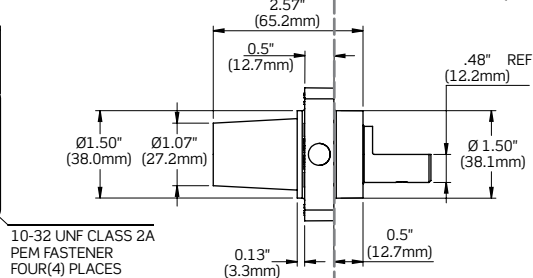
Typical for Bus Bar  
Termination (Top View)



Typical Front for Female Panel  
Receptacle with PEM Nuts



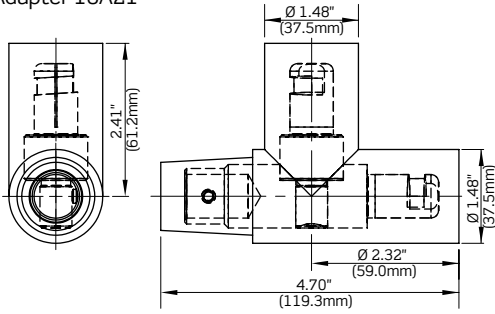
Typical for Bus Bar  
Termination (Side View)



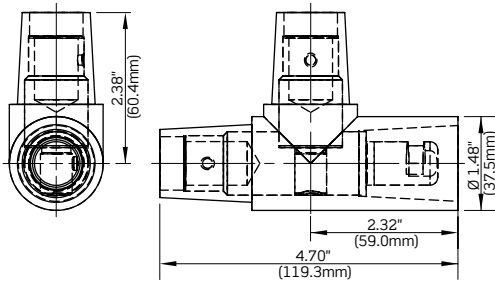
# Dimensional Diagrams

## 16 Series Devices

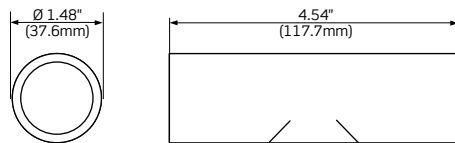
Paralleling Tee Adapter 16A21



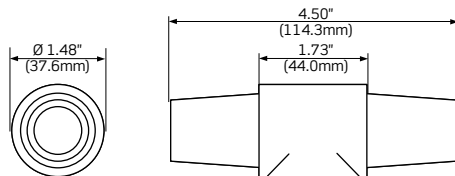
