



ENTERTAINMENT INTERCONNECT CATALOGUE

Amphenol Australia Pty Ltd



#### Amphenol Australia Pty. Ltd.

Amphenol Australia's head office is based in Melbourne, Victoria and is the Sales, Marketing and Engineering centre of excellence for an extensive range of professional connector and cabling products. Satellite facilities of Amphenol Australia also exist in Colorado and Los Angeles, in the USA as well as Shenzhen, China.

Amphenol's global presence allows us to take full advantage of our numerous corporate resources and product portfolio to provide you with a vast offering and choice. Our extensive range is designed to meet the specific needs of the entertainment markets to make the selection of your interconnect partner an easy choice.

The Amphenol Audio international brand name was launched by Amphenol Australia in 2006 and represents the flag ship of one of the company's main core businesses and specialist product ranges. The company has been producing products for the pro-audio industry for over fifty years. Since the development of our XLR AC Series connectors, we have continued to provide our customers with exacting quality in an increasingly competitive environment.

Amphenol Australia's award winning IDC (Insulation Displacement Contact) XLR showcases the company's commitment to both Engineering Excellence and "Green Gigging" philosophies. It is the world's first XLR to use solderless technology for a pro-audio microphone cabling application. It allows for cable assemblies to be made, or repairs performed to assemblies in the field, without the need for solder, resins and fluxes or externally powered soldering stations.

Continuous improvement through ISO9001, a focus on environmental awareness and development of next generation industry leading products is our philosophy. As the entertainment industry moves into the future the emerging technologies from other industries has become more prevalent and more challenging. Amphenol Australia's global presence combined with its close technical relationships with other Amphenol sister divisions, each a specialist and leader in their own interconnect field, places it well to support innovation and meet this challenge head on.

The ability of Amphenol to provide a full range of design services required to support the customers applications design and modelling, applications engineering, fabrication, value-added assembly and testing, coupled with the largest interconnect offering on the market means that we can support all of your system level needs.

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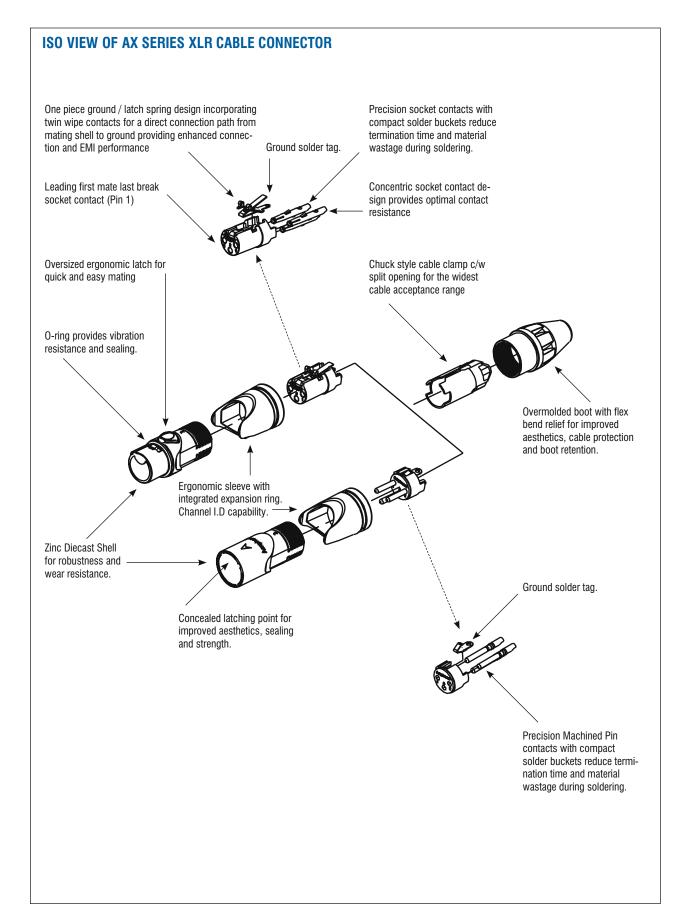
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The revolutionary AX series of XLR connectors introduce an exciting contemporary look and feel to the professional audio interconnect market. They are designed to complement modern audio architecture and truly "fit" within their environment. An impressive list of features guarantees pure sound performance in the most demanding applications providing unrivalled value.

#### **Features**

- Unique Australian designed shell and housing.
- One piece ground / latch spring design incorporating twin wipe contacts for a direct connection path from mating shell to ground providing enhanced connection and EMI performance.
- Ergonomic sleeve design for improved grip.
- Channel I.D capability with coloured sleeves.
- Oversized ergonomic latch for quick and
- easy mating.Leading first mate last break pin 1 on socket connectors.
- Chuck style cable clamp to suit 3mm 8mm (0.118" - 0.314") cable 0.D. with integrated split to allow inclusion after soldering.
- Concealed latching point for improved aesthetics, sealing and strength.
- Overmolded boot with flex bend relief for improved aesthetics, cable protection and boot retention.
- Concentric socket contact design provides optimal contact resistance
- Precision machined pin contacts as standard.
- Compact solder buckets to reduce termination time and material wastage during the soldering process.
- Zinc diecast shell housing for robustness and wear with Satin nickel or Black finish.
- Available in 3,4 and 5 contact arrangements.

#### **Options**

- Coloured I.D sleeves.
- Satin nickel or Black shell finish.
- · Single or Bulk packaging.
- · Gold plated contacts.

#### **Ordering Codes**

We have listed the more common ordering codes in each section. For further options please refer to the part number breakdown charts. Please contact us if you need any further assistance.

### AX SERIES XLR CABLE CONNECTORS

### Simple steps to guide you in using this catalogue

- 1) Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- 3) Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use variations column to determine your choice.
- 6) Identify part number.
- In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.

#### **METAL SHELL TYPE - SOLDER**



#### Features:

- Unique Australian designed shell and housing.
- Ergonomic stylish sleeve design for improved grip.
- Oversized latch lever preserves your thumb.
- Leading first mate last break pin 1 on socket connectors.
- Chuck style cable clamp to suit 3mm 8mm (0.118" 0.314") cable 0.D. with integrated split to allow inclusion after soldering.
- Overmolded cable support boot.
- New socket contact design for improved contact resistance.
- Precision machined pin contacts as standard.
- Compact solder buckets to reduce soldering time and wastage.
- Zinc diecast shell housing with Satin nickel or Matt black finish.
- Available in 3,4 and 5 contact arrangements.

#### Options:

- Coloured I.D sleeves.
- Clear I.D Sleeve for connector marking.
- Satin nickel or Matt black shell finish.
- Single or Bulk packaging.

#### Part Number Breakdown: page 6

#### **Specifications: page 7**

Assembly Instructions: PI538\*

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	71 - 74 [2.80-2.90"]	XLR 3 pole male Machined contacts	Standard	AX3M
-1-5		Nickel Finish	Gold Plated Contacts	AX3M-AU
	610		Bulk Pack	AX3M BULK
	71 - 74 [2.80-2.90″]⊷	XLR 3 pole male Machined contacts	Standard	AX3MB
6600		Black Finish	Gold Plated Contacts	AX3MB-AU
3	Providence		Bulk Pack	AX3MB BULK
	∑71 - 74 [2.80-2.90"]≈_	XLR 3 pole female Stamped contacts	Standard	AX3F
6/100		Nickel Finish	Gold Plated Contacts	AX3F-AU
			Bulk Pack	AX3F BULK
	§71 - 74 [2.80-2.90"]≈	XLR 3 pole female Stamped contacts	Standard	AX3FB
SILVE		Black Finish	Gold Plated Contacts	AX3FB-AU
			Bulk Pack	AX3FB BULK
	<b></b> 71 - 74 [2.80-2.90″]	XLR 4 pole male Standard Machined contacts		AX4M
		Nickel Finish	Gold Plated Contacts	AX4M-AU
			Bulk Pack	AX4M BULK

\*PI538 is available for download at www.amphenolaudio.com

ENTERTAINMENT INTERCONNECT CATALOGUE - Amphenol Australia Pty Ltd Telephone 61 3 8796 8888 Fax 61 3 8796 8801

#### **METAL SHELL TYPE - SOLDER**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	- F	71 - 74 <b>[2.80-2.90"]</b>	XLR 4 pole male Machined contacts	Standard	AX4MB
and the second	Ø19 [0.744]		Black Finish	Gold Plated Contacts	AX4MB-AU
				Bulk Pack	AX4MB BULK
	Ø15.7 [0.618 <sup>-</sup> ]	71 - 74 [ <b>2.80-2.90"</b> ]	XLR 4 pole female Machined contacts	Standard	AX4F
TP.	@1271		Nickel Finish	Gold Plated Contacts	AX4F-AU
				Bulk Pack	AX4F BULK
	[	71 - 74 [ <b>2.80-2.90</b> "]~	XLR 4 pole female	Standard	AX4FB
	Ø15.7 [0.618"]		Machined contacts Black Finish	Gold Plated Contacts	AX4FB-AU
			Bulk Pack	AX4FB BULK	
	₹71 - 74 [2.80-2.90"]	XLR 5 pole male Machined contacts	Standard	AX5M	
	[0.744]	3 TE	Nickel Finish	Gold Plated Contacts	AX5M-AU
			Bulk Pack	AX5M BULK	
		71 - 74 [2.80-2.90"]⊳		Standard	AX5MB
SELL CON	(147) [0.744]		Machined contacts Black Finish	Gold Plated Contacts	AX5MB-AU
	5100 ×			Bulk Pack	AX5MB BULK
	[[8]	71 - 74  [ <b>2.80-2.90</b> "]⊨	XLR 5 pole female	Standard	AX5F
	Ø15.7 [0.6187]		Machined contacts Nickel Finish	Gold Plated Contacts	AX5F-AU
				Bulk Pack	AX5F BULK
		71 74 73 69 3 6917	XLR 5 pole female	Standard	AX5FB
			Machined contacts Black Finish	Gold Plated Contacts	AX5FB-AU
				Bulk Pack	AX5FB BULK

**METAL SHELL TYPE - SOLDER** 

### PART NUMBER BREAKDOWN

METAL SHELL TYPE - SOLDER

					ALL OF	HS PRENT MET	sents net the control and the senten	SHEPHENK COMPETINGUES SHELF	SHESPHERN SHELLINGTS	SHEPHERN COMPACT NOUTS	ASPRETATION OF A THEAT AND THE PAINS	ASPRETATION OF A THAT AND THE PAINS	senes needs to be a connect provide the connec
				AX		<sup>201</sup>	3 M	control     citit     sufficiency       3     M     B	colspan="3" stell3MB2	colincitilsitilsitilcitil3MB2-AU	colt     cell     self     self     self     cell       3     M     B     2     -     AU     BL	colinecolinestrcolinephi3MB2-AUBULI	colinecolinesolitiecolinephi3MB2-AUBULK
E. G. AX3MB2-AU BULK AX (Series Prefix), 3 2 (Red Sleeve)- AU	Contacts, N (Gold Plated)	Nale, Black F I Contacts), I	inish, Bulk Packaoed.										
RIES PREFIX	AX	=	Series Prefix										
ONTACT LAYOUTS	3	=	3 Contacts	-									
	4	=	4 Contacts										
	5	=	5 Contacts										
NDER	F	=	Female Socket Contacts	-									
	M	=	Male Pin Contacts										
IELL FINISH	Blank	=	Nickel Plated Finish	-									
	В	=	Black Finish										
EEVE OPTION	1		Brown	-									
	2	_	Red										
	3	_											
			Orange										
	4	=	Yellow										
	5	=	Green										
	6	=	Blue										
	7	=	Violet										
	8	=	Grey										
	9	=	White										
	C	=	Clear										
CONTACT PLATING	Blank	=	Standard Plating ( Silver or Tin - Refer to Standard Data.)										
	AU	=	Gold Plated										
PACKAGING	Blank	=	Individual Bags	]									
	BULK	=	Bulk Packed										

**STANDARD DATA** 

### **STANDARD DATA AX SERIES CABLE CONNECTORS**

			VALUE					
GENERAL Characteristics	Number of contacts	3	4	5				
CHARACTERISTICS	AX Series Contact Arrangements (Front view of pin inserts)							
	Termination		SOLDER					
	Max. Wire Gauge - Stranded wire: Solder	14AWG	16AWG	18AWG				
	Flammability rating of insulator plastics and housings		UL94V-0					
	Environmental	Complie	es with EU RoHS 2 Directive 201	1/65/EU				
ELECTRICAL Characteristics	Service Voltage RMS		133V <sup>1)</sup>					
GIANAGIENISTICS	Test Voltage AC RMS		1400V					
	Current carrying capacity: Solder	15A	10A	7.5A				
	Typicial Contact Resistance		≤3m Ω					
	Insulation Resistance		≥1G Ω					
CLIMATIC Characteristics	Protection Class	IP40						
CHANACIENISTICS	Operating Temperature	-25°C to +75°C (-13°F to -167°F)						
MECHANICAL Characteristics	Insertion and Withdrawal force							
CHANACIENIS IICS	Weight <sup>2)</sup>	31g (0.068lb)	33g (0.073lb)	33g (0.073lb)				
	Typical Cable retention force	22Kg to 44Kg (50lb t	to 100lb) - Dependent on cable r	material and diameter.				
	Cable O.D. range	;	3mm to 8mm (0.118" to 0.314"	)				
	Mechanical Operations		1000 mating cycles					
MATERIALS	Connector shell - Metal Shell finish		Diecast Zinc Alloy Satin nickel or Black					
	Insulators		UL94V-0 PA66, 30% Glass Fille	d				
	Boot / Backshell Finish		JL94V-0 Noryl N190 / Santoprer , other colours available - see pa					
	Cable clamp		Noryl N190					
	Sleeve		Noryl N190					
	Male Contact Machined - Solder / Plating		Brass / Silver or Gold (Optional)	1				
	Female Contact Stamped - Solder / Plating	Phosphor Bronze / Tin or Gold (Optional)						

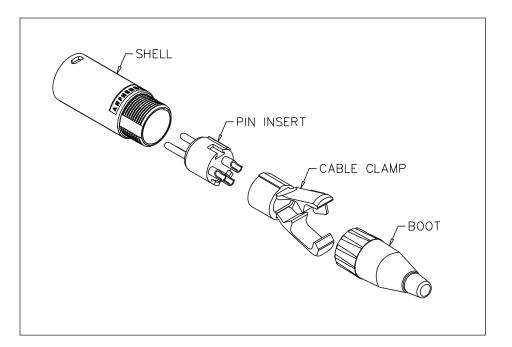
<sup>1)</sup> Not suitable for domestic applications above 50V

Rev 3 - 03/2013

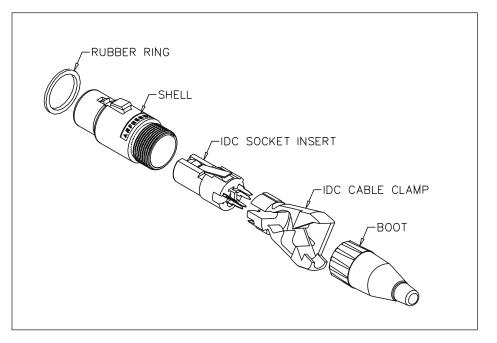
<sup>2)</sup> Approximate weight only, does not include packaging. Please contact us for exact weight for shipping purposes.







**ISO VIEW OF AC3FI** 



### AMPHENOL AUSTRALIA WEBSITE www.amphenolaudio.com

### AMPHENOL WORLD HEADQUARTERS WEBSITE www.amphenol.com



### AC SERIES XLR CABLE CONNECTORS



Amphenol Australia have been manufacturing and designing innovative XLR connectors since 1955 and were the first to offer the cost saving Insulation Displacement Contact (IDC) in an XLR connector. The IDC connector is ideal for Original Equipment Manufacturers and end users alike and offers an alternative to our standard solder connector. The AC series cable connector range complies with IEC268-12 and AES 14-1992 standards. CSA File Number 68598.

#### **Features**

- AC series XLR connectors feature the unique Australian design and patented "Jaws" cable retention system for both standard Solder connectors and the Insulation Displacement Contact (IDC) connectors.
- A leading first mate last break socket contact is standard on all female connectors (Pin 1).
- The "Jaws" cable retention system provides up to 44kg (100lb) of strain.
- Solderless IDC technology offers savings of up to 60% in termination time.
- The AC series connector can be quickly and easily assembled without screws – by hand or portable termination tool. (Part number T2860)
- Available in 3, 4, 5, 6A and 7 contact arrangements.
- · Compatible with all other XLR brands.

