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### XLR SERIES

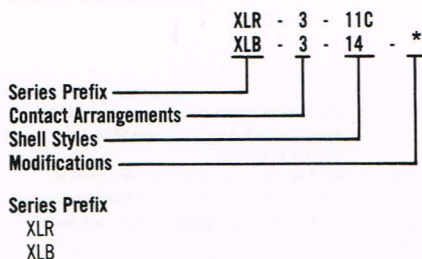
- Captive Screw on Cable Clamp
- Latch Lock/Quick Disconnect
- Resilient Socket Insulator for best performance in humid conditions—minimizes vibration and electrical noise
- UL Approved

XLR connectors from ITT Cannon have gained wide usage in commercial/industrial electronics and are designed for use in audio/video and other low level circuit applications where reliability, quiet operation, and the elimination of mechanical interference are necessary. Common uses include microphones, tape recorders, video tape recorders, amplifiers, mixers, test instrumentation, medical electronics, computers, TV cameras,

industrial control devices, and audio/video systems on transportation facilities.

The XLR series is known for its resilient neoprene rubber insulator and standard machined solder contacts. The shell design offers a cable clamp design preferred in the audio, video and broadcasting industry with a new captive screw feature for easy assembly. The shells have a satin nickel finish for reducing glare from lights in the entertainment industry. The XLR is available in 6 contact arrangements accommodating from 2 to 7 contacts in cable-to-cable or panel-to-cable connections. For complete technical and dimensional data on these versatile audio series connectors, please consult the factory or fill out the reply card at the back of your Standard Line catalog.

### HOW TO ORDER



#### Contact Arrangements

2A, 3, \*4, 5, 6A, 7

#### Shell Styles

- 11C — Straight Plug, socket contacts\*
- 13 — Round Flange Receptacle, socket contacts
- 31 — Rectangular Flange Receptacle, socket contacts\*
- 12C — Straight Plug, pin contacts\*
- 14 — Round Flange Receptacle, pin contacts
- 32 — Rectangular Flange Receptacle, pin contacts\*

#### Modification

A176 — Gold contact

### STANDARD DATA

Description	Materials	Finishes
Contacts	Copper Alloy	Silver or Gold
Insulator	Socket	Resilient
	Pin	Glass-filled Nylon
Shell*	Zinc or Alum. Alloy	Satin Nickel
Barrel	Steel	Nickel
Insulation Tube	Polyethylene	—
Bushing	Resilient	—
Latch	Nickel Silver	—
Cable Clamp	Zinc Alloy	Nickel
Clamp Screw	Steel	Nickel
Insert Retaining Screw	Steel	Nickel
Latch Lever	Steel	Nickel
Latch Spring	Stainless Steel	Passivated

\*Plugs also available with steel shell designated XLR\*-11SC and XLR\*-12SC.

### SHELL DESIGN

#### SOCKET SIDE

XLR\*-11C

-11SC

Straight cord plug

XLR\*-13

Wall mounting receptacle

XLR\*-31

Wall mounting receptacle

#### PIN SIDE

XLR\*-12C

-12SC

Straight cord plug

XLR\*-14

Wall mounting receptacle

XLR\*-32

Wall mounting receptacle

The -31 and -32 Wall Mounting receptacles are also available with a small flange. Please consult the factory.

### CONTACT ARRANGEMENTS AND GENERAL PERFORMANCE CHARACTERISTICS

Contact Arrangement Configuration



Contact Arrangement Designator	2A	3	4	5	6A	7
Number of Contacts	2	3	4	5	6	7
Current Rating	15A	15A	10A	7.5A	7.5A	5A
Test Voltage	1600V	1400V	1400V	1400V	1400V	1400V
Operating Voltage	200V	133V	133V	133V	133V	133V
Contact Resistance	21mV max. (25A DC)	21mV max. (25A DC)	25mV max. (20A DC)	25mV max. (10A DC)	25mV max. (10A DC)	25mV max. (7.5A DC)
Insulation Resistance	500V DC, 1000MQ min.					
Temperature Range	-55°C to +125°C					
Wire Accommodation						
Reference AWG	#14	#14	#16	#18	#18	#20
Wire Cross Section Area	2.0mm <sup>2</sup> max.	2.0mm <sup>2</sup> max.	1.4mm <sup>2</sup> max.	0.9mm <sup>2</sup> max.	0.9mm <sup>2</sup> max.	0.5mm <sup>2</sup> max.
Stranded Wire O.D.	2.1mm max.	2.1mm max.	1.6mm max.	1.4mm max.	1.4mm max.	1 mm max.