Tapping Tee Adapter 16A22



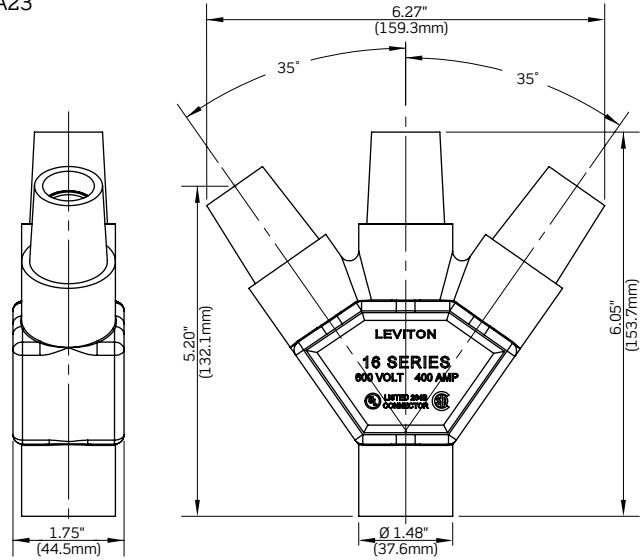
Double Female Adapter 16A24



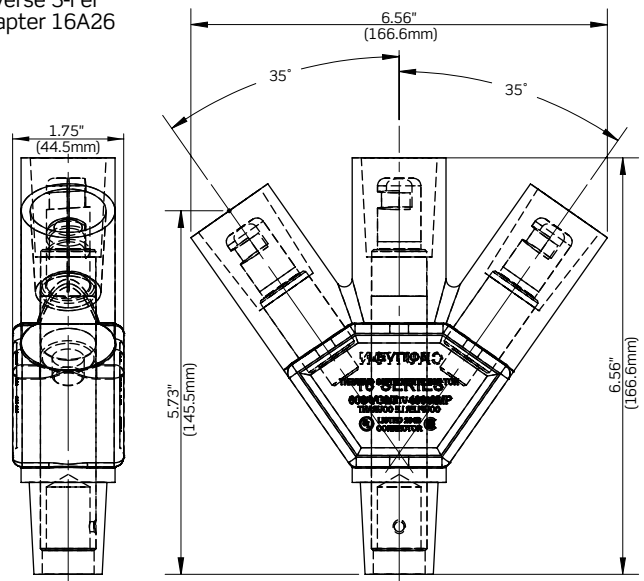
Double Male Adapter 16A25



3-Fer Adapter 16A23



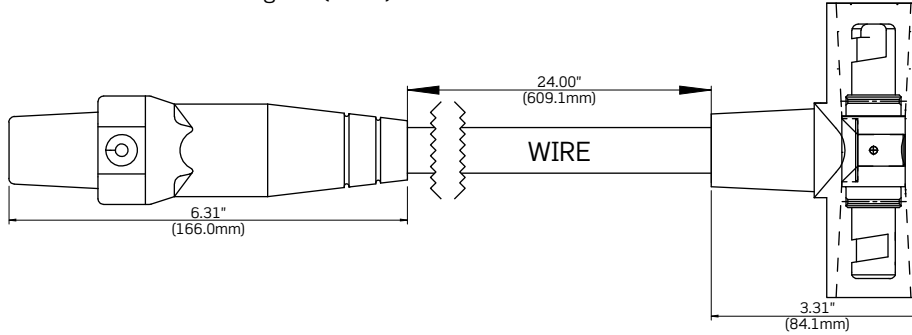
Reverse 3-Fer Adapter 16A26



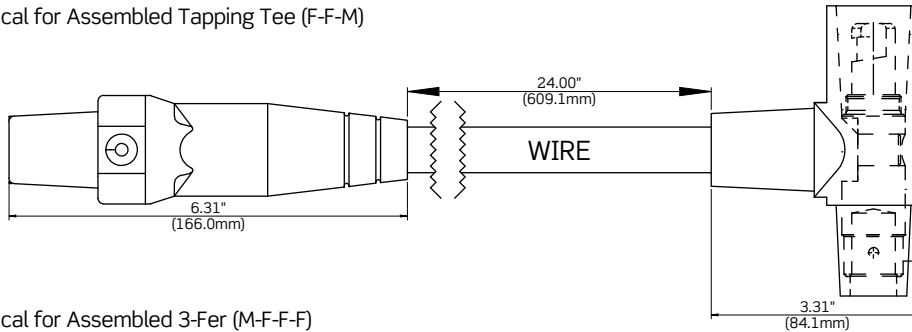


**16 Series Devices**

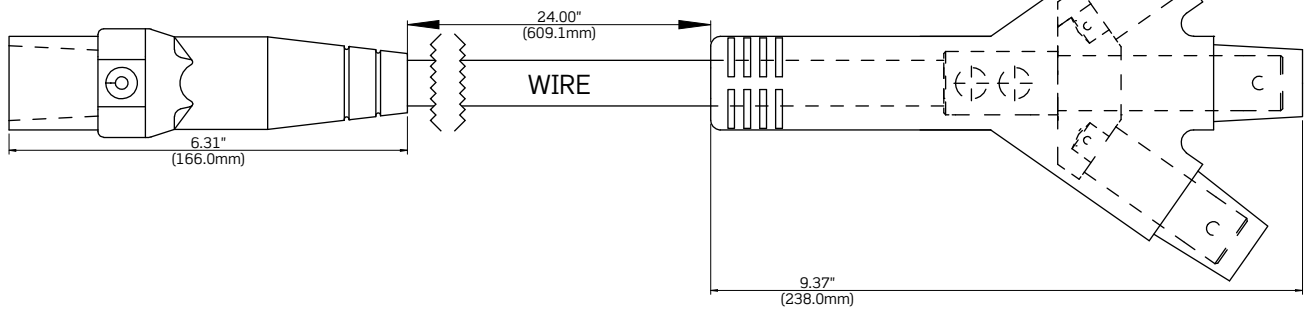
Typical for Assembled Paralleling Tee (F-M-M)