#### **Options**

- Solder Bucket termination
- Insulation Displacement Contact (IDC)
- Thermoplastic shell
- Zinc Diecast shell Satin Nickel Finish
- Zinc Diecast shell Black Polyester Finish
- Gold, Silver or Tin Plated contacts
- Bulk Style Packaging
- Single Bag packs
- Precision machined contacts
- Cost effective stamped contacts on 3 pole

#### **Options** (Cont'd)

- Standard Jaws cable clamp, Cable 0.D 3mm to 6.5mm (0.118" to 0.255")
- Large Jaws cable clamp, Cable 0.D 6.5mm to 8mm (0.255" to 0.314")
- IDC Jaws cable clamp,
- Max. Cable 0.D 5.85mm (0.23") • Metal Boots / Backshells
- Metal Boots / Backshells
  Coloured Boots / Backshells
- Coloured Identification rings
- Termination / Assembly tooling

#### **Jaws Cable Clamp Options**



Standard Jaws cable clamp (Black), Cable 0.D 3mm to 6.5mm (0.118" to 0.255")



Large Jaws cable clamp (Purple), Cable 0.D 6.5mm to 8mm (0.255" to 0.314")

#### **Ordering Codes**

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- 8) Please contact us directly if you have any further problems.



#### **METAL SHELL TYPE - SOLDER**





#### Features:

- Zinc Diecast Shell.
- Solder Bucket connections.
- "Jaws" Cable Retention System.
- Contact layouts in 3, 4, 5, 6A and 7.Precision machined or Stamped contacts.
- Leading first mate last break socket contacts.
- Quick and easy assembly without screws by hand or portable termination tool. (Part number T2860.)

**Options:** Stamped Contacts (3 contact only), Gold plated contacts, Large or Small Jaws Cable Clamp, Black Finish Shell, Bulk Pack, Coloured Boots / Backshells

#### Part Number Breakdown: page 13

#### **Specifications: page 20**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
			XLR 3 pole male,	Standard	AC3MM
			Machined contacts, Nickel Finish,	Gold Plated Contacts	AC3MM-AU
	ø19.0 [0.748″] ()		Jaws cable clamp	Large Cable Clamp	AC3MMJ
	<u>¥</u> L			Bulk Pack	AC3MM BULK
-			XLR 3 pole male, Machined contacts,	Standard	AC3MMB
			Black Finish, Jaws cable clamp	Gold Plated Contacts	AC3MMB-AU
	ø19.0 [0.748″]			Large Cable Clamp	AC3MMBJ
	¥			Bulk Pack	AC3MMB BULK
	Δ		XLR 3 pole male, Stamped contacts,	Standard	AC3M
	Ø19.0 [0.748*] 0		Nickel Finish, Jaws cable clamp	Gold Plated Contacts	AC3M-AU
			Large Cable Clamp	AC3MJ	
				Bulk Pack	AC3M BULK
	82.0 [3.228"]	XLR 3 pole male, Stamped contacts,	Standard	AC3MB	
		Black Finish, Jaws cable clamp	Gold Plated Contacts	AC3MB-AU	
	ø19.0 [0.748″] ()		Jaws Cable Clamp	Large Cable Clamp	AC3MBJ
•	¥			Bulk Pack	AC3MB BULK
	*		XLR 3 pole female, Stamped contacts,	Standard	AC3F
			Nickel Finish, Jaws cable clamp	Gold Plated Contacts	AC3F-AU
	ø19.0 [.748″]			Large Cable Clamp	AC3FJ
	<u>y</u> u			Bulk Pack	AC3F BULK
			XLR 3 pole female, Stamped contacts,	Standard	AC3FB
	Ø19.0 [.748"]		Black Finish, Jaws cable clamp	Gold Plated Contacts	AC3FB-AU
			Jaws Cable Clattip	Large Cable Clamp	AC3FBJ
	<u>į                                    </u>			Bulk Pack	AC3FB BULK

AC SERIES XLR CABLE CONNECTORS

**METAL SHELL TYPE - SOLDER** 

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	5		XLR 4 pole male, Machined contacts,	Standard	AC4M
			Nickel Finish, Jaws cable clamp	Gold Plated Contacts	AC4M-AU
	ø19.0 [0.748″] 0			Large Cable Clamp	AC4MJ
	<u>V</u> L			Bulk Pack	AC4M BULK
~	5		XLR 4 pole male, Machined contacts,	Standard	AC4MB
			Black Finish, Jaws cable clamp	Gold Plated Contacts	AC4MB-AU
6	ø19.0 [0.748″] 0			Large Cable Clamp	AC4MBJ
	¥(			Bulk Pack	AC4MB BULK
	82.0 [3.228*]     XLR 4 pole female, Machined contacts, Nickel Finish, Jaws cable clamp		Standard	AC4F	
		Nickel Finish,	Gold Plated Contacts	AC4F-AU	
			Large Cable Clamp	AC4FJ	
				Bulk Pack	AC4F BULK
	H=	—82.0 [3.228″]———— <del>-</del>	XLR 4 pole female, Machined contacts,	Standard	AC4FB
1000			Black Finish, Jaws cable clamp	Gold Plated Contacts	AC4FB-AU
	ø19.0 [.748"]		Large Cable Clamp	AC4FBJ	
· · ·				Bulk Pack	AC4FB BULK
~	⊭	XLR 5 pole male, Machined contacts,	Standard	AC5M	
	4		Nickel Finish, Jaws cable clamp	Gold Plated Contacts	AC5M-AU
	ø19.0 [0.748″] ()			Large Cable Clamp	AC5MJ
	¥[			Bulk Pack	AC5M BULK
	*	—82.0 [3.228″]———— <del>-</del>	XLR 5 pole male, Machined contacts,	Standard	AC5MB
	<u>а</u>		Black Finish, Jaws cable clamp	Gold Plated Contacts	AC5MB-AU
	ø19.0 [0.748″] 0			Large Cable Clamp	AC5MBJ
-	¥(			Bulk Pack	AC5MB BULK
			XLR 5 pole female, Machined contacts,	Standard	AC5F
			Nickel Finish, Jaws cable clamp	Gold Plated Contacts	AC5F-AU
	Ø19.0 [.748″]			Large Cable Clamp	AC5FJ
	<u> </u>			Bulk Pack	AC5F BULK
	₩	—82.0 [3.228″]———————————————————————————————————	XLR 5 pole female, Machined contacts,	Standard	AC5FB
			Black Finish, Jaws cable clamp	Gold Plated Contacts	AC5FB-AU
	ø19.0 [.748"]	ouwo cabic clamp	Large Cable Clamp	AC5FBJ	
			Bulk Pack	AC5FB BULK	

AC SERIES XLR CABLE CONNECTORS

#### **METAL SHELL TYPE - SOLDER**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
		·82.0 [3.228″]	XLR 6A pole male, Machined contacts,	Standard	AC6AM
			Nickel Finish, Jaws cable clamp	Gold Plated Contacts	AC6AM-AU
	ø19.0 [0.748'] 0		Large Cable Clamp	AC6AMJ	
	¥L			Bulk Pack	AC6AM BULK
		.82.0 [3.228″]———————————————————————————————————	XLR 6A pole male, Machined contacts,	Standard	AC6AMB
	<u></u>		Black Finish, Jaws cable clamp	Gold Plated Contacts	AC6AMB-AU
	∮ ø19.0 [0.748″] ∮			Large Cable Clamp	AC6AMBJ
			Bulk Pack	AC6AMB BULK	
	82.0 [3.228"]	XLR 6A pole female, Machined contacts,	Standard	AC6AF	
			Nickel Finish, Jaws cable clamp	Gold Plated Contacts	AC6AF-AU
	ø19.0 [.748″]			Large Cable Clamp	AC6AFJ
	¥			Bulk Pack	AC6AF BULK
	₽	82.0 [3.228"]	XLR 6A pole female, Machined contacts,	Standard	AC6AFB
			Black Finish, Jaws cable clamp	Gold Plated Contacts	AC6AFB-AU
	¢19.0 [.748"]		Large Cable Clamp	AC6AFBJ	
			Bulk Pack	AC6AFB BULK	
	82.0 [3.228"]		XLR 7 pole male, Gold plated Machined contacts, Nickel Finish,	Standard	AC7M
	ø19.0 [0.748"] 0	Jaws cable clamp	Large Cable Clamp	AC7MJ	
	¥L			Bulk Pack	AC7M BULK
		82.0 [3.228*]	XLR 7 pole male, Gold plated Machined contacts, Black Finish,	Standard	AC7MB
	ø19.0 [0.748″] 0		Jaws cable clamp	Large Cable Clamp	AC7MBJ
	¥t			Bulk Pack	AC7MB BULK
		82.0 [3.228"]	XLR 7 pole female, Gold plated Machined contacts, Nickel Finish,	Standard	AC7F
	ø19.0 [.748″]		Jaws cable clamp	Large Cable Clamp	AC7FJ
				Bulk Pack	AC7F BULK
		82.0 [3.228"]	XLR 7 pole female, Gold plated Machined contacts, Black Finish,	Standard	AC7FB
	ø19.0 [.748"]	Jaws cable clamp	Large Cable Clamp	AC7FBJ	
			Bulk Pack	AC7FB BULK	

AC SERIES XLR CABLE CONNECTORS

**METAL SHELL TYPE - SOLDER** 

### PART NUMBER BREAKDOWN

METAL SHELL TYPE - SOLDER

					.FI	. at	UITS		્સ		NI	ATHE
				SERI	SPRENT	INTACT LAY	JER CONTR	ist syft	FIMIS	instruction	CONTACT	PATING PACEAGENG BULK
				AC	3	Μ	М	В	,	J -	AU	BULK
E. G . AC3MMBJ-AU BULI AC (Series Prefix), 3 J (Large Jaws),- AU	contacts, N		ed Contacts, Black Polyester Finish, sulk Packaged.									
SERIES PREFIX	AC	=	Series Prefix	]								
CONTACT LAYOUTS	3	=	3 Contacts	1								
	4	=	4 Contacts									
	5	=	5 Contacts									
	6A	=	6 Contacts									
	7	=	7 Contacts									
GENDER	F	=	Female Socket Contacts	1								
	М	=	Male Pin Contacts									
CONTACT <sup>1</sup>	Blank M G MG		Stamped Contacts Machined Contacts Stamped Contacts, Ground Tag Machined Contacts, Ground Tag (Applicable 3 male pin contacts, option M and MG only)									
SHELL FINISH <sup>2</sup>	Blank	=	Nickel Plated Finish	1								
	В	=	Black Polyester Finish	-								
CABLE CLAMP	Blank	=	Standard Jaws 3 mm - 6.5 mm cable 0.D. (0.118" to 0.255")									
	J	=	Large Jaws 6.5mm - 8mm cable 0.D. (0.255" to 0.314")							J		
CONTACT PLATING <sup>3</sup>	Blank	=	Standard Plating ( Silver or Tin - Refer to Standard Data.)	1								
	AU	=	Gold Plated									
PACKAGING	Blank	=	Individual Bags									
	BULK	=	Bulk Packed									]
	1			-								

#### Note:

<sup>1</sup> 4 - 7 contact connectors have machined contacts and grounding as standard.

 $^{2}% \left( \mathcal{A}^{2}\right) =0$  Ground contacts are not supplied with the black polyester finish shell option.

<sup>3</sup> 7 Contact is gold plated as standard.

<sup>4</sup> All AC Series Connectors are available with optional colour coded boot / backshell. Refer to page 137 and simply add colour to end of part number. Example: AC3MM - RED



#### **THERMOPLASTIC SHELL TYPE - SOLDER**



#### Features:

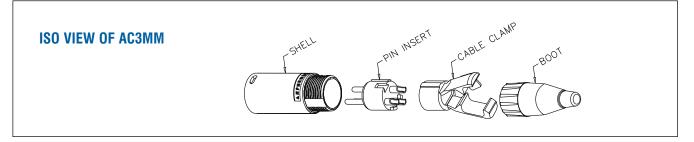
- Thermoplastic Shell.
- Solder Bucket Connections.
- "Jaws" Cable Retention System.
- Stamped or Machined Contacts.
- Leading first mate last break socket contact.
- Quick and easy assembly without screws by hand or portable termination tool. (Part number T2860.)

**Options:** Gold Plated Contacts, Stamped Contacts (3 Contact only), Bulk Pack, Coloured Boots / Backshells 3, 4, 5, 6A and 7 Contacts.

#### **Specifications: page 20**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	► <u>82.0</u> [3.228*]		XLR 3 pole male, Machined contacts, Thermoplastic shell,	Standard	AC3MMCP
3	ø19.0 [0.748″]	VERSIENCE	Jaws cable clamp	Gold Plated Contacts	AC3MMCP-AU
	¥L			Large Cable Clamp	AC3MMCPJ
				Bulk Pack	AC3MMCP BULK
	₽		XLR 3 pole male, Stamped contacts, Thermoplastic shell,	Standard	AC3MCP
	¢19.0 [0.748"] ¢	Jaws cable clamp	Gold Plated Contacts	AC3MCP-AU	
8			Large Cable Clamp	AC3MCPJ	
				Bulk Pack	AC3MCP BULK
			XLR 3 pole female, Stamped contacts, Thermoplastic shell,	Standard	AC3FCP
	Ø19.0 [0.748"]		Jaws cable clamp	Gold Plated Contacts	AC3FCP-AU
			Large Cable Clamp	AC3FCPJ	
				Bulk Pack	AC3FCP BULK

Note: Thermoplastic shell connectors are also available in 4 - 7 contact arrangements, please contact us for ordering code.



#### METAL SHELL TYPE RIGHT ANGLE - SOLDER



#### Features:

- XLR 90° right angle
- Metal or Thermoplastic connector shell
- Thermoplastic 90° right angle backshell
- Solder bucket connections
- "Jaws" Cable Retention System
- Contact Layouts in 3, 4, 5, 6A and 7
- Precision machined pin contacts
- · Leading first mate last break socket contact

#### Specifications: page 20 Assembly Tooling: page 137

NOTE\*Connector assembly requires the use of assembly tool T2880. Please refer to assembly instruction PI540\* for details. The connector is non-servicable once assembled.

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	64		XLR 90 <sup>o</sup> right angle female,	3 pole	AC3FR
			Metal shell, Nickel Finish,	4 pole	AC4FR
			Jaws cable clamp	5 pole	AC5FR
				6A pole	AC6AFR
				7 pole	AC7FR
	64		XLR 90° right angle male,	3 pole	AC3MMR
		Metal shell, Nickel Finish, Jaws cable clamp	4 pole	AC4MR	
			5 pole	AC5MR	
				6A pole	AC6AMR
				7 pole	AC7MR

\*PI540 is available for download at www.amphenolaudio.com



AC SERIES XLR CABLE CONNECTORS

### METAL SHELL TYPE - IDC (SOLDERLESS)

The Insulation Displacement Contact (IDC) connector is ideal for Original Equipment Manufacturers and end users alike and offers an alternative to our standard solder connector. Connectors can be quickly and easily assembled without screws or a soldering iron – by hand or portable termination tool. (Part number T2860.)

Labour savings of up to 60% in termination time can be achieved. **Recommended Cable Dimensions: page 21 Features:** 

- Zinc Diecast Shell Available in 3 Contact only.
- Insulation Displacement Contacts (IDC Solderless).
- "Jaws" Cable Retention System.
- Leading first mate last break socket contact.

Options: Gold plated contacts, Black Finish Shell, Bulk Pack,

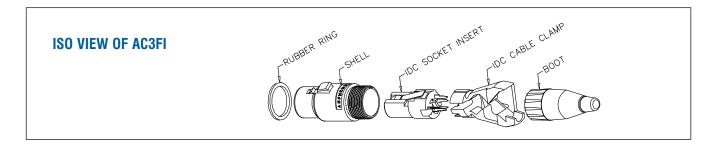
Coloured Boots / Backshells.

#### Specifications: page 20

Assembly Instructions: page 19

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	82.0 [3.228*]		XLR 3 pole male, IDC contacts, Nickel Finish, IDC Jaws cable clamp	Standard	AC3MI
	ø19.0 [0.748″] 0			Gold Plated Contacts	AC3MI-AU
	¥(			Bulk Pack	AC3MI BULK
	<b>↓</b>		XLR 3 pole male, IDC contacts, Black Finish, IDC Jaws cable clamp	Standard	AC3MIB
	Ø19.0 [0.748*] \$	IDO Jaws Cable Clamp	Gold Plated Contacts	AC3MIB-AU	
			Bulk Pack	AC3MIB BULK	
	Ø19.0 [.748*] ↓	XLR 3 pole female, IDC contacts, Nickel Finish, IDC Jaws cable clamp	Standard	AC3FI	
				Gold Plated Contacts	AC3FI-AU
				Bulk Pack	AC3FI BULK
			XLR 3 pole female, IDC contacts, Black Finish, IDC Jaws cable clamp	Standard	AC3FIB
	ø19.0 [.748"]			Gold Plated Contacts	AC3FIB-AU
				Bulk Pack	AC3FIB BULK

Note: Amphenol can not guarantee the termination performance unless the recommended cable dimensions listed on page 21 are followed.