### XLA SERIES—LOW COST XLR VERSION

The XLA series is a low cost version of the XLR. It is available only in the popular 3 contact layout. The connector utilizes the XLR shell design in the straight cord plug style with a new feature of a captive screw on the cable clamp. The insulator is an UL approved PBT glass-filled nylon 30% material (UL94V0), the same as the XLB series. The XLA is interchangeable and intermateable with the XLR, XLB and AXR series.

- XLR shell design
- Low Cost
- Captive screw on cable clamp
- Interchangeable with XLR and XLB
- Grounding lug is provided separately from contacts.
- UL approved insulator material used (glass-filled PBT).

### STANDARD DATA

#### Specifications

Rated current	10 amps
Service voltage	133 volts
Dielectric withstanding voltage	1,400 VAC (rms) for 1 minute
Insulation resistance	100 megohms min. at 500VDC
Contact resistance	10 milliohms max. at 10 amps DC
Operating temperature range	-35°C to +85°C
Wire size	Up to #14 AWG



#### Materials

Shell	Zinc
Finish	Satin Nickel
Insulator	PBT Glass-filled Nylon 30%
Socket Contact	Nickel Silver Alloy
Busing	Resilient
Barrel	Stainless Steel



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### AXR

The AXR Series professional audio connector upgrades the ever popular XLR range and is suitable for audio/video and other low level circuit applications where reliability and the elimination of radio frequency and electro mechanical interference is necessary. All AXR series connectors are interchangeable and intermateable with XLR and XLB series. This series is also widely used as a general purpose commercial connector.

### APPLICATIONS

- Audio Equipment
- Video Equipment
- Medical Equipment
- Test Instrumentation
- Computer Serial Communication
- Television Equipment
- Industrial Control Devices
- Telecommunications Equipment

### FEATURES

- High dielectric resilient insulators on the socket side (3, 4 and 5 only) incorporate shock absorbing ribs ensuring quiet operation. Noise problems from mechanical interference when cables are pulled or subjected to shock are eliminated.
- Contact 1, which may be grounded, engages before signal contacts.
- Optional finishes—available in satin nickel or black (Shell style 15—satin nickel only).
- All pin versions incorporate a grounding lug connected to shell. This is pre-tapped for ease of assembly.
- Latch lock for positive coupling and quick disconnect.
- High conductivity copper alloy contacts.
- Convenient grubscrew cable clamping.
- Completely intermateable and intermountable with XLR and XLB connectors.

### HOW TO ORDER

<b>SERIES PREFIX</b>	AXR
<b>CONTACT ARRANGEMENTS</b>	3, 4, 5, 6A & 7 (See Page 141 for configurations)
<b>SHELL STYLE*</b>	11 — Straight cord plug 12 — Straight cord plug 13 — Wall mounting receptacle 13N — Panel mounting receptacle with lock nut 14 — Wall mounting receptacle 14N — Panel mounting receptacle with lock nut 15 — 90° cord plug 31 — Wall mounting receptacle 32 — Wall mounting receptacle 42 — 90° receptacle 50T — Adapter—threaded barrel 52-1 — Bulkhead mounting receptacle
<b>OPTIONAL FINISH</b>	B — Black all styles, except -15
<b>MODIFICATION CODE</b>	M — Machined contact (only required with -3 socket which has precision stamped contact as standard) AU — Gold plated contacts (not required with -7 which has gold finish as standard)