Typical for Assembled Tapping Tee (F-F-M)



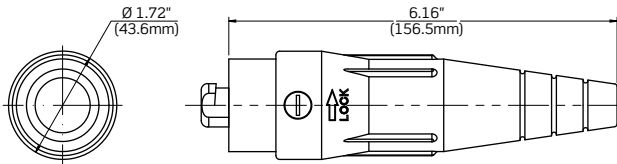
Typical for Assembled 3-Fer (M-F-F-F)



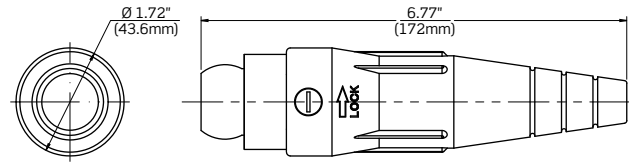
## Dimensional Diagrams

### 18 Series Devices

Male Detachable Plug

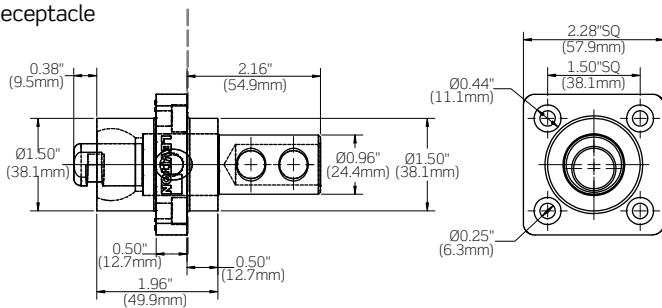


Female Detachable Plug



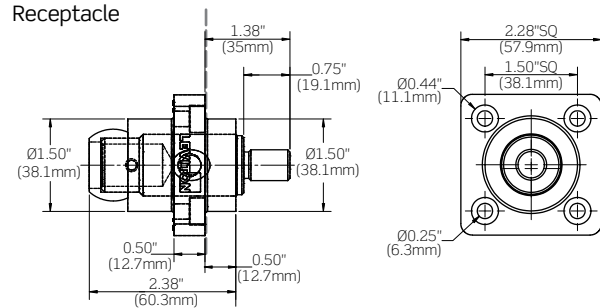
Typical Front for Male Panel Receptacle

Typical for Double Set Screw Termination

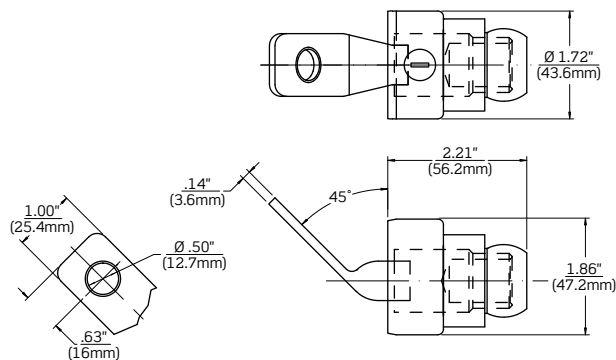


Typical Front for Female Panel Receptacle

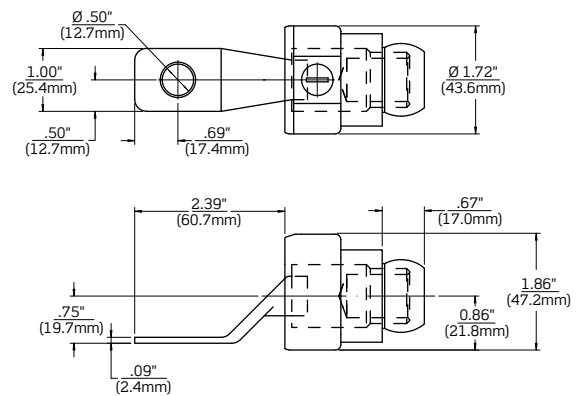
Typical for Threaded Stud Termination



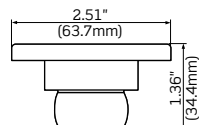