METAL SHELL TYPE - IDC (SOLDERLESS)

## Amphenol

### PART NUMBER BREAKDOWN

METAL SHELL TYPE - IDC

E. G. AC3MIB-AU BULK AC (Series Prefix), - AU (Gold Plated C	3 contacts, M		tacts, <b>Bl</b> ack Polyester Finish,
SERIES PREFIX	AC	=	Series Prefix
CONTACT LAYOUT	3	=	3 Contact only
GENDER	F	=	Female Socket Contacts
	М	=	Male Pin Contacts
TERMINATION Method	I	=	IDC Contacts
SHELL FINISH	Blank	=	Nickel Plated Finish
	В	=	Black Polyester Finish
CONTACT PLATING	Blank	=	Standard Plating (Silver or Tin - Refer to Standard Data.)
	AU	=	Gold Plated
PACKAGING	Blank	=	Individual Bags
	BULK	=	Bulk Packed

**Note:** All AC Series Connectors are available with optional colour coded boot / backshell. Refer to page 80 and simply add colour to end of part number. Example: AC3MI - RED



#### **THERMOPLASTIC SHELL TYPE - IDC** (SOLDERLESS)



The Insulation Displacement Contact (IDC) connector is ideal for Original Equipment Manufacturers and end users alike and offers an alternative to our standard solder connector. Connectors can be quickly and easily assembled without screws or a soldering iron – by hand or portable termination tool. Labour savings of up to 60% in termination time can be achieved.

#### Recommended Cable Dimensions: page 21 Features:

- Thermoplastic Shell
   Available 3 Contact only.
   Insulation Displacement Contacts (IDC Solderless).
   "Jaws" Cable Retention System.
- · Leading first mate last break socket contact.
- · Quick and easy assembly without screws by hand or portable termination tool. (Part number T2860.)

Options: Gold plated contacts, Bulk Pack, Coloured Boots / Backshells **Specifications: page 20** 

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
			XLR 3 pole male, IDC contacts, Thermo- plastic shell, IDC Jaws cable clamp	Standard	AC3MCPI
	ø19.0 [0.748″]		IDC Jaws cable clamp	Gold Plated Contacts	AC3MCPI-AU
				Bulk Pack	AC3MCPI BULK
	Ø19.0 [0.748*]	XLR 3 pole female, IDC contacts, Thermo- plastic shell, IDC Jaws cable clamp	Standard	AC3FCPI	
			IDC Jaws cable clamp	Gold Plated Contacts	AC3FCPI-AU
	¥U			Bulk Pack	AC3FCPI BULK

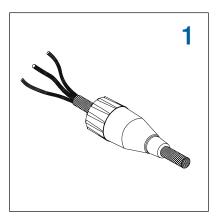
Note: Amphenol can not guarantee the termination performance unless the recommended cable dimensions listed on page 21 are followed.

### PART NUMBER BREAKDOWN

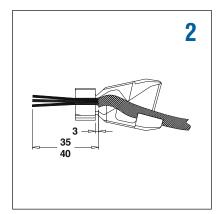
DC THERMOP		C SHE	<b>akdown</b> Ll type	SERIE	PREFU	IACT LAY	urs eft syftl	MATER	MINAT	ON METHOD CONTR	TPATING PREMAIN
E. G. AC3MCPI-AU BULK AC (Series Prefix), 3 - AU (Gold Plated Co	contacts, Ma		moplastic Shell), IDC Contacts,	AC	3	M	CP		-	AU	BULK
SERIES PREFIX	AC	=	Series Prefix	]							
CONTACT LAYOUT	3	=	3 Contacts only	1							
GENDER	F M	=	Female Socket Contacts Male Pin Contacts	]							
SHELL MATERIAL	СР	=	Thermoplastic Shell	1							
TERMINATION METHOD	T	=	IDC Contacts	]							
CONTACT PLATING	Blank	=	Standard Plating ( Silver or Tin - Refer to Standard Data.)	<b> </b>							
	AU	=	Gold Plated								
PACKAGING	Blank	=	Individual Bags	1							
	BULK	=	Bulk Packed		boot /	backsł		to pa	je 80	and sim	optional colour oly add colour t



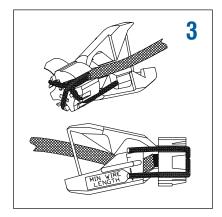
### **AC IDC SERIES CABLE ASSEMBLY INSTRUCTIONS**



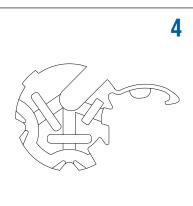
Push the cable through the boot assembly and strip the cable back 35 to 40 mm. Twist the shield wire.



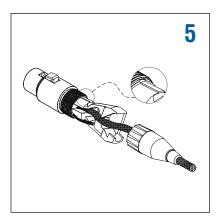
Fit the cable into the 'Jaws' cable clamp ensuring that the cable is pushed up to the neck of the clamp within 3mm.



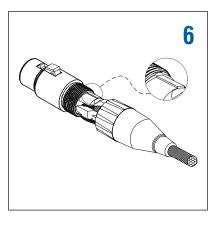
Pull back the conductors into their individual wire guidetracks. Note: Two spring fingers in the clamp will hold the conductors in position during subsequent operations. The ends of the two insulated wires must be on or past the minimum wire length mark.



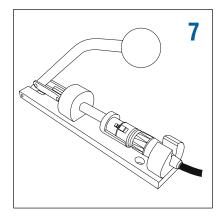
For ground protection the twisted shield wire is clipped in place with the ground protect flap.



Trim back the shield wire, so there are no wires coming out of the flap and fit the 'Jaws' cable clamp into the shell assembly, ensuring the keyways are aligned.



Close the cable clamp slightly and push the boot over the clamp ensuring the wires fit inside the boot.



Final assembly can be achieved either by manually screwing the boot on, or by using an Amphenol Australia T2860 termination tool.

### **STANDARD DATA AC CABLE CONNECTORS**

	A	
l		
	M	

		VALUE							
GENERAL Characteristics	Number of contacts	3	4	5	6A	7			
	AC Series Contact Arrangements (Front view of pin inserts)								
	Termination	IDC / SOLDER	SOLDER	SOLDER	SOLDER	SOLDER			
	Max. Wire Gauge - Stranded wire:								
	IDC	24AWG	N/A	N/A	N/A	N/A			
	Solder	14AWG	16AWG	18AWG	18AWG	20AWG			
	Flammability rating of insulator plastics and housings			UL94V-0	1				
	Environmental		Complies with	EU RoHS 2 Directi	ve 2011/65/EU				
ELECTRICAL	Service Voltage RMS			133V <sup>1)</sup>					
CHARACTERISTICS	Test Voltage AC RMS			1400V					
	Current carrying capacity: IDC	1A	N/A	N/A	N/A	N/A			
	Solder	15A	10A	7.5A	7.5A	5A			
	Typical Contact Resistance	≤3mΩ							
	Insulation Resistance			≥1GΩ					
CLIMATIC	Protection Class			IP40					
CHARACTERISTICS	Operating Temperature		-25°C t	o +75°C (-13°F to	) -167°F)				
MECHANICAL	Insertion and Withdrawal force			≥10N - ≤30N					
CHARACTERISTICS	Weight - Metal <sup>2)</sup>	36g	37g	38g	38g	38g			
		(0.080lb)	(0.081lb)	(0.083lb)	(0.083lb)	(0.083lb)			
	Weight - Thermoplastic 2)	18g	19g	20g	20g	20g			
		(0.039lb)	(0.041lb)	(0.044lb)	(0.044lb)	(0.044lb)			
	Typical Cable retention force	22Kg to	44Kg (50lb to 100	b) - Dependent on	cable material and	diameter.			
	Cable O.D. range - JAWS clamp								
	IDC Max. Cable 0.D. 5.85mm (0.23")								
	Standard solder	3mm to 6.5mm (0.118" to 0.255")							
	Large Solder		6.5mm	to 8mm ( 0.255" i	to 0.314")				
	Mechanical Operations	1000 mating cycles							
	c applications above 50V								

 $^{\scriptscriptstyle 1)}\,\text{Not}$  suitable for domestic applications above 50V

<sup>2)</sup> Approximate weight only, does not include packaging. Please contact us for exact weight for shipping purposes.

Rev 5 - 03/2013

AC SERIES XLR CABLE CONNECTORS

### **STANDARD DATA AC CABLE CONNECTORS**

		DETAILS				
MATERIALS	Connector shell - Metal	Diecast Zinc Alloy				
	Shell finish	Satin nickel or Black polyester				
	Connector shell - Thermoplastic	Thermoplastic, UL94V-0 Modified PPE Resin				
	Shell finish	Black				
	Insulators	UL94V-0 PBT Resin or Modified PPE Resin				
	Boot / Backshell	UL94V-0 Modified PPE Resin or Machined Brass				
	Finish	Black, other colours available - see page 80				
	Cable clamp					
	IDC Socket JAWS	UL94V-0 Modified PPO Resin (Pink)				
	IDC Pin JAWS	UL94V-0 Modified PPO Resin (Blue)				
	Standard Solder JAWS	UL94V-0 Modified PPO Resin (Black)				
	Large Solder JAWS	UL94V-0 Modified PPO Resin (Purple)				
	Cable Bushing	Santoprene				
	Male Contact	Thermoplastic Polyurethane				
	Stamped - IDC / Plating	Phosphor Bronze / Silver or Gold (Optional)				
	Stamped - Solder / Plating	Phosphor Bronze / Silver or Gold (Optional)				
	Machined - Solder / Plating	Brass / Silver or Gold (Optional)				
	Female Contact					
	Stamped - IDC / Plating	Phosphor Bronze / Tin or Gold (Optional)				
	Stamped - Solder / Plating	Phosphor Bronze / Tin or Gold (Optional)				
	Machined - Solder / Plating	Brass / Silver or Gold (Optional)				
DC RECOMMEND Able Dimensio		<sup>2</sup> 3.00mm (0.11 <sup>l</sup> ⇒0.12 <sup>n</sup> )(A) Thermoplastic Elastomer High Molecular Weight Polyethylene Bare Copper Spiral Shield Min. 90% Coverage 56/,005" (36AWG)				

Rev 4 - 03/2013



The metal chassis mount "Z" series connectors are designed for the audio user where durability, reliability and strength across a wide range of applications are important. All AC products are manufactured to the highest quality standards and will withstand the harshest environments. This range complies with IEC268-12 and AES 14-1992 standards. CSA File Number 68598

#### **Features**

- The "D" size housing can be either front or rear mounted using the same panel cutout.
- The "P" size housing is the original wide flange front mounting XLR connector. "PN" is the original narrow flange front mounting male connector.
- A leading first mate last break socket contact is standard on all female connectors (Pin 1).
- · Solder cup or Vertical PCB versions.
- Connectors are fitted with a grounding system for RFI shielding applications.
- Available in 3, 4, 5, 6A and 7 contact arrangements.
- · Compatible with all other XLR brands.

#### **Options**

- Solder Bucket termination
- · Vertical PCB contacts
- Zinc Diecast Shell Satin Nickel Finish
- Zinc Diecast Shell Black Polyester Finish
- · Gold, Silver or Tin Plated Contacts
- Bulk Packaging
- Single Bag packs
- Precision machined contacts
- Cost effective stamped contacts on 3 pole
- Latchless versions (Non-Latching) (Female only)

22

**Note:** A ground tag is standard on all AC "Z" series connectors. Although the ground tag is intended for RFI shielding applications, Amphenol cannot guarantee its effectiveness in all cases.

The non-conductive Black polyester finish insulates the ground tag from the shell and should not be used in applications requiring ground contact to the shell.

#### **Ordering Codes**

We have listed the more common ordering codes in each section. For further options please refer to the part number breakdown charts. Please contact us if you need any further assistance.

### AC "Z" SERIES XLR METAL CHASSIS MOUNT CONNECTORS

### Simple steps to guide you in using this catalogue

- 1) Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- 3) Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use variations column to determine your choice.
- 6) Identify part number.
- In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.

#### METAL D TYPE FLANGE - SOLDER AND PCB



#### Features:

- Zinc Diecast Shell.
- D size housing can be front or rear mounted using the same panel cutout.
- Solder Bucket connections.
- Vertical PCB mounting (not available in 4 contact female).
- Precision machined or Stamped contacts (3 pin only).
- Leading first mate last break socket contact.
- · Positive latch lock system.

**Options:** Stamped contacts (3 contact only), Gold plated contacts, Vertical PCB contacts, Black finish, Non-Latching (Female only), Bulk Pack.

Part Number Breakdown: page 31 Specifications: page 32 PCB Footprints: page 33 Panel Cutouts: page 33

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
-		XLR 3 pole male,	Standard	AC3MMDZ
2		D Flange, Machined contacts, Nickel Finish	Gold Plated Contacts	AC3MMDZ-AU
	19.0 [.748"]= -2.7 [.106"] = 5.5 [.217"]	NICKEI FIIIISII	Vertical PCB	AC3MMDZV
Carring			Bulk Pack	AC3MMDZ BULK
		XLR 3 pole male, D Flange,	Standard	AC3MMDZB
9	+ 26.0 [1.024 <sup>-</sup> ]-=	Machined contacts, Black Finish	Gold Plated Contacts	AC3MMDZB-AU
		Diack Finish	Vertical PCB	AC3MMDZVB
as a min ma			Bulk Pack	AC3MMDZB BULK
-		XLR 3 pole male, D Flange,	Standard	AC3MDZ
(°())	19.0 [.748 <sup>-</sup> ]	Stamped contacts, Nickel Finish	Gold Plated Contacts	AC3MDZ-AU
			Vertical PCB	AC3MDZV
and the second second			Bulk Pack	AC3MDZ BULK
	SOLDER CONTACTS -26.0 [1.024"] - 32.1 [1.263"] - 41.0 [1.614"] -	XLR 3 pole male, D Flange, Stamped contacts, Black Finish	Standard	AC3MDZB
8			Gold Plated Contacts	AC3MDZB-AU
		Black Finich	Vertical PCB	AC3MDZVB
and the second second			Bulk Pack	AC3MDZB BULK
the second		XLR 3 pole female, D Flange,	Standard	AC3FDZ
		Stamped contacts, Nickel Finish	Gold Plated Contacts	AC3FDZ-AU
	← 26.0 [1.024"] ← ← 6.5 [.256"] ← ← − 2.5 [.099"]	Nickerrinish	Vertical PCB	AC3FDZV
all and a second			Bulk Pack	AC3FDZ BULK
		XLR 3 pole female, D Flange,	Standard	AC3FDZB
6	19.0 [.748"]	Stamped contacts, Black Finish	Gold Plated Contacts	AC3FDZB-AU
			Vertical PCB	AC3FDZVB
and the second second			Bulk Pack	AC3FDZB BULK

PRODUCT - FIGURE	DRAWING	Dimens	sions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
				XLR 4 pole male, D Flange, Machined contacts, Nickel Finish	Standard	AC4MDZ
ST AN					Gold Plated Contacts	AC4MDZ-AU
	<sup>19.0</sup>	2.7 [.106"]	5.5 [.217"]		Vertical PCB	AC4MDZV
and the second second	€ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Bulk Pack	AC4MDZ BULK
			PCB CONTACTS	XLR 4 pole male, D Flange,	Standard	AC4MDZB
9/3	26.0 [1.024"]	Solder Contacts 5.5 [.217"] 32.1 [1.263"]	27.5 [1.081"] - 36.5 [1.437"]	Machined contacts, Black Finish	Gold Plated Contacts	AC4MDZB-AU
				Diack Tillion	Vertical PCB	AC4MDZVB
and the second second					Bulk Pack	AC4MDZB BULK
				XLR 4 pole female, D Flange,	Standard	AC4FDZ
			Machined contacts, Nickel Finish	Gold Plated Contacts	AC4FDZ-AU	
	œ-26.0 [1.024"]-∞		2.5 [.098"]		Vertical PCB	AC4FDZV
and the second second					Bulk Pack	AC4FDZ BULK
	31.0 [1			XLR 4 pole female, D Flange,	Standard	AC4FDZB
O man	19.0 [.748"]	Image: Solder contacts         PCB contacts           1.0	Machined contacts, Black Finish	Gold Plated Contacts	AC4FDZB-AU	
					Vertical PCB	AC4FDZVB
					Bulk Pack	AC4FDZB BULK
-			XLR 5 pole male, D Flange,	Standard	AC5MDZ	
12				Machined contacts, Nickel Finish	Gold Plated Contacts	AC5MDZ-AU
	<sup>19.0</sup>	2.7 [.106"]	5.5 [.217"]		Vertical PCB	AC5MDZV
Contraction of the second					Bulk Pack	AC5MDZ BULK
	1.0 [1.220			XLR 5 pole male, D Flange,	Standard	AC5MDZB
8	-26.0 [1.024"]-	5.5 [.217"] 32.1 [1.263"]	- 27.5 [1.083"]	Machined contacts, Black Finish	Gold Plated Contacts	AC5MDZB-AU
					Vertical PCB	AC5MDZVB
a subscription of the					Bulk Pack	AC5MDZB BULK
				XLR 5 pole female, D Flange,	Standard	AC5FDZ
E				Machined contacts, Nickel Finish	Gold Plated Contacts	AC5FDZ-AU
	~ 26.0 [1.024"]-~	e−e+ 6.5 [.256"]			Vertical PCB	AC5FDZV
And and a second second	24.0 [.945"]				Bulk Pack	AC5FDZ BULK
	(1) 015 - 310 (1)			XLR 5 pole female, D Flange,	Standard	AC5FDZB
	19.0 - [.748"] -		SOLDER CONTACTS 31.1 [1.224"]	D Flange, Machined contacts, Black Finish	Gold Plated Contacts	AC5FDZB-AU
	- [.748 <sup>°</sup> ] <sup></sup>	0 [1.224 ]84			Vertical PCB	AC5FDZVB
and the second s					Bulk Pack	AC5FDZB BULK

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
			XLR 6A pole male, D Flange,	Standard	AC6AMDZ
12			Machined contacts, Nickel Finish	Gold Plated Contacts	AC6AMDZ-AU
	19.0 [.748"] -	2.7 [.106"]		Vertical PCB	AC6AMDZV
rumation .	(1, 220°]			Bulk Pack	AC6AMDZ BULK
	- 31.0	SOLDER CONTACTS	XLR 6A pole male, D Flange,	Standard	AC6AMDZB
9		SOLDER CONTACTS -5.5 [.217"] 32.1 [1.263"]	Machined contacts, Black Finish	Gold Plated Contacts	AC6AMDZB-AU
			Diack Fillion	Vertical PCB	AC6AMDZVB
				Bulk Pack	AC6AMDZB BULK
			XLR 6A pole female, D Flange,	Standard	AC6AFDZ
9			Machined contacts, Nickel Finish	Gold Plated Contacts	AC6AFDZ-AU
	≠ 26.0 [1.024"] ÷	-6.5 [.256"]		Vertical PCB	AC6AFDZV
amana	HEU9			Bulk Pack	AC6AFDZ BULK
	-240 [:945 <sup>-1</sup> ]		XLR 6A pole female, D Flange,	Standard	AC6AFDZB
Contraction of the second	19.0 - [.748"] =	SOLDER CONTACTS	Machined contacts, Black Finish	Gold Plated Contacts	AC6AFDZB-AU
		- 31.1 [1.224"]		Vertical PCB	AC6AFDZVB
				Bulk Pack	AC6AFDZB BULK
2	19.0 [.748*]		XLR 7 pole male, D Flange, Gold Plated	Standard	AC7MDZ
		Machined contacts, Nickel Finish	Vertical PCB	AC7MDZV	
				Bulk Pack	AC7MDZ BULK
8	31.0	SOLDER CONTACTS 5.5 [217] 32.1 [1.263]	XLR 7 pole male, D Flange, Gold Plated Machined contacts,	Standard	AC7MDZB
			Black Finish	Vertical PCB	AC7MDZVB
and the second second				Bulk Pack	AC7MDZB BULK
PIEt			XLR 7 pole female, D Flange, Gold Plated Machined contacts,	Standard	AC7FDZ
	- 26.0 [1.024"] 6	.5 [.256*]	Nickel Finish	Vertical PCB	AC7FDZV
and the				Bulk Pack	AC7FDZ BULK
		SOLDER CONTACTS	XLR 7 pole female, D Flange, Gold Plated Machined contacts,	Standard	AC7FDZB
	[.748 <sup>*</sup> ]_≕	32.0 [1.260"] - 36.2 [1.425"] -	Black Finish	Vertical PCB	AC7FDZVB
and the second second				Bulk Pack	AC7FDZB BULK

#### METAL P TYPE FLANGE - SOLDER AND PCB

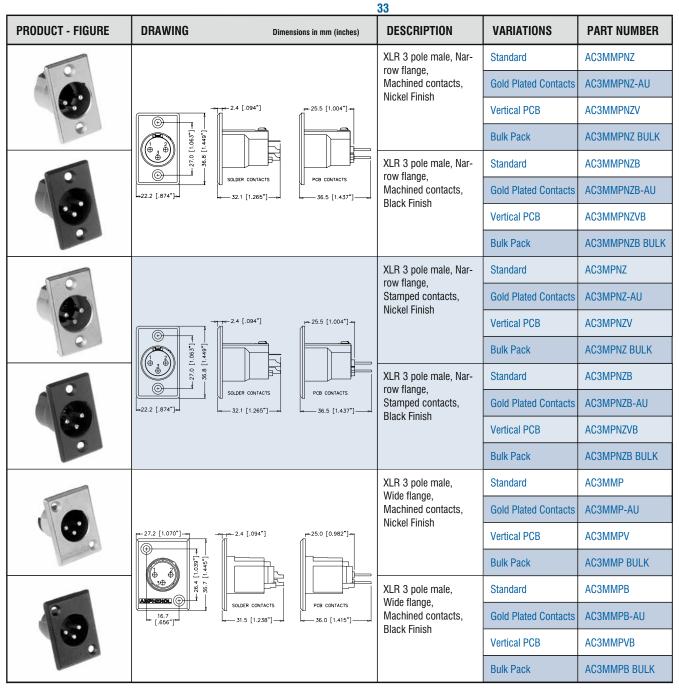


#### Features:

- · Zinc Diecast shell.
- The P size housing is the original wide flange front mounting XLR connector. PN is the original narrow, front mounting male connector.
- · Solder Bucket connections.
- Vertical PCB mounting.
- Precision Machined or Stamped contacts (3 pin only).
- Leading first mate last break socket contact.
- Positive latch lock system.

**Options:** Stamped contacts (3 contact only), Gold plated contacts, Vertical PCB contacts, Black Finish, Non-Latching (Female only), Bulk Pack.

### Part Number Breakdown: page 31Specifications: page 32PCB Footprints: page 33Panel Cutouts: ppage



PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
			XLR 3 pole male, Wide flange,	Standard	AC3MP
		Stamped contacts, Nickel Finish	Gold Plated Contacts	AC3MP-AU	
		4 [.094"]	Weren mish	Vertical PCB	AC3MPV
Lannande	(1:039 <sup>-1</sup> )			Bulk Pack	AC3MP BULK
	36.7 [1.4]		XLR 3 pole male, Wide flange,	Standard	AC3MPB
C.		DER CONTACTS 2.5 [1.278"]	Stamped contacts, Black Finish	Gold Plated Contacts	AC3MPB-AU
			Diack Tillion	Vertical PCB	AC3MPVB
Course States of				Bulk Pack	AC3MPB BULK
			XLR 3 pole female, Wide flange,	Standard	AC3FPZ
Parsar Parsar		Stamped contacts, Nickel Finish	Gold Plated Contacts	AC3FPZ-AU	
		5 [.138"]	Nickerrinish	Vertical PCB	AC3FPZV
L. Ce				Bulk Pack	AC3FPZ BULK
	- 36.1	LDER CONTACTS	XLR 3 pole female, Wide flange,	Standard	AC3FPZB
C Push		2.5 [.098"] .6 [1.204"]→ 40.5 [1.596"]→	Stamped contacts, Black Finish	Gold Plated Contacts	AC3FPZB-AU
				Vertical PCB	AC3FPZVB
Carrie and a				Bulk Pack	AC3FPZB BULK
			XLR 4 pole male, Nar- row flange, Machined contacts, Nickel Finish	Standard	AC4MPNZ
				Gold Plated Contacts	AC4MPNZ-AU
		4 [.094"]		Vertical PCB	AC4MPNZV
6				Bulk Pack	AC4MPNZ BULK
			XLR 4 pole male, Nar- row flange,	Standard	AC4MPNZB
		DER CONTACTS 2.1 [1.265"]	Machined contacts, Black Finish	Gold Plated Contacts	AC4MPNZB-AU
				Vertical PCB	AC4MPNZVB
				Bulk Pack	AC4MPNZB BULK
			XLR 4 pole male,	Standard	AC4MP
2			Wide flange, Machined contacts, Nickel Finish	Gold Plated Contacts	AC4MP-AU
		2.4 [.094"] ➡ 25.0 [0.982"]⊶		Vertical PCB	AC4MPV
and a state of the				Bulk Pack	AC4MP BULK
	-26.4 [1.039 <sup>-1</sup> ]		XLR 4 pole male,	Standard	AC4MPB
P		OLDER CONTACTS 31.5 [1.238"]	Wide flange, Machined contacts,	Gold Plated Contacts	AC4MPB-AU
			Black Finish	Vertical PCB	AC4MPVB
-saucestal set				Bulk Pack	AC4MPB BULK

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
		XLR 4 pole female, Wide flange,	Standard	AC4FPZ	
C Puist			Machined contacts, Nickel Finish	Gold Plated Contacts	AC4FPZ- AU
				Vertical PCB	AC4FPZV
				Bulk Pack	AC4FPZ BULK
			XLR 4 pole female, Wide flange,	Standard	AC4FPZB
Calm	Solder CON	PCB CONTACTS	Machined contacts, Black Finish	Gold Plated Contacts	AC4FPZB-AU
	16.7 [.656 <sup>•</sup> ] ↔ 30.6 [1.20	)4"] b34.0 [1.340"]	Diack Thilish	Vertical PCB	AC4FPZVB
and the second sec				Bulk Pack	AC4FPZB BULK
			XLR 5 pole male, Nar- row flange,	Standard	AC5MPNZ
			Machined contacts, Nickel Finish	Gold Plated Contacts	AC5MPNZ-AU
	2.4 [.094"]	₽~25.5 [1.006"]-		Vertical PCB	AC5MPNZV
C				Bulk Pack	AC5MPNZ BULK
			XLR 5 pole male, Nar- row flange,	Standard	AC5MPNZB
10	Solder contacts     PCB contacts       →22.2 [.874"]→     →25.5 [1.006"]→       →32.1 [1.265"]→     →36.5 [1.439"]→	Machined contacts, Black Finish	Gold Plated Contacts	AC5MPNZB-AU	
			Vertical PCB	AC5MPNZVB	
				Bulk Pack	AC5MPNZB BULK
		XLR 5 pole male,	Standard	AC5MP	
			Wide flange, Machined contacts, Nickel Finish	Gold Plated Contacts	AC5MP-AU
	₽-27.2 [1.070"]-₩ -₽_₽-2.4 [.094"]  ₽-25.0 [0.982"]-₩	r≈25.0 [0.982"]~		Vertical PCB	AC5MPV
1 million Contraction				Bulk Pack	AC5MP BULK
	36. 7		XLR 5 pole male, Wide flange,	Standard	AC5MPB
Con la constante	16.7 [.656"] - 31.5 [1.238		Machined contacts, Black Finish	Gold Plated Contacts	AC5MPB-AU
			Didok Tillion	Vertical PCB	AC5MPVB
successive to the second				Bulk Pack	AC5MPB BULK
			XLR 5 pole female, Wide flange,	Standard	AC5FPZ
			Machined contacts, Nickel Finish	Gold Plated Contacts	AC5FPZ-AU
				Vertical PCB	AC5FPZV
- es				Bulk Pack	AC5FPZ BULK
(aust)			XLR 5 pole female, Wide flange,	Standard	AC5FPZB
	SOLDER CONT 16.7 [.656"]	"] ↓ →- 22.8 [.899"]→	Wide flange, Machined contacts, Black Finish	Gold Plated Contacts	AC5FPZB-AU
U,	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	, <b>.</b>		Vertical PCB	AC5FPZVB
				Bulk Pack	AC5FPZB BULK

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER	
			XLR 6A pole male, Narrow flange,	Standard	AC6AMPNZ	
			Machined contacts, Nickel Finish	Gold Plated Contacts	AC6AMPNZ-AU	
	2.4 [.05	94"] (1.006"]		Vertical PCB	AC6AMPNZV	
6				Bulk Pack	AC6AMPNZ BULK	
	36.8		XLR 6A pole male, Narrow flange,	Standard	AC6AMPNZB	
	SOLDER CON -22.2 [.874"]-	006"]	Machined contacts, Black Finish	Gold Plated Contacts	AC6AMPNZB-AU	
			Didok Tillion	Vertical PCB	AC6AMPNZVB	
				Bulk Pack	AC6AMPNZB BULK	
			XLR 6A pole male, Wide flange,	Standard	AC6AMP	
Can la			Machined contacts, Nickel Finish	Gold Plated Contacts	AC6AMP-AU	
		094"] ↦25.0 [0.982"]		Vertical PCB	AC6AMPV	
and the second second				Bulk Pack	AC6AMP BULK	
			XLR 6A pole male, Wide flange,	Standard	AC6AMPB	
C.C.			Machined contacts, Black Finish	Gold Plated Contacts	AC6AMPB-AU	
5				Vertical PCB	AC6AMPVB	
A second second				Bulk Pack	AC6AMPB BULK	
Iteres			XLR 6A pole female, Wide flange,	Standard	AC6AFPZ	
			Machined contacts, Nickel Finish	Gold Plated Contacts	AC6AFPZ-AU	
	-27.2 [1.071"]	.138"]		Vertical PCB	AC6AFPZV	
				Bulk Pack	AC6AFPZ BULK	
Upper and a second	- 36.8	SOLDER CONTACTS SOLDER CONTACTS SOLDER CONTACTS SOLDER CONTACTS SOLDER CONTACTS SOLDER CONTACTS SOLDER CONTACTS SOLDER CONTACTS	XLR 6A pole female, Wide flange	Standard	AC6AFPZB	
				Gold Plated Contacts	AC6AFPZB-AU	
	16.7 [.656*] - 31.1	[1.224"] 36.2 [1.425"]		Vertical PCB	AC6AFPZVB	
and the second se				Bulk Pack	AC6AFPZB BULK	
			XLR 7 pole male, Nar- row flange, Gold Plated Machined contacts,	Standard	AC7MPNZ	
	-=+=2.4 [.09	14"]	Nickel Finish	Vertical PCB	AC7MPNZV	
6				Bulk Pack	AC7MPNZ BULK	
13	Saper control of the second se		XLR 7 pole male, Nar- row flange, Gold Plated Machined contacts,	Standard	AC7MPNZB	
			Black Finish	Vertical PCB	AC7MPNZVB	
				Bulk Pack	AC7MPNZB BULK	

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
2			XLR 7 pole male, Wide flange, Gold Plated Machined contacts,	Standard	AC7MP
			Nickel Finish	Vertical PCB	AC7MPV
A REAL PROPERTY AND A REAL				Bulk Pack	AC7MP BULK
Pa		SOLDER CONTACTS 	XLR 7 pole male, Wide flange, Gold Plated Machined contacts,	Standard	AC7MPB
			Black Finish	Vertical PCB	AC7MPVB
and the second second				Bulk Pack	AC7MPB BULK
Paul Paul			XLR 7 pole female, Wide flange, Gold Plated Machined contacts,	Standard	AC7FPZ
			Nickel Finish	Vertical PCB	AC7FPZV
1 miles				Bulk Pack	AC7FPZ BULK
C run	36.8	SOLDER CONTACTS	XLR 7 pole female, Wide flange, Gold Plated Machined contacts,	Standard	AC7FPZB
	16.7 [.656"]	→ 32.0 [1.260"]→	Black Finish	Vertical PCB	AC7FPZVB
and and a second second				Bulk Pack	AC7FPZB BULK

**METAL TYPE FLANGE** 

### PART NUMBER BREAKDOWN

METAL TYPE FLANGE

E. G. AC3MMPNZVB-AU B AC (Series Prefix), 3 c Z (Metal Chassis Serie - AU (Gold Plated Con	contacts, Ma es), Vertical	Printed Circu	Contacts, <b>PN</b> (Narrow Flange), it Board, Black Polyester Finish,	SERIE	PREFIX CON	TACT	ANOUT	is ionthi	SHEL	SH	L SEP	ANNIA G	ION IN IN	<sup>5<sup>th</sup></sup> con	TACIPLA	MG PACHAG	MO	Ĩ
	itacis), buik	r ackayeu.		AC	3	M		/1   F	PN	Z	V	B	-	AU		BULK		
SERIES PREFIX	AC	=	Series Prefix															
CONTACT LAYOUTS	3	=	3 Contacts															
	4	=	4 Contacts															
	5	=	5 Contacts	-														
	6A	=	6 Contacts															
	7	=	7 Contacts															
GENDER	F	=	Female Socket Contacts															
	м	=	Male Pin Contacts	-														
MACHINED	Blank	=	Stamped Contacts															
CONTACTS <sup>1</sup>	м	=	Machined Contacts (Applicable 3 male pin contacts only)					J										
SHELL STYLE	D	=	Small Flange (front or rear mountir	ng)														
	Р	=	Large Shell with wide flange	_														
	PN	=	Large Shell with Narrow Flange (male only)															
SHELL SERIES	Blank	=	Male P Shell Style only															
	Z	=	Metal Chassis Series															
TERMINATION	Blank	=	Solder Buckets															
	v	=	Vertical Printed Circuit Board															
SHELL FINISH <sup>2</sup>	Blank	=	Nickel Plated Finish															
	В	=	Black Polyester Finish															
<b>CONTACT PLATING</b> <sup>3</sup>	Blank	=	Standard Plating (Silver or Tin -															
	AU	=	Refer to Standard Data.) Gold Plated															
PACKAGING	Blank	=	Individual Bags															
	BULK	=	Bulk Packed	-														

#### Note:

<sup>1</sup>4 - 7 contact connectors have machined contacts and grounding as standard. They are not available in stamped contacts.

<sup>2</sup> Ground contacts are not supplied with the black polyester finish shell option.

<sup>3</sup> 7 Contact is gold plated as standard.

<sup>4</sup> Non-Latching Versions (Female) available - Please contact us for part number options.

**STANDARD DATA** 

### STANDARD DATA AC SERIES CHASSIS - METAL "Z"

		VALUE									
GENERAL Characteristics	Number of contacts	3	4	5	6A	7					
UNARAU I ERIS I IUS	Contact Arrangement (Front view of pin inserts)										
	Termination	Solder Bucket / Printed Circuit Board (PCB)									
	Max. Wire Gauge - Stranded wire: Solder Printed Circuit Board - PCB	14AWG N/A	16AWG N/A	18AWG N/A	18AWG N/A	20AWG N/A					
	Flammability rating of plastics										
	Environmental Complies with EU RoHS 2 Directive 2011/65/EU										
ELECTRICAL Characteristics	Service Voltage RMS 133V <sup>1)</sup>										
UNANAL IENIS IIUS	Test Voltage AC RMS	1400V									
	Current carrying capacity: Solder Printed Circuit Board (PCB)	15A 15A	10A 10A	7.5A 7.5A	7.5A 7.5A	5A 5A					
	Typical Contact Resistance	≤3mΩ									
	Insulation Resistance ≥1000MΩ										
CLIMATIC	Protection Class	IP40									
CHARACTERISTICS	Operating Temperature	-25°C to +75°C (-13°F to +167°F)									
MECHANICAL Characteristics	Weight - Metal 2)	31g	32g	33g	33g	33g					
		(0.068lb)	(0.070lb)	(0.072lb)	(0.072lb)	(0.072lb)					
	Mechanical Operations	1000 mating cycles									
MATERIALS	Connector Shell	Diecast Zinc Alloy									
	Shell Finish	Satin Nickel or Black Polyester									
	Insulators UL94V-0 PBT Resin or Modified PPE Resin										
	Male Contact										
	Stamped Solder and PCB-(Material/Plating) Phosphor Bronze / Silver or Gold (optional)										
	Machined Solder-(Material/Plating)	Brass / Silver or Gold (optional)									
	Female Contact										
	Stamped Solder and PCB-(Material/Plating)	Stamped Solder and PCB-(Material/Plating) Phosphor Bronze / Tin or Gold (optional)									
	Machined Solder-(Material/Plating)	Brass / Silver or Gold (Optional)									

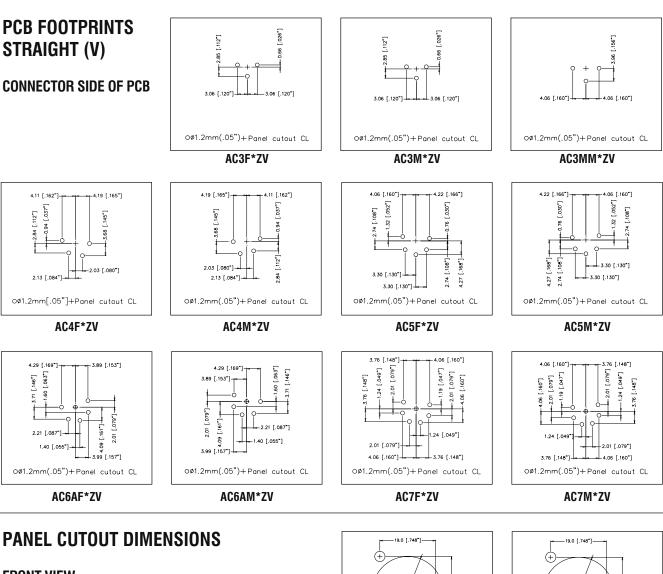
<sup>1)</sup> Not suitable for domestic applications above 50V

<sup>2)</sup> Approximate weight only, does not include packaging. Please contact us for exact weight for shipping purposes.

### **AC SERIES CHASSIS METAL "Z"**

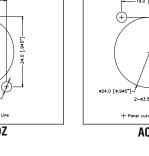
AC SERIES CHASSIS CONNECTORS

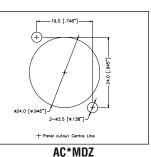
**METAL TYPE FLANGE** 

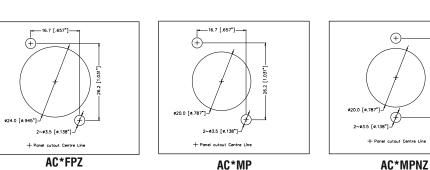


#### **FRONT VIEW**

### ¢24.0 [¢.945"]-2~\$3.5 [\$.138"]-+ Panel cutout Centre Line AC\*FDZ







www.amphenolaudio.com

1.063



The AC series, A and B type XLR chassis receptacles have been designed and manufactured with the Original Equipment

manufactured with the Original Equipment Manufacturers' (OEM) needs in mind. The compact shell design allows a significant space saving over the traditional 'D' type shell. Gold plated contacts improve the performance, ensuring a reliable contact and the unique grounding link options offer flexibility in design.

#### **Features**

- A leading first mate last break socket contact is standard on all female connectors (Pin 1).
- Vertical and Horizontal PCB versions available.
- Latching and Non-latching versions available.
- A range of different grounding options are available including:
- Mating connector shell to Pin 1
- Mating connector shell to Chassis
- Mating connector shell to pin 1 to Chassis
- A type is available in 3 or 5 contacts.
- B type is available in 3 contact only.
- Compatible with all other XLR brands.
- Metal Mounting Flange (B type)

#### **Options**

- Vertical PCB contacts
- · Horizontal PCB contacts
- Precision Machined Pin contacts
- Cost effective Stamped Socket contacts
- Gold Plated contacts (Standard)
- Silver Plated contacts (Optional)
- Bulk Packaging
- · Integrated Switch

#### **Ordering Codes**

We have listed the more common ordering codes in each section. For further options please refer to the part number breakdown charts. Please contact us if you need any further assistance. AC SERIES CHASSIS CONNECTORS

#### A AND B TYPE FLANGE

### AC SERIES XLR PCB CHASSIS MOUNT CONNECTORS

### Simple steps to guide you in using this catalogue

- 1) Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- 3) Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use variations column to determine your choice.
- 6) Identify part number.
- In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.

#### THERMOPLASTIC A -TYPE FLANGE 3 CONTACT



#### Features:

- Thermoplastic Shell
- Industry standard PCB footprints.
- Vertical or Horizontal PCB mounting.
- Precision machined pin contacts.
- Gold plated contacts.
- Leading first mate last break socket contact.
- $\bullet\,$  Bulk packed in trays, 100 to a box as standard.
- Positive latch lock system.

**Options:** Silver plated contacts, Vertical or Horizontal PCB, Various grounding methods, Latching or Non-Latching.

Part Number Breakdown: page 44 Specifications: page 47PCB Footprints: page 48Panel Cutouts: page 49Recommended Fastener: page 137

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches	)	DESCRIPTION	GROUND LINK Variations	PART NUMBER
			H ج ا	XLR 3 pole male, Horizontal PCB, Gold Plated Contacts, Bulk Pack	No Ground Link	AC3MAH-AU-B
C.	25.4 [.998"] -25.4 [.998"] -000 -		+ ب ا	XLR 3 pole male, Horizontal PCB, Gold Plated Contacts, Bulk Pack	Pin 1 to Chassis to Mating connector shell	AC3MAH1-AU-B
			+ ج (6	XLR 3 pole male, Horizontal PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis - Pin 1 sep. Ground	AC3MAH2-AU-B
	25.4 [.998"] 		+ ج ا	XLR 3 pole male, Horizontal PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Pin 1	AC3MAH3-AU-B
			ارتي 1-	XLR 3 pole male, Horizontal PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis to PCB, Pin 1 sep. Ground	AC3MAH4-AU-B
	25.4 [.998"] 			XLR 3 pole male with integrated switch, Horizontal PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis to PCB, Pin 1 sep. Ground	AC3MAH4-SW-B



#### THERMOPLASTIC A TYPE FLANGE

PRODUCT - FIGURE	DRAWING	Dimensions in mm	n (inches)	DESCRIPTION	GROUND LINK Variations	PART NUMBER
	2.7 [.106]	-24.0 [.945] -19.5 [.768] -19.5 [.768] -19.5 [.768] -19.6 [.768] -19.8 [.768] -1		XLR 3 pole male, Verti- cal PCB, Gold Plated Contacts, Bulk Pack	No Ground Link	AC3MAV-AU-B
	25.4 [.998"]- -25.4 [.998"]- 			XLR 3 pole male, Verti- cal PCB, Gold Plated Contacts, Bulk Pack	Pin 1 to Chassis to Mating connector shell	AC3MAV1-AU-B
	25.4 [.998"] -25.4 [.998"] 	-19.5 [.768"]-		XLR 3 pole male, Verti- cal PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis - Pin 1 sep. Ground	AC3MAV2-AU-B
	2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	24.0 [.945"] 19.5 [.768"] 		XLR 3 pole male, Verti- cal PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Pin 1	AC3MAV3-AU-B
	25.4 [.998"] 	-24.0 [.945"]- =19.5 [.766"]- =19.5 [.766"]-		XLR 3 pole male, Verti- cal PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis to PCB, Pin 1 sep. ground	AC3MAV4-AU-B
		24.0 [.945] 19.5 [.768] 		XLR 3 pole male, Solder Buckets, Gold Plated Contacts, Bulk Pack	No Ground Link	AC3MA-AU-B
C.	25.4 [.998"] PUSH PUSH PC PC PC PC PC PC PC PC PC PC	-3.3 [.130"] -19.5 [.766"] -1.566"		XLR 3 pole female, Horizontal PCB, Latching Type, Gold Plated Contacts, Bulk Pack	No Ground Link	AC3FAH-AU-B
	25.4 [.998"] <b>PUSH</b> <b>PUSH</b> <b>PUSH</b> <b>PUSH</b> <b>PUSH</b> <b>PUSH</b> <b>PUSH</b>			XLR 3 pole female, Horizontal PCB, Latching Type, Gold Plated Contacts, Bulk Pack	Pin 1 to Chassis to Mating connector shell	AC3FAH1-AU-B

#### THERMOPLASTIC A TYPE FLANGE

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	GROUND LINK Variations	PART NUMBER
C.	25.4 [998"]		XLR 3 pole female, Horizontal PCB, Latching Type, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis - Pin 1 sep. Ground	AC3FAH2-AU-B
.0.	25.4 [998"] PUSH 	52 - 256 - 2	XLR 3 pole female, Horizontal PCB, Latching Type, Gold Plated Contacts, Bulk Pack	Pin 1 to Chassis	AC3FAH3-AU-B
0	25.4 [.996"] -25.4 [.996"] 		XLR 3 pole female, Horizontal PCB, Non-Latching Type Gold Plated Contacts, Bulk Pack	No Ground Link	AC3FAHL-AU-B
0	25.4 [.998"]		XLR 3 pole female, Horizontal PCB, Non-Latching Type Gold Plated Contacts, Bulk Pack	Pin 1 to Chassis to mating connector shell	AC3FAHL1-AU-B
0			XLR 3 pole female, Horizontal PCB, Non-Latching Type Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis - Pin 1 sep. Ground.	AC3FAHL2-AU-B
C	25.4 [.998"]		XLR 3 pole female, Horizontal PCB, Non-Latching Type Gold Plated Contacts, Bulk Pack	Pin 1 to Chassis	AC3FAHL3-AU-B
	25.4 [.998"] PUSH PUSH 2.7 [.106"] 2.7	-3.3 [130"] +19.5 [.766"] -19.8 [.780"] -19.8 [.	XLR 3 pole female, Vertical PCB, Latching Type, Gold Plated Contacts, Bulk Pack	No Ground Link	AC3FAV-AU-B
		3.3 [130"] 19.5 [768"] 24.0 [.945"] 3.5 [138"]	XLR 3 pole female, Vertical PCB, Latching Type, Gold Plated Contacts, Bulk Pack	Pin 1 to Chassis to mating connector shell	AC3FAV1-AU-B

#### THERMOPLASTIC A TYPE FLANGE

PRODUCT - FIGURE	DRAWING	Dimensions i	in mm (inches)	DESCRIPTION	GROUND LINK Variations	PART NUMBER
e ceuse				XLR 3 pole female, Vertical PCB, Latching Type, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis - Pin 1 sep. Ground.	AC3FAV2-AU-B
0				XLR 3 pole female, Vertical PCB, Latching Type, Gold Plated Contacts, Bulk Pack	Pin 1 to Chassis	AC3FAV3-AU-B
0	25.4 [.998"] -25.4 [.998"] -27.7 [.106"] -27.7 [	9.5 [.768']		XLR 3 pole female, Vertical PCB, Non-Latching Type, Gold Plated Contacts, Bulk Pack	No Ground Link	AC3FAVL-AU-B
0		9.5 [.768"]= 9.5 [.768"]= 9.		XLR 3 pole female, Vertical PCB, Non-Latching Type, Gold Plated Contacts, Bulk Pack	Pin 1 to Chassis to Mating connector shell	AC3FAVL1-AU-B
		9.5 [.768"]		XLR 3 pole female, Vertical PCB, Non-Latching Type, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis - Pin 1 sep. Ground.	AC3FAVL2-AU-B
0		9.5 [.768"]		XLR 3 pole female, Vertical PCB, Non-Latching Type, Gold Plated Contacts, Bulk Pack	Pin 1 to Chassis	AC3FAVL3-AU-B

#### AC SERIES CHASSIS CONNECTORS

#### **METAL B - TYPE FLANGE 3 CONTACT**



#### Features:

- Thermoplastic Shell with Metal Mounting Flange.
- Industry standard PCB footprints.
- Improved grounding performance.
- Vertical or Horizontal PCB mounting.
- Precision machined pin contacts.
- · Gold plated contacts.
- Leading first mate last break socket contact.
- Bulk packed in trays, 100 to a box as standard.
- Positive latch lock system.
- Options: Silver plated contacts, Vertical or Horizontal PCB,
- Various grounding methods, Latching or Non-Latching.

Part Number Breakdown: page 45Specifications: page 47PCB Footprints: page 48Panel Cutouts: page 49Recommended Fastener: page 137

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION/ Ground Link	MOUNTING FLANGE VARIATIONS	PART NUMBER
			XLR 3 pole male, Horizontal PCB, Gold Plated Contacts,	Nickel Finish	AC3MBH-AU-B
	27 [.106"]		Bulk Pack No Ground Link	Black Finish	AC3MBHB-AU-B
900	25.3 [.996 <sup>+</sup> ]		XLR 3 pole male, Hori- zontal PCB, Gold Plated Contacts, Bulk Pack	Nickel Finish	AC3MBH1-AU-B
			Pin 1 to Chassis to Mat- ing connector shell	Black Finish	AC3MBHB1-AU-B
9			XLR 3 pole male, Horizontal PCB, Gold Plated Contacts, Bulk Pack	Nickel Finish	AC3MBH2-AU-B
			Mating connector shell to Chassis - Pin 1 sep. Ground	Black Finish	AC3MBHB2-AU-B
900	-25.3 [.996"]		XLR 3 pole male, Hori- zontal PCB, Gold Plated Contacts,	Nickel Finish	AC3MBH3-AU-B
	2.7 [.106*]-		Bulk Pack Mating connector shell to Pin 1	Black Finish	AC3MBHB3-AU-B
50	25.3 [.996"]		XLR 3 pole male, Horizontal PCB, Non-Latching Type,	Nickel Finish	AC3MBHL-AU-B
			Gold Plated Contacts, Bulk Pack No Ground Link	Black Finish	AC3MBHBL-AU-B
	25.3 [996"]	-19.5 [768]	XLR 3 pole male, Verti- cal PCB, Gold Plated Contacts,	Nickel Finish	AC3MBV-AU-B
			Bulk Pack No Ground Link	Black Finish	AC3MBVB-AU-B

#### **METAL B TYPE FLANGE**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION/ GROUND LINK	MOUNTING FLANGE Variations	PART NUMBER
	25.3 [.996"]		XLR 3 pole male, Verti- cal PCB, Gold Plated Contacts, Bulk Pack	Nickel Finish	AC3MBV1-AU-B
			Pin 1 to Chassis to Mating connector shell	Black Finish	AC3MBVB1-AU-B
	25.3 [.996"]		XLR 3 pole male, Verti- cal PCB, Gold Plated Contacts, Bulk Pack	Nickel Finish	AC3MBV2-AU-B
	2.7 [.106 <sup>+</sup> ]-		Mating connector shell to Chassis - Pin 1 sep. Ground	Black Finish	AC3MBVB2-AU-B
	25.3 [ 996"]	-24.0 [.945']	XLR 3 pole male, Verti- cal PCB, Gold Plated Contacts, Bulk Pack	Nickel Finish	AC3MBV3-AU-B
			Mating connector shell to Pin 1	Black Finish	AC3MBVB3-AU-B
	25.3 [996"]		XLR 3 pole female, Horizontal PCB, Latching Type, Gold Plated Contacts,	Nickel Finish	AC3FBH-AU-B
			Bulk Pack No Ground Link	Black Finish	AC3FBHB-AU-B
	25.3 [.996"]		XLR 3 pole female, Horizontal PCB, Latching Type, Gold Plated Contacts,	Nickel Finish	AC3FBH1-AU-B
			Bulk Pack Pin 1 to Chassis to Mat- ing connector shell	Black Finish	AC3FBHB1-AU-B
	25.3 [.996"] PUSH		XLR 3 pole female, Horizontal PCB, Latch- ing Type, Gold Plated	Nickel Finish	AC3FBH2-AU-B
			Contacts, Bulk Pack Mating connector shell to Chassis - Pin 1 sep. Ground	Black Finish	AC3FBHB2-AU-B
	25.3 [996"]		XLR 3 pole female, Horizontal PCB, Latching Type, Gold Plated Contacts,	Nickel Finish	AC3FBH3-AU-B
			Bulk Pack Pin 1 to Chassis	Black Finish	AC3FBHB3-AU-B
	25.3 [996"] 986" 1987 25.3 [996"] 4 Amphenol 9 3 0 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1		XLR 3 pole female, Horizontal PCB, Non-Latching Type Gold Plated Contacts,	Nickel Finish	AC3FBHL-AU-B
	2.7 [.106		Bulk Pack	Black Finish	AC3FBHBL-AU-B

#### **METAL B TYPE FLANGE**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION/ GROUND LINK	MOUNTING FLANGE Variations	PART NUMBER
<b>1</b>	25.3 [.996"]		XLR 3 pole female, Horizontal PCB, Non-Latching Type Gold Plated Contacts,	Nickel Finish	AC3FBHL1-AU-B
			Bulk Pack Pin 1 to Chassis to mat- ing connector shell	Black Finish	AC3FBHBL1-AU-B
	-22.4 [.82*]		XLR 3 pole female, Horizontal PCB, Non- Latching Type, Gold Plated	Nickel Finish	AC3FBHL2-AU-B
			Mating connector shell to Chassis - Pin 1 sep. Ground.	Black Finish	AC3FBHBL2-AU-B
	25.3 [.996"]		XLR 3 pole female, Horizontal PCB, Non-Latching Type	Nickel Finish	AC3FBHL3-AU-B
			Gold Plated Contacts, Bulk Pack Pin 1 to Chassis	Black Finish	AC3FBHBL3-AU-B
	25.3 [.996"]		XLR 3 pole female, Vertical PCB, Latching Type,	Nickel Finish	AC3FBV-AU-B
400.			Gold Plated Contacts, Bulk Pack No Ground Link	Black Finish	AC3FBVB-AU-B
	PUSH		XLR 3 pole female, Vertical PCB, Latching Type,	Nickel Finish	AC3FBV1-AU-B
<b>10</b>	2.7 [106"]-		Gold Plated Contacts, Bulk Pack Pin 1 to Chassis to mating connector shell	Black Finish	AC3FBVB1-AU-B
	PUSH		XLR 3 pole female, Vertical PCB, Latching Type, Gold Plated	Nickel Finish	AC3FBV2-AU-B
			Mating connector shell to Chassis - Pin 1 sep. Ground.	Black Finish	AC3FBVB2-AU-B
	PUSH		XLR 3 pole female, Vertical PCB, Latching Type, Gold Plated Contacts,	Nickel Finish	AC3FBV3-AU-B
<b>40</b> ,	2.7 [.106 <sup>°</sup> ]-		Bulk Pack Pin 1 to Chassis	Black Finish	AC3FBVB3-AU-B
	25.3 [.996"]		XLR 3 pole female, Vertical PCB, Non-Latching Type,	Nickel Finish	AC3FBVL-AU-B
<b>40</b> .			Gold Plated Contacts, Bulk Pack No Ground Link	Black Finish	AC3FBVBL-AU-B

ENTERTAINMENT INTERCONNECT CATALOGUE - Amphenol Australia Pty Ltd Telephone 61 3 8796 8888 Fax 61 3 8796 8801

#### **METAL B TYPE FLANGE**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION/ Ground Link	MOUNTING FLANGE Variations	PART NUMBER
	25.3 [.996"]		XLR 3 pole female, Vertical PCB, Non-Latching Type, Gold Plated Contacts,	Nickel Finish	AC3FBVL1-AU-B
	[_966]] [: 57]		Bulk Pack	Black Finish	AC3FBVBL1-AU-B
	2.7 [.106*]		Pin 1 to Chassis to Mat- ing connector shell		
	25.3 [.996 <sup>*</sup> ]		XLR 3 pole female, Vertical PCB, Non-Latching Type,	Nickel Finish	AC3FBVL2-AU-B
			Gold Plated Contacts, Bulk Pack	Black Finish	AC3FBVBL2-AU-B
	2.7 [.106*		Mating connector shell to Chassis - Pin 1 sep. Ground.		
	25.3 [.996*]		XLR 3 pole female, Vertical PCB, Non-Latching Type, Cold Distoid Costacto	Nickel Finish	AC3FBVL3-AU-B
	[.966'] [:97]		Gold Plated Contacts, Bulk Pack	Black Finish	AC3FBVBL3-AU-B
	2.7 [.106*]		Pin 1 to Chassis		



#### THERMOPLASTIC A -TYPE FLANGE 5 CONTACT



#### Features:

- 5 contacts.
- Thermoplastic Shell
- Industry standard PCB footprints.
- Vertical or Horizontal PCB mounting.
- Precision machined pin contacts.
- Gold plated contacts.
- Leading first mate last break socket contact.
- Bulk packed in trays, 100 to a box as standard.
- Positive latch lock system.
- **Options:** Vertical or Horizontal PCB,

Part Number Breakdown: page 46 PCB Footprints: page 48 Recommended Fastener: page 137

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION/ Ground Link	MOUNTING FLANGE Variations	PART NUMBER
		748°] -25 [.984″] -25 [.984″]	XLR 5 pole male, Horizontal PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis to PCB, Pin 1 sep. Ground	AC5MAH-AU-B
SO.		25 [ 984"] - 25 [ 984"] - 25 [ 984"] - 20 0 - 20 0	XLR 5 pole male, Verti- cal PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis to PCB, Pin 1 sep. Ground	AC5MAV-AU-B
	19.8 [.780 <sup>-</sup> ] 19.5 [.76 19.5 [.7 19.5 [.7] 19.5 [.7 19.5 [.7] 19.5 [.7 19.5 [.7]		XLR 5 pole female, Horizontal PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis to PCB, Pin 1 sep. Ground	AC5FAH-AU-B
	19.8 [.780 <sup>°</sup> ] 19.5 [.7 19.5 [.7 19.5 [.7]		XLR 5 pole female, Vertical PCB, Gold Plated Contacts, Bulk Pack	Mating connector shell to Chassis to PCB, Pin 1 sep. Ground	AC5FAV-AU-B

AC SERIES CHASSIS CONNECTORS

### **Amphenol**

A AND B TYPE FLANGE

### PART NUMBER BREAKDOWN

AC SERIES A AND B TYPE MALE - 3 CONTACT

								¢.					EFINISH	SM off	þ	
				c	ERIESP	AFFIX	TACTLA	OUT.	ELL SEP	AMMATIC	NN DUNTING	SFLAN	a MECHAN MECHAN ROUNDI	NE OFTID	TACTPI	1
	3-AU B       AC       3       IN       B       V       B       L       S       -       AU         3-AU B       prefix)3 contacts, Male, A Type, Vertical Printed Circuit Board, Latchless, Shell to Pin 1 Groundrig)AU (Gold Plated Contacts), Bulk Packaged.       IN       AC       =       S       A       -       AU         YOUT       3       =       3 Contacts only       IN       M       Male Pin Contacts         IS       A       =       A Type       B       B       B       Type         B       =       B Type       B       B       B Type       IN       H       Horizontal Printed Circuit Board         V       =       Vertical Printed Circuit Board       Intervention       Intervention       Intervention       Intervention         SH       B       =       Black       Blank       Nickel       Intervention       Intervention		-													
E. G . AC3MAVL3-AU B AC (series prefix),3 ( 3 (Mating Shell to Pi	contacts, <b>M</b> a n 1 Groundin	le, <b>A</b> Type, <b>V</b> g), - <b>AU</b> (Go	ertical Printed Circuit Board, Latchless, d Plated Contacts), Bulk Packaged.													
SERIES PREFIX	AC	=	Series Prefix													
CONTACT LAYOUT	3	=	3 Contacts only													
GENDER	М	=	Male Pin Contacts													
E. G. ACSIMUL3.AU B AC (peries prebl). 3 contacts, Male, A Type, Vertical Printed Circuit Board Signature Signature A Type B       Image: Contacts Signater A Type B       Image: Contacts Signature																
TERMINATION	Н	=	Horizontal Printed Circuit Board													
	v	=	Vertical Printed Circuit Board													
	Blank	=	Solder Bucket Contacts													
	Blank	=	Nickel													
	В	=	Black													
	Blank	=	Latching													
MECHANISM	L	=	Latchless													
	Blank	=	No Ground Link													
	1	=														
	2	=														
	3	=	Mating connector to Pin 1													
	4	=	Mating connector to Shell to Chas- sis to PCB, Pin 1 separate ground													
CONTACT PLATING	ACC 3       VI       B       L       S       - AC         ACC series prefix 3 contacts, Male, A Type, Vertical Printed Circuit Board, Latchless, 3 (Maining Shell to Prin 1 Securiding) AU (Gold Plated Contacts), Bulk Packaged.															
E. G. AC3MAVL3-AU B         AC. (series prefix).         S. (water Shell to Ph.1 Grounding).         AV (series prefix).         Steries PREFIX         AC.         Series Prefix         Souract Layout         3         Bank         Blank         Solder Sourd Link         B Table Solder Bucket Contacts         WOUNTING         Blank         Solder Bucket Contacts         MOUNTING         Blank         L         Latchings         L         L         Blank         L         L         L         L         L         L         L         Latchiess         SROUNDING LINK         Blank         L       Latchiess <t< td=""><td></td><td></td></t<>																
PACKAGING	В	=	Bulk Packed													_

A AND B TYPE FLANGE

### PART NUMBER BREAKDOWN

AC SERIES A AND B TYPE FEMALE - 3 CONTACT

E. G . AC3FAVL3-AU B	contacts. Female. A Type. Vertical Printed Circuit Board. Latchless.         AC       =       Series Prefix         3       =       3 Contacts only         F       =       Female Socket Contacts.         AC       =       Series Prefix         3       =       3 Contacts only         F       =       Female Socket Contacts.         AC       =       Series Prefix         3       =       3 Contacts only         F       =       Female Socket Contacts.         A       =       A Type         B       =       B Type         H       =       Horizontal Printed Circuit Board         V       =       Vertical Printed Circuit Board         V       =       Vertical Printed Circuit Board         I       =       Black         Blank       =       No Ground Link         1       =       Pin 1 to Chassis         AU       =       Goid Plated Contacts         AG       =       Silver Plated Contacts         AG       =       Blank       No Ground Link         1       =       Pin 1 to Chassis         AU       =       Goid Plated Contacts		
AC (series prefix),3 co	ontacts, <b>F</b> em rounding), -	nale, <b>A</b> Type, <b>AU</b> (Gold Pla	Vertical Printed Circuit Board,Latchless, ted Contacts), Bulk Packaged.
SERIES PREFIX	AC		Series Prefix
CONTACT LAYOUT			
GENDER		=	
SHELL SERIES	A	=	А Туре
	В	=	В Туре
TERMINATION	н	=	Horizontal Printed Circuit Board
	V	=	Vertical Printed Circuit Board
MOUNTING Flange Finish	Blank	=	Nickel
(B TYPE ONLY)	В	=	Black
LOCKING Mechanism	Blank	=	Latching
	L	=	Latchless
GROUNDING LINK OPTIONS	Blank	=	No Ground Link
	1	=	
			tor shell
	2	=	
	3	=	Pin 1 to Chassis
CONTACT PLATING	AU	=	Gold Plated Contacts
	AG	=	Silver Plated Contacts (Non-Standard)
PACKAGING	В	=	Bulk Packed

**A TYPE FLANGE** 

### PART NUMBER BREAKDOWN

AC SERIES A TYPE MALE AND FEMALE - 5 CONTACT

				states	PREFIX	IACTU	NOUTS NDER SH	ell serie	HINNAT NINAT	0	× 
				AC	5	F	Α	V	-	A	U
	AC (series prefix),5 contacts, Female, A Type, Vertical Printed Circuit Board, AU (Gold Plated Contacts) - Bulk Packaged.         RIES PREFIX       AC       Series Prefix         DNTACT LAYOUT       5       5 Contacts only         ENDER       F       Female Socket Contacts         M       Male Pin Contacts         IELL SERIES       A       A Type         RMINATION       H       Horizontal Printed Circuit Board, V										
SERIES PREFIX	AC	=	Series Prefix								
CONTACT LAYOUT	5	=	5 Contacts only	1—							
GENDER	F	=	Female Socket Contacts	1							
	М	=	Male Pin Contacts								
SHELL SERIES	А	=	А Туре	]							
TERMINATION	Н	=	Horizontal Printed Circuit Board								
	V	=	Vertical Printed Circuit Board								
CONTACT PLATING	AU	=	Gold Plated Contacts	]							
PACKAGING	В	=	Bulk Packed	]							

**STANDARD DATA** 

### **STANDARD DATA AC SERIES A AND B TYPE CHASSIS**

		VAL	UE		
GENERAL	Number of contacts	3	5		
CHARACTERISTICS	Contact Arrangements (Front view of pin insert)				
	Termination	Printed Circuit	t Board (PCB)		
	Flammability rating of plastics	UL94V-0	UL94HB		
	Environmental	Complies with EU RoHS	2 Directive 2011/65/EU		
ELECTRICAL Characteristics	Service Voltage RMS	13	3V <sup>1)</sup>		
UNARAU I ERIS IIUS	Test Voltage AC RMS	150	V0V		
	Current carrying capacity	6A	3A		
	Typical Contact Resistance	≤5r	πΩ		
	Insulation Resistance (initial)	≥20	GΩ		
	Insulation Resistance (after damp heat test)	≥1	GΩ		
CLIMATIC	Protection Class	١Þ،	40		
CHARACTERISTICS	Operating Temperature	-25°C to +75°C (-13°F to +167°F)			
MECHANICAL	Weight <sup>2)</sup>	14g (0.030lb)			
CHARACTERISTICS	Retention Spring separating force	≥20N			
	Mounting Screw torque max.	1.5Nm			
	Mechanical Operations	1500 mat	ting cycles		
	Fastening A Type Connectors <sup>3)</sup> Fastening B Type Connectors <sup>3)</sup>	Self-Tapping PT screw with thread 2.9 x 1.06 and of Tri-rondular configuration Self-Tapping screw M2.5			
MATERIALS	Connector Flange - B-Type Flange Finish - B-Type		Zinc Alloy or Black		
	Insulators	PA6.6+25% glass fibre reinforced, UL94V-0	UL94HB		
	Male Contact Material	Brass			
	Male Contact Plating	0.0762µm (3µ") gold over 0.762µm (30µ") nickel			
	Female Contact Material	Bronze			
	Female Contact Plating		ver 0.762µm (30µ") nickel		
	Latch lock and Spring		g Steel		
	Ground element	Sprin	g Steel		

 $^{\scriptscriptstyle \mathrm{D}}\operatorname{Not}$  suitable for domestic applications above 50V

<sup>2)</sup> Approximate weight only, does not include packaging. Please contact us for exact weight for shipping purposes.

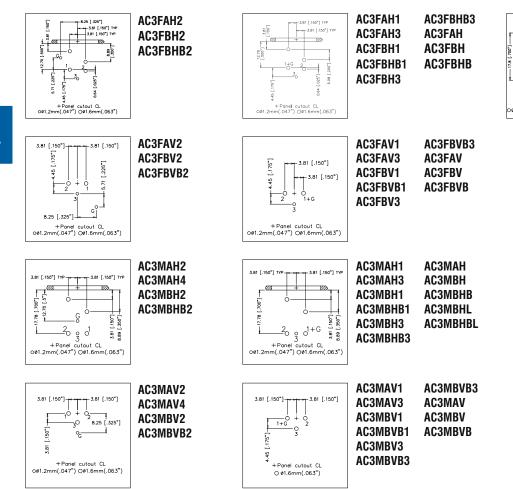
<sup>3)</sup> Refer to page 132

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AC SERIES CHASSIS CONNECTORS

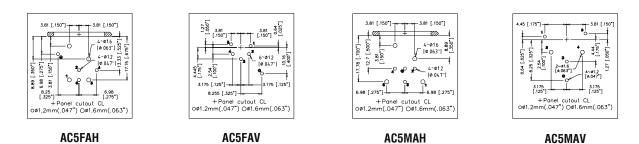
A AND B TYPE FLANGE

### AC SERIES A AND B TYPE CHASSIS PCB FOOTPRINTS STRAIGHT (V) - CONNECTOR SIDE OF PCB



# AC3MAH4SWB

AC SERIES 5 PIN PCB FOOTPRINTS STRAIGHT (V) - CONNECTOR SIDE OF PCB



«I»

48

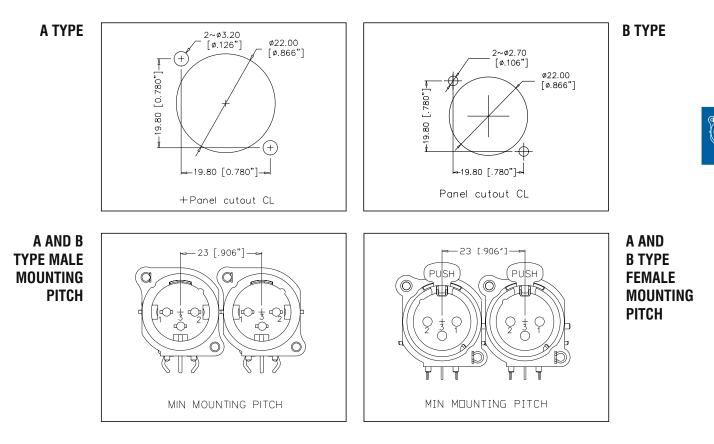


AC SERIES CHASSIS CONNECTORS

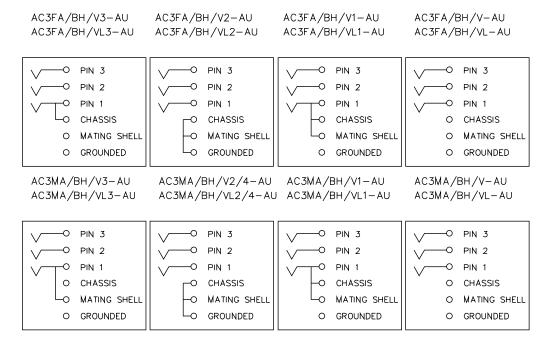
A AND B TYPE FLANGE

### **AC SERIES A AND B TYPE CHASSIS**

**PANEL CUTOUT DIMENSIONS - FRONT VIEW** 



### **AC3FA/BH/V SCHEMATIC CHART**



1/4" (6.35mm) / XLR

**AC SERIES DUAL** 

#### **THERMOPLASTIC C TYPE SERIES**



The AC Series C type chassis receptacles feature two connectors in the one space saving housing. A combined XLR female receptacle together with a 6.35mm (1/4") phone jack give the designer more flexibility ensuring premium board space is saved. The new low profile high density C type offers a 15% space saving over the traditional C type. Various configurations are available in either stereo or mono layouts with Vertical, Horizontal Printed Circuit Board or Solder contacts.

#### **Features**

- · Standard or low profile / high density shell design
- · Two connectors in the one housing.
- Industry standard PCB footprint layout on standard C type.
- · Vertical or Horizontal PCB mounting.
- · Bulk packed.
- · Positive latch lock system (XLR).

#### **Options**

- · Solder contacts
- Vertical PCB contacts
- Horizontal PCB contacts
- · Bulk Packaging
- · Overmoldable connector housing

#### **Ordering Codes**

We have listed the more common ordering codes in each section. For further options please refer to the part number breakdown charts. Please contact us if you need any further assistance.

### Simple steps to guide you in using this catalogue

- 1) Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- 3) Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use variations column to determine your choice.
- 6) Identify part number.
- In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.

AC SERIES CHASSIS CONNECTORS

#### C - TYPE LOW PROFILE DUAL JACK / XLR CONNECTORS



#### Features:

- Two connectors in the one housing.
- Low profile design offers a 15% space saving over the traditional design.
- Vertical or Horizontal PCB mounting.
- Bulk packed in trays, 100 to a box as standard.
- Positive latch lock system (XLR).

Part Number Breakdown: page 56 Specifications: page 58 PCB Footprints: page 57 Recommended Fastener: page 137

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	986 108 178   986 10 52 -75 30 1996   -75 30 1906   -75 30 190	SCHEMATIC CHART JACK XIR JACK 03 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Low Profile XLR 3 pole female receptacle with 1/4" stereo jack with- out switching contact, Horizontal PCB mount, Bulk Pack	Latching	ACJC6AH BULK
		SCHEMATIC CHART JACK	Low Profile XLR 3 pole female receptacle with 1/4" stereo jack with- out switching contact, Horizontal PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC6AHL BULK
		275 [1082] 	Low Profile XLR 3 pole female receptacle with 1/4" stereo jack with- out switching contact, Vertical PCB mount, Bulk Pack	Latching	ACJC6AV BULK
		275 [1082] SCHEMATIC CHART JACK J	Low Profile XLR 3 pole female receptacle with 1/4" stereo jack with- out switching contact, Vertical PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC6AVL BULK
	1980   78  1980   78  1986	SCHEMATIC CHART JACK SLR JACK SLR JACK SLR SCHEMATIC CHART JACK SLR SCHEMATIC CHART JACK SLR SCHEMATIC CHART JACK SLR SCHEMATIC CHART JACK SLR SCHEMATIC CHART JACK SLR SCHEMATIC CHART SCHEMATIC C	Low Profile XLR 3 pole female receptacle with 1/4" switching stereo jack, Horizontal PCB mount, Bulk Pack	Latching	ACJC9AH BULK
	966 10:52 1966 10:52 1976 10:52 1	SCHEMATIC CHART JACK SLR JACK SLR JACK SLR SCHEMATIC CHART JACK SLR SCHEMATIC CHART SCHEMATIC CHART JACK SLR SCHEMATIC CHART SCHEMATIC CHART SCHEM	Low Profile XLR 3 pole female receptacle with 1/4" switching stereo jack, Horizontal PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC9AHL BULK

AC SERIES CHASSIS CONNECTORS

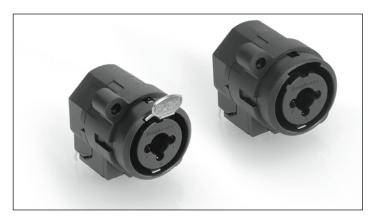
#### **THERMOPLASTIC C TYPE SERIES**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	98   78  96   18   25 3   996	275 (1082) 30/2/ 31/166 30/2/ 31/166 30/2	Low Profile XLR 3 pole female receptacle with 1/4" switching stereo jack, Vertical PCB mount, Bulk Pack	Latching	ACJC9AV BULK
		275 (1002) -275 (1002) -37 [ 146] Schematic chart JACK XR 30 0 30	Low Profile XLR 3 pole female receptacle with 1/4" switching stereo jack, Vertical PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC9AVL BULK
		SCHEMATIC CHART JACK XLR JACK XLR SCHEMATIC CHART JACK 03 01 01 01 04 04 04 04 04 04 04 04 04 04	Low Profile XLR 3 pole female receptacle with 1/4" switching stereo jack and switching ground contact, Horizontal PCB mount, Bulk Pack	Latching	ACJC10AH BULK
		SCHEMATIC CHART JACK XLR JACK XLR SCHEMATIC CHART JACK XLR SCHEMATIC CHART JACK CHART JACK CHART JACK CHART JACK CHART JACK CHART CON	Low Profile XLR 3 pole female receptacle with 1/4" switching stereo jack and switching ground contact, Horizontal PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC10AHL BULK
		275 (1082) 37 [ 146] SCHEMATIC CHART JACK 38 0 2 38 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Low Profile XLR 3 pole female receptacle with 1/4" switching stereo jack and switching ground contact, Vertical PCB mount, Bulk Pack	Latching	ACJC10AV BULK
	-19 80   78) 	275 [102] 304 - 37 [146] 304	Low Profile XLR 3 pole female receptacle with 1/4" switching stereo jack and switching ground contact, Vertical PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC10AVL BULK

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AC SERIES CHASSIS CONNECTORS

#### **C** - TYPE DUAL JACK / **XLR CONNECTORS**



#### Features:

- Two connectors in the one housing.
- Space saving design.
  Industry standard PCB footprint layout.
  Vertical or Horizontal PCB mounting.
- Bulk packed in trays, 100 to a box as standard.
  Positive latch lock system (XLR).

Part Number Breakdown: page 56 Specifications: page 58 PCB Footprints: page 57 Recommended Fastener: page 137

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
NO.		24 [.945"] - 10.6 [.417]] - SCHEMATIC CHART HACK NAR HACK NAR - 0 S - 0	XLR 3 pole female receptacle with 1/4" mono jack without switching contact, Horizontal PCB mount, Bulk Pack	Latching	ACJC5H BULK
RO		24 [.945"] SCHEMARE CHART 460 3.8 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	XLR 3 pole female receptacle with 1/4" mono jack without switching contact, Horizontal PCB mount, Bulk Pack	Non-latching, Reten- tion Spring	ACJC5HL BULK
RO		24 [340] -35 [397] -35 [397] -37 [276] -24 [340] -30 [1417] -30 SCHEMATIC CHART -30 SC	XLR 3 pole female receptacle with 1/4" mono jack without switching contact, Vertical PCB mount, Bulk Pack	Latching	ACJC5V BULK
80	27 [1.06.5] 20 [.787] (.187] (.187) (.187) (.187) (.187) (.187) (.187) (.187) (.187) (.187) (.187) (.187) (.187) (.187) (.187) (.197)	-24 [945] -35 [138] -35 [1	XLR 3 pole female receptacle with 1/4" mono jack without switching contact, Vertical PCB mount, Bulk Pack	Non-latching, Reten- tion Spring	ACJC5VL BULK
		24 [345 <sup>7</sup> ] [31 <sup>7</sup> ] SCHEMATIC CHART 4.5 [177 <sup>7</sup> ] 400 300 300 400 300 7 [276 <sup>7</sup> ] 000 7 [276 <sup>7</sup> ] 000 100	XLR 3 pole female receptacle with 1/4" mono jack without switching contact, Solder Contacts, Bulk Pack	Latching	ACJC5S BULK
	-27 [1:067] -20 [:797] 	24 [345 <sup>°</sup> ]	XLR 3 pole female receptacle with 1/4" mono jack without switching contact, Solder Contacts, Bulk Pack	Non-latching, Reten- tion Spring	ACJC5SL BULK

#### **THERMOPLASTIC C TYPE SERIES**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
S.C		24 [.945"] [.417] 350EMATIC CHART 405 X8 0 1 0 0 0 0	XLR 3 pole female receptacle with 1/4" stereo jack without switching contact, Horizontal PCB mount, Bulk Pack	Latching	ACJC6H BULK
30		-24 [945"] SCHEMATIC CHART 400 NR 0 2 0 1 0 0 7 [276"]	XLR 3 pole female receptacle with 1/4" stereo jack without switching contact, Horizontal PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC6HL BULK
80		-24 [945"] -3.5 [156"] -3.5 [1	XLR 3 pole female receptacle with 1/4" stereo jack without switching contact, Vertical PCB mount, Bulk Pack	Latching	ACJC6V BULK
RO		-24 [945] -3.5 [187] 	XLR 3 pole female receptacle with 1/4" stereo jack without switching contact, Vertical PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC6VL BULK
		-24 [.457] - 0.6 -45 [.177] - SCHEMATIC CHART -45 [.177] - 405 X8 -45 [.177] - 405 X8 - 0 5 0 2 - 0 7 0 6	XLR 3 pole female receptacle with 1/4" stereo jack without switching contact, Solder Contacts, Bulk Pack	Latching	ACJC6S BULK
80		-24 [945] -45 [177] -45 [1	XLR 3 pole female receptacle with 1/4" stereo jack without switching contact, Solder Contacts, Bulk Pack	Non-latching, Retention Spring	ACJC6SL BULK
			XLR 3 pole female receptacle with 1/4" switching stereo jack, Horizontal PCB mount, Bulk Pack	Latching	ACJC9H BULK
RO		-24 [945] -24 [945]	XLR 3 pole female receptacle with 1/4" switching stereo jack, Horizontal PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC9HL BULK

#### **THERMOPLASTIC C TYPE SERIES**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
RO	27 [105] 20 [207] 	7 (276)	XLR 3 pole female receptacle with 1/4" switching stereo jack, Vertical PCB mount, Bulk Pack	Latching	ACJC9V BULK
50	27 [1:063] (0 [394])	24 [345] 35 [198]	XLR 3 pole female receptacle with 1/4" switching stereo jack, Vertical PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC9VL BULK
		24 [945] → 10.6 4.5 [177] 417] 50:EMAIN: CHART 400 212 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	XLR 3 pole female receptacle with 1/4" switching stereo jack, Solder Contacts, Bulk Pack	Latching	ACJC9S BULK
		24 [1945] 45 [177] 50:EMAIL CHARI 400 XLR 0 0 0 1 0 0 0 1 0 1 7 [276]	XLR 3 pole female receptacle with 1/4" switching stereo jack, Solder Contacts, Bulk Pack	Non-latching, Retention Spring	ACJC9SL BULK
RO	22 (1005) (1005) (1006) (1006) (1006) (1007) (10	24 [945"] 10.6 1417] 402 348 342 348 348 348	XLR 3 pole female receptacle with 1/4" switching stereo jack and switching ground contact, Horizontal PCB mount, Bulk Pack	Latching	ACJC10H BULK
S.C	27 [1:063] -20 [7:07] -1.067] -1.077] -1.067		XLR 3 pole female receptacle with 1/4" switching stereo jack and switching ground contact, Horizontal PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC10HL BULK
80	27 [1083] -20 [787] -1 [508] -1 [	24 [9457] 10.6 5.5 [1397] 4177] 3010 01481 400 318 400 318 400 318 5010MATC 0HART 400 318 0 2 0 3 0 4 0 5 1 (137) 7 (	XLR 3 pole female receptacle with 1/4" switching stereo jack and switching ground contact, Vertical PCB mount, Bulk Pack	Latching	ACJC10V BULK
		24 [ 045'] 4.5 [ 177'] 50:EMAIL: CHART 4.5 [ 177'] 4.5 [ 177'] 50:EMAIL: CHART 4.5 [ 177'] 50:EMAIL: CHART 4.5 [ 177'] 50:EMAIL: CHART 4.5 [ 177'] 50:EMAIL: CHART 4.5 [ 177'] 50:EMAIL: CHART 50:EMAIL: CHART 50:EM	XLR 3 pole female receptacle with 1/4" switching stereo jack and switching ground contact, Vertical PCB mount, Bulk Pack	Non-latching, Retention Spring	ACJC10VL BULK

ENTERTAINMENT INTERCONNECT CATALOGUE - Amphenol Australia Pty Ltd Telephone 61 3 8796 8888 Fax 61 3 8796 8801

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#### THERMOPLASTIC C TYPE SERIES

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	-27 [1063] -20 [27] -00	24 [9497] 10.6 1.477] 5.5 [177] 10.6 1.477] 10.6 1.477	XLR 3 pole female receptacle with 1/4" switching stereo jack and switching ground contact, Solder Contacts, Bulk Pack	Latching	ACJC10S BULK
	27 [1.063 <sup>-</sup> ] -20 [.787 <sup>-</sup> ] -20 [.797 <sup>-</sup> ] -2	24 [945] 5.177] 50HEMATIC CHART 402 3.8 0 3 0 3 0 3 0 3 0 3 0 3 0 3 0 3	XLR 3 pole female receptacle with 1/4" switching stereo jack and switching ground contact, Solder Contacts, Bulk Pack	Non-latching, Retention Spring	ACJC10SL BULK
	e27 [1.079"]-	24 [945"] 10.6 4.5 [1777] [.417"] SCHEWATIC CHART 4.5 [.1777] J.117"] J.100 SCHEWATIC CHART J.100 SCHEWATIC CHART J.100	XLR 3 pole female receptacle with 1/4" jack, Solder Contacts, Overmoldable Connec- tor Housing	Latching and Non-latching options avaliable	ACJC9M BULK

### PART NUMBER BREAKDOWN AC SERIES THERMOPLASTIC C TYPE

#### E. G. ACJC5HL BULK

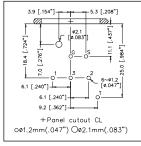
AC (Series Prefix), JC Jack/Connector XLR, 5 Mono, Horizontal Printed Circuit Board, Latchless, Bulk Packaged.

SERIES PREFIX	AC	=	Series Prefix
CONNECTOR TYPE	JC	=	Jack / Connector XLR
CONTACT OPTIONS	5	=	Mono, Non Switching, XLR Grounded
	6	=	Stereo, Non Switching, XLR Grounded
	9	=	Stereo, Switching, XLR Grounded
	10	=	Stereo, Switching, XLR with Ground Switch
HOUSING TYPE	Blank	=	Standard
	A M	=	Low Profile / High Density Overmold Housing
CONTACT TYPE	V	=	Vertical Printed Circuit Board
	Н	=	Horizontal Printed Circuit Board
	S	=	Solder Contacts
LOCKING	Blank	=	Latching
MECHANISM	L	=	Latchless
PACKAGING	Blank	=	Individual Bags
	BULK	=	Bulk Packed

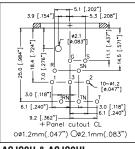
56

#### THERMOPLASTIC C TYPE SERIES

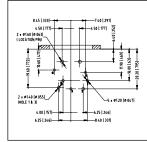
### **AC SERIES C TYPE SERIES**



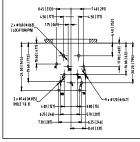
#### ACJC5H & ACJC5HL



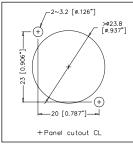
ACJC9H & ACJC9HL



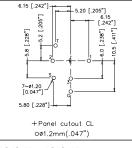
#### ACJC6AH & ACJC6AHL



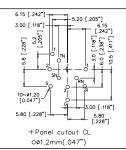
ACJC10AH & ACJC10AHL



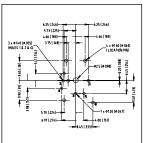




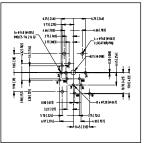
#### ACJC5V & ACJC5VL



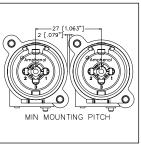




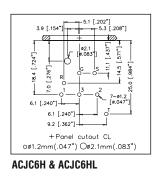
#### ACJC6AV & ACJC6AVL



#### ACJC10AV & ACJC10AVL



**C TYPE MOUNTING PITCH** 



02.1 .437

3

9.2 [.362"] + Panel cutout CL 0¢1.2mm(.047") Ø¢2.1mm(.083")

ACJC10H & ACJC10HL

4.00 ( 157

ACJC9AH & ACJC9AHL

7.30 | 28

80 | 15|

6.25 | 246| 6.40 | 331|

.208"]

14.5 [.571"] .581

11~ø1.2 [ø.047"]

[.118"] [.240"]

4.8

3.9 [.154"]

18.4 [.724"

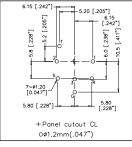
.276

0

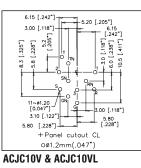
6.1 [.240"]-

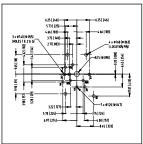
5.0 [.984"

2 x #1.60 |#.063

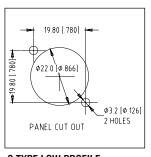


#### ACJC6V & ACJC6VL

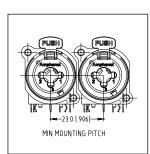




ACJC9AV & ACJC9AVL



**C TYPE LOW PROFILE** PANEL CUTOUT



**C TYPE LOW PROFILE** MOUNTING PITCH

### **STANDARD DATA C TYPE CHASSIS RECEPTACLES**

		VALUE				
		LOW PROFILE TYPE	STANDARD C TYPE			
GENERAL CHARACTERISTICS	Number of contacts	is 5, 6, 9 or 10				
CHARACTERISTICS	Termination	Printed Circuit Board (PCB)	Printed Circuit Board (PCB) or Solder Bucket			
	Flammability	UL S	94HB			
	Environmental	Complies with EU RoHS	2 Directive 2011/65/EU			
ELECTRICAL Characteristics	Service Voltage RMS	5	OV			
CHARACTERISTICS	Test Voltage AC RMS	15	00V			
	Current carrying capacity	7.	5A			
	Typical Contact Resistance	≤50	mΩ			
	Insulation Resistance (initial)	> 0.	5GΩ			
	Insulation Resistance (after damp heat test)	> 0.	2GΩ			
	Protection Class	IP	40			
CHARACTERISTICS	Operating Temperature	-25°C to +70°C				
MECHANICAL	Weight**	9.2g (0.02lb)	14g (0.030lb)			
CHARACTERISTICS	Retention Spring separating force	≥20N				
	Mounting Screw torque max.	1.5	.5Nm			
	Mechanical Operations	1500 ma	ting cycles			
	Fastening***	Self-Tapping PT screw with thread 2.9	x 1.06 and of Tri-rondular configuration			
MATERIALS	Connector Shell Shell Finish	PA6.6 + 30% glass fibre reinforced, UL94HB	PA6.6 + 20% glass fibre reinforced, UL94HB Black			
	Insulators	PA6.6 glass fibre reinforced, UL94HB	PA6.6 + 20% glass fibre reinforced, UL94HB			
	XLR Contact Material	Bronze				
	Plating	Gold over	Nickel plated			
	Jack Contact					
	Material	Bronze	Brass			
	Plating	Gold over Nickel plated	Silver over Copper plated			
	Latch lock and Spring	Nicke	el Plated			
	Ground element	Nickel Plated	Silver over Copper plated			

\*\*Approximate weight in grams not including packaging. Please contact us for exact weight for shipping purposes.

\*\*\*Refer to page 137

Rev 6 - 03/2013



The SP Series are available in 2 or 4 pole chassis mount connectors. The durable thermoplastic housings are fitted with high power contacts to ensure optimal current carrying capacity. Completely intermatable with industry standard loudspeaker connections.

The EP Series incorporates a rugged zinc diecast shell to give it maximum durability when used in demanding situations. The EP cable connector cable flex relief design minimises cable bend stress at point of entry into the connector housing.

The AP Series Shell is manufactured from tough, durable thermoplastic, and ideal for fixed indoor installations. Both the EP and AP Series utilise the same contact and insulator components.

#### **Features**

- High current contacts for distortion free signal.
- Tough, durable zinc diecast shell for the EP series.
- Cost effective durable thermoplastic shell for the AP and SP series.
- EP series available in 3, 4, 5, 6 and 8 contact arrangements
- AP series available in 4, 5, 6, and 8 contact arrangements.
- SP series available in 2 and 4 contact arrangements.
- SP Series with overmolded cable support boot or PG gland with or without cable support strain relief.

- EP series cable clamp capable of supporting cables from 9mm (0.35") to 16mm (0.63") in diameter.
- Quick release, vibration resistant latch lock.
- AP & EP series are completely intermatable.
   Options
- Solder termination / Tab or Printed Circuit Board versions, Screw Terminals (SP Series)
- Nickel Plated Zinc Alloy shell (EP/SP Series)
- Black finished Zinc Alloy shell (EP/SP Series)
- Precision machined contacts
- Thermoplastic shell (AP/SP Series)

#### **Ordering Codes**

We have listed the more common ordering codes in each section. Please contact us if you need any further assistance. EP / AP / SP SERIES

#### HIGH POWER / LOUDSPEAKER CONNECTORS

### SP/EP/AP SERIES HIGH POWER / LOUDSPEAKER CONNECTORS

### Simple steps to guide you in using this catalogue

- 1) Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- 3) Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use variations column to determine your choice.
- 6) Identify part number.
- In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.

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EP / AP / SP SERIES

#### **SP SERIES LOUDSPEAKER CONNECTORS**



Amphenol's range of loudspeaker connectors have been further enhanced with the introduction of the SP Series. Designed to complement the popular EP/AP Series, we now offer a range of loudspeaker connectors to suit most applications. SP Series chassis connectors are available in industry standard PCB footprints with solder tabs. SP Series cable plugs are available with screw or solder terminals.

#### Features:

- · Quick release, vibration resistant latch lock
- 2 or 4 pole
- Solder tabs, PCB Contacts, Solder or Screw Terminals
  Chuck type or PG Gland cable clamp
  Various mounting hole options

- 30A Current rating
  Thermoplastic or Metal housing (Cable Plugs)
- Industry standard mating

Part Number Breakdown: page 72 Specifications: page 75 PCB Footprints: page 74

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	CONTACT Type	SHELL Colour	PART NUMBER
			2 pole, Cable connector, Thermoplastic shell,	Screw	Black	SP-2-F
	φ <sup>28</sup>		Blue sleeve	Solder	Black	SP-2-FS
		111	2 pole, Cable connector, Thermoplastic shell,	Screw	Black	SP-2-FG
	928  109°		Blue sleeve, PG Gland	Solder	Black	SP-2-FSG
Com	179	179	2 pole, Cable connector, Thermoplastic shell,	Screw	Black	SP-2-FL
MARIE CO			Blue sleeve, PG Gland strain relief	Solder	Black	SP-2-FSL
		87	2 pole, Cable connector, Metal shell, Blue sleeve	Screw	Nickel	SP-2-FN
				Solder	Nickel	SP-2-FNS
			Screw	Black	SP-2-FB	
				Solder	Black	SP-2-FBS
	1-	111 [4.36"]	2 pole, Cable connector, Metal shell, Blue sleeve,	Screw	Nickel	SP-2-FNG
The second secon			PG Gland	Solder	Nickel	SP-2-FNSG
	¢28 [109"]			Screw	Black	SP-2-FBG
				Solder	Black	SP-2-FBSG
(m)		179	2 pole, Cable connector, Metal shell, Blue sleeve,	Screw	Nickel	SP-2-FNL
Mall Com			PG Gland strain relief	Solder	Nickel	SP-2-FNSL
ALL A				Screw	Black	SP-2-FBL
				Solder	Black	SP-2-FBSL

EP / AP / SP SERIES

#### **SP LOUDSPEAKER CONNECTORS**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	CONTACT Type	SHELL Colour	PART NUMBER
		4 pole, Cable connector, Thermoplastic black	Screw	Black	SP-4-F	
	¢28		shell, Blue sleeve	Solder	Black	SP-4-FS
		111	4 pole, Cable connector, Thermoplastic black	Screw	Black	SP-4-FG
	¢28		shell, Blue sleeve, PG Gland	Solder	Black	SP-4-FSG
(h)			4 pole, Cable connector, Thermoplastic black	Screw	Black	SP-4-FL
SALAN CONTRACTOR			shell, Blue sleeve, PG Gland strain relief	Solder	Black	SP-4-FSL
	87	4 pole, Cable connector, Metal shell, Blue sleeve	Screw	Nickel	SP-4-FN	
		[5.43]	Ivietal Stiell, Dide Sleeve	Solder	Nickel	SP-4-FNS
A PA			Screw	Black	SP-4-FB	
	¢2			Solder	Black	SP-4-FBS
		111	4 pole, Cable connector, Metal shell, Blue sleeve,	Screw	Nickel	SP-4-FNG
		111 [4.36"]	PG Gland	Solder	Nickel	SP-4-FNSG
	¢28			Screw	Black	SP-4-FBG
			Solder	Black	SP-4-FBSG	
		170	4 pole, Cable connector, Metal shell, Blue sleeve,	Screw	Nickel	SP-4-FNL
A CONTRACTOR OF THE OWNER OWNE OWNER	179 [7.06"]	17.06"	PG Gland strain relief	Solder	Nickel	SP-4-FNSL
	* 11011 11011			Screw	Black	SP-4-FBL
				Solder	Black	SP-4-FBSL

#### **SP LOUDSPEAKER CONNECTORS**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
6		232 (1)10'1 (1)10'1 (0)169'1 (0)17'1 (0)17'1 (0)169'1 (0)169'1 (0)169'1 (0)17'1 (0)169'1 (0)17'1 (0)169'1 (0)17'1 (0)169'1 (0)17'1 (0)169'1	2 pole, D flange, Thru holes, Solder tabs 3/16"	Black	SP-2-MD
16		25 (009er) (0177)	2 pole, D flange, Thru holes, Horizontal PCB	Black	SP-2-MDH
<b>60.</b>		25 (0098') + 45 (0017')	2 pole, D flange, Thru holes, Vertical PCB	Black	SP-2-MDV
6		282 (1.10°) (1.10°) (0.69°) (0.69°) (0.69°) (0.69°)	4 pole, D flange, Thru holes, Solder tabs 3/16"	Black	SP-4-MD
6		282 (L11') (L11') (L11') (L11') (L10'	4 pole, D flange, Thru holes, Solder tabs 3/16"	Grey	SP-4-MD-8
10		2.5. (0098')	4 pole, D flange, Self Tapping holes, Solder tabs 3/16"	Black	SP-4-MDT
10		25 (0098') (0177')	4 pole, D flange, Thru holes, Horizontal PCB	Black	SP-4-MDH
			4 pole, D flange, Self Tapping holes, Horizontal PCB	Grey	SP-4-MDHT-8

#### **SP LOUDSPEAKER CONNECTORS**

PRODUCT - FIGURE		DESCRIPTION	VARIATIONS	PART NUMBER
10	260 (1024') (1	4 pole, D flange, Self Tapping holes, Horizontal PCB	Black	SP-4-MDHT
6	260 (1024') (1	4 pole, D flange, Thru holes, Vertical PCB	Black	SP-4-MDV
(0.	260 (1043') (1043') (1043') (1043') (1043') (1043') (1043') (1043') (10136'	4 pole, D flange, Thru holes, Vertical PCB	Red	SP-4-MDV-2
0	260 (1024'] (1	4 pole, D flange, Self Tapping holes, Vertical PCB	Grey	SP-4-MDVT-8
.0.	508 (86') 4.38 (80') 4.38 (8	4 pole, EP flange, Thru holes, Solder tabs 3/16"	Black	SP-4-MC

EP / AP / SP SERIES

## Amphenol

#### **SP LOUDSPEAKER CONNECTORS**

### PART NUMBER BREAKDOWN

SP SERIES - CABLE CONNECTORS

						PREFIX	PRENT	SREEN TLANDUS	WEEK TLANDIS	offert TLATON'S INST	offerst Turouts anist allow	SHISPHER DATA SHITPH SHITPHER BASS	SERIES REIN ROUTS SHELFINSH BRASHLING
					strif SP	SP -	SP - 4 -	sentes' contract genetic	SP - 4 - F	SP - 4 - F N S	SP - 4 - F N S	SP - 4 - F N S G	SP - 4 - F N S G -
E. G . <b>SP-4-FNSG</b> <b>SP</b> (Series Prefix), <b>S</b> (Solder Terminal:	4 contacts, F ( s), G (PG Glan	(Cable Conn id)	ector), N (Metal Shell Nickel Finish),										
SERIES PREFIX	SP	=	Series Prefix	 ] –		]							
CONTACT LAYOUT	2	=	2 Contacts	_									
	4	=	4 Contacts										
GENDER	F	=	Cable Connector	_									
SHELL FINISH	Blank	=	Thermoplastic - Black	_									
	Ν	=	Metal - Nickel Finish										
	В	=	Metal - Black Finish										
TERMINATION	Blank	=	Screw Terminals	_									
	S	=	Solder Terminals										
BACKSHELL TYPE	Blank	=	Standard	_									
	G	=	PG Gland										
	L	=	PG Gland Strain Relief										
PACKAGING BACK- Shell Colour	1	=	Brown	_									
001001	2	=	Red										
	3	=	Orange										
	4	=	Yellow										
	5	=	Green										
	6	=	Blue										
	7	=	Violet										
	8 9	=	Grey White										
PACKAGING	Blank		Individual Bags										
, nonandina