\* Odd Numbers—Socket contacts; even numbers—Pin contacts

### STANDARD DATA

Item	Material	Finish
Shell	- 15 Die cast aluminum All others die cast zinc alloy	Satin nickel only Satin nickel or black
Barrel	3, 4 and 5 Contact Steel 6A and 7 Die cast zinc alloy	Satin nickel
Contacts	- 3 Socket—Precision stamped beryllium copper All others—Machined copper alloy	Bright tin or gold
Pin Insulator	UL 94VO Polyester	Color-black
Socket Insulator	3, 4, and 5 Resilient UL 94VO Polychloroprene 6A and 7 UL 94VO Polyamide	Color-black
Cable Relief	Resilient UL 94VO Polychloroprene	Color-black

### VOLTAGE AND CURRENT RATING

No. of Contacts	Voltage		Current (A)	Wire Sizes AWG
	Test	Service RMS		
3	1400	133	15	14
4	1400	133	10	16
5 and 6A	1400	133	7.5	18
7	1400	133	5	20

<p><b>AXR—(*)—11</b> Straight cord plug Socket contacts</p> 	<p><b>AXR—(*)—12</b> Straight cord plug Pin contacts</p> 	<p><b>AXR—(*)—13</b> Wall mounting receptacle Socket contacts</p> 	<p><b>AXR—(*)—13N</b> Panel mounting receptacle Socket contacts. Panel accommodation up to 5/16 thick can be achieved by reversing the locknut.</p> 
<p><b>AXR—(*)—14</b> Wall mounting receptacle Pin contacts</p> 	<p><b>AXR—(*)—14N</b> Panel mounting receptacle Pin contacts. Panel accommodation up to 5/16 thick can be achieved by reversing the locknut.</p> 	<p><b>AXR—(*)—15</b> 90° cord plug Socket contacts</p> 	<p><b>AXR—(*)—31</b> Wall mounting receptacle Socket contacts</p> 
<p><b>AXR—(*)—32</b> Wall mounting receptacle Pin contacts</p> 	<p><b>AXR—(*)—42</b> 90° receptacle Pin contacts</p> 	<p><b>AXR—(*)—50T</b> "Adapter." Adapter Pin contacts</p> 	<p><b>AXR—(*)—52-1</b> Bulkhead Mounting Receptacle Pin Contacts Hexagon Lock Nut</p> 



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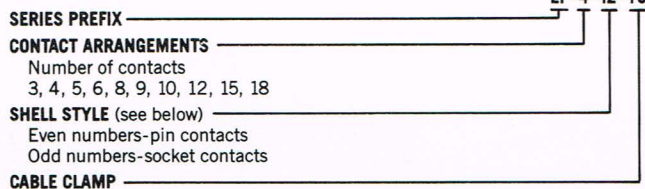
### INTRODUCTION

General purpose big brother to the AXR series, EP connectors combine ruggedness, versatility and field proven dependability. The diecast aluminum shells have protective satin nickel finish. EP connectors feature latch lock coupling and are available in a range of shell styles. Insulators are made from tough Polyamide material.

### FEATURES

- Field proven reliability
- Latch lock for positive coupling
- Variety of mounting types
- Integral cable clamp
- 10 contact arrangements 3, 4, 5, 6, 8, 9, 10, 12, 15 and 18 plus LNE mains layout

### HOW TO ORDER



### STANDARD DATA

Description	Material	Finish
Shell	Diecast aluminum	Satin nickel
Insulator	UL 94VO Polyamide	Color-black
Contacts	Machined copper alloy	Bright tin
Cable Bushing	UL 94VO Flexible P.V.C.	Color-black

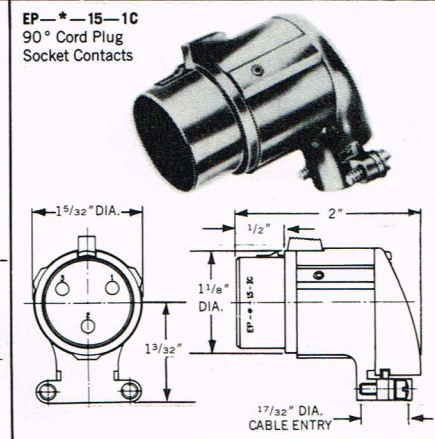
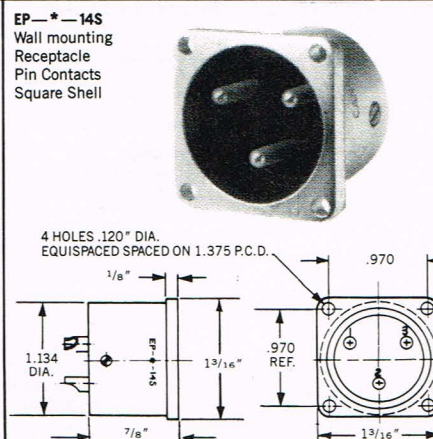
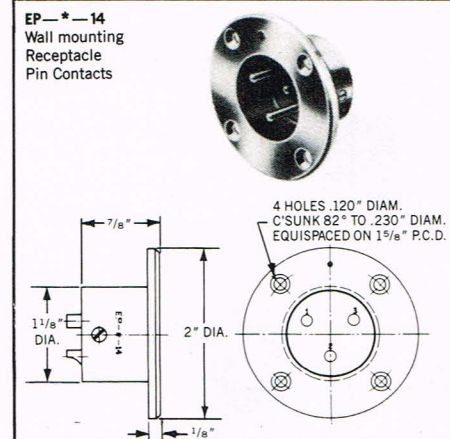
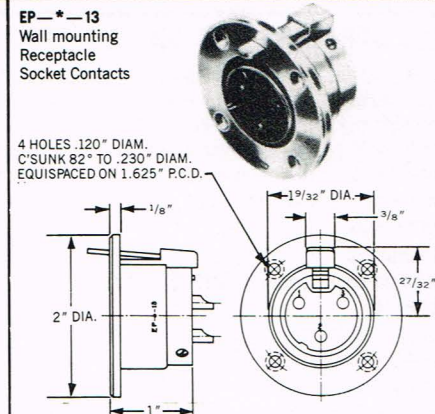
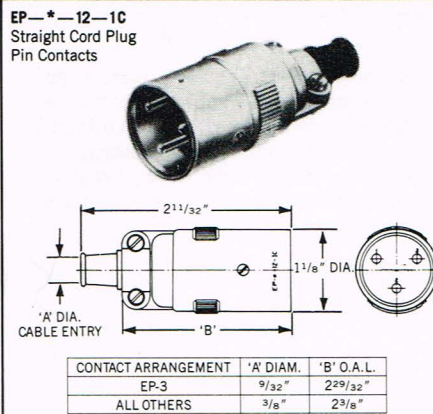
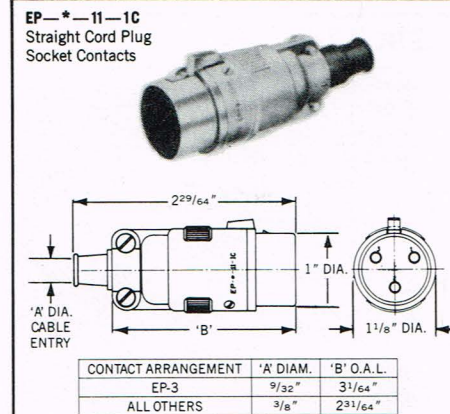
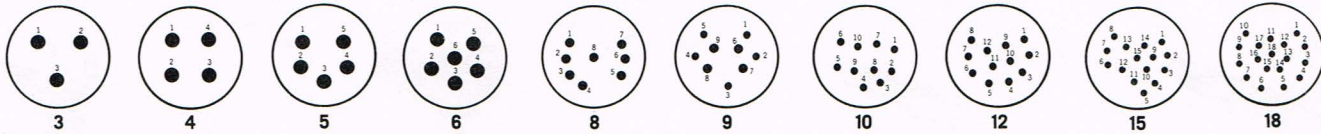
### ELECTRICAL DATA

No. of Contacts	3	4	5	6	8	9	10	12	15	18
Test Voltage	2400	3000	1600	1600	1300	1750	1600	1450	1600	1600
Service Voltage (RMS)	460	660	200	200	100	250	200	150	300	200
Current Rating (AMPS)	20	20	20	20	15	4x15 5x10	10	10	10	10

### MATING CHARACTERISTICS

	EP-11-1C	EP-12-1C	EP-13-1C	EP-14 & 14S	EP-15-1C
EP-11-1C					
EP-12-1C					
EP-13					
EP-14 & 14S					
EP-15-1C					

### CONTACT ARRANGEMENTS





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## XLB SERIES AUDIO CONNECTORS LOW COST, STREAM-LINED VERSION

- Low Cost
- Streamlined design with cable clamp mechanism built-in.
- Interchangeable with XLR and XLA
- Grounding lug is provided separately from contacts.
- UL approved insulator material used (glass-filled nylon).

The XLB series is a low cost streamlined audio connector that is interchangeable and intermateable with both the XLR and XLA series. The connector is available in the very popular 3 contact layout with cable-to-cable or panel-to-cable applications. The XLB offers an UL approved PBT glass-filled nylon 30% (UL94V0) insulator to lower cost, and it is designed with a built-in cable clamp mechanism. The shells have a satin nickel finish to reduce glare, a very important feature in the broadcasting industry. If the user is in need of a very reliable and economical audio-connector, the XLB series is perfect for your application.

## STANDARD DATA

### Specifications

Rated current	.10 amps
Service voltage	.133 volts
Dielectric withstanding voltage	1,400 VAC (rms) for 1 minute
Insulation resistance	.100 megohms min. at 500VDC
Contact resistance	.10 milliohms max. at 10 amps DC
Cable size	.0197 — 0.264 dia. (5.0 — 6.7) dia.
Operating temperature range	—35 °C to +85 °C
Wire size	Up to #14 AWG

### Materials

Shell	Zinc
Finish	Satin Nickel
Insulator	PBT Glass-filled Nylon 30%
Socket Contact	Nickel Silver Alloy
Busing	Resilient
Barrel	Stainless Steel

## SHELL DESIGN

### XLB-3-11C

Straight cord plug, socket contacts.



### XLB-3-12C

Straight cord plug, pin contacts.



### XLB-3-31

Wall mounting receptacle socket contacts.



### XLB-3-32

Wall mounting receptacle pin contacts.



## XLB STRAIGHT AND 90° P.C. MOUNT AUDIO CONNECTORS

The XLB series now offers a new low cost P.C. mount audio connector with 3 contacts. These printed circuit audio connectors are designed to plug into a printed circuit board and to flow solder from the rear. With the elimination of hand soldering, overall installation has been reduced greatly in both cost and labor. They are intermateable with the straight cord plug and cable with pin or socket contacts from either the XLR, XLA, XLB or AXR series. The diverse applications include audio mixers, equalizers, amplifiers, test instrumentation, computers, peripheral devices, and other broadcast and communication systems.

### ADVANTAGES

- Intermateable with XLR, XLB, XLA, and AXR
- Low cost
- Easy installation
- Light-weight design
- UL approved insulator material (UL94V-0)

For further information on these new versatile connectors please contact your nearest ITT Cannon Sales Office or Distributor, or, write to ITT Cannon, 10550 Talbert Ave., P.O. Box 8040, Fountain Valley, CA 92728-8040, telephone (714) 964-7400.

## STANDARD DATA

### Specifications

Rated current	.10 amps
Service voltage	.133 volts
Dielectric withstanding voltage	1,400 VAC (rms) for 1 minute
Insulation resistance	.5000 megohms min. at 500VDC
Contact resistance	PCS: 12.5 milliohms max. at 10 amps DC PCV: 21.1 milliohms max. at 10 amps DC
Operating temperature range	—35 °C to +85 °C

## SHELL DESIGN

### Female

#### XLB-3-31PCS

Rectangular flange receptable, straight termination socket contacts.



#### XLB-3-31PCV

Rectangular flange receptable, vertical 90° termination socket contacts.



### Male

#### XLB-3-32PCS

Rectangular flange receptable, straight termination pin contacts.



#### XLB-3-32PCV

Rectangular flange receptable, vertical 90° termination pin contacts.