18F21 Female Terminal Connector - Bus Bar Mount, Angled



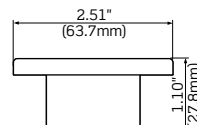
18F22 Female Terminal Connector - Bus Bar Mount, Offset



18P21 Male Protective Cap

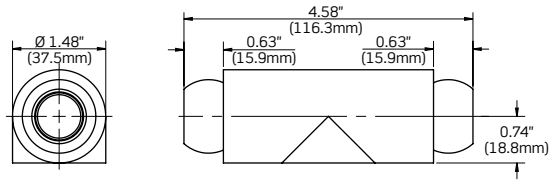


18P22 Female Protective Cap

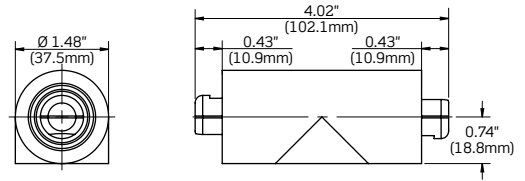


## 18 Series Devices

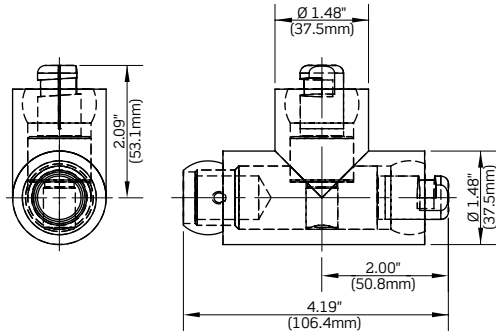
18A25 Double Male Adapter



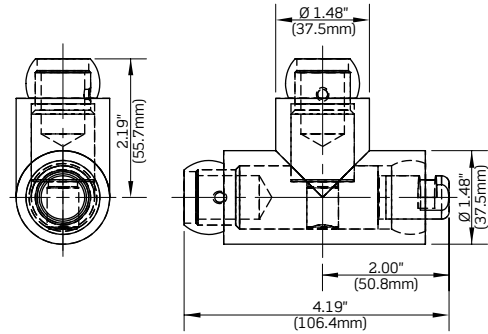
18A24 Double Female Adapter



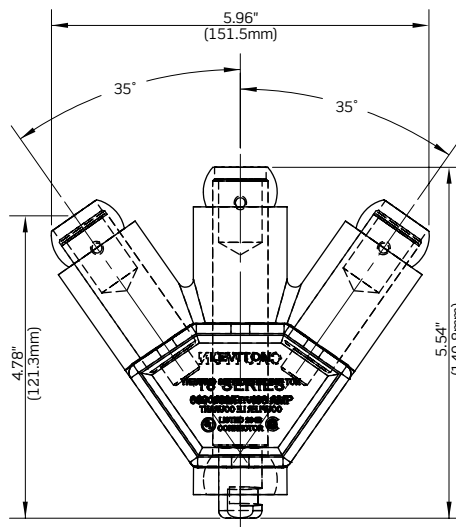
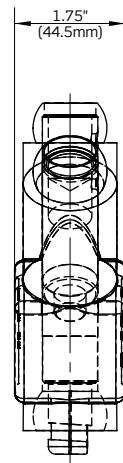
Paralleling Tee Adapter



Tapping Tee Adapter



3-Fer Adapter



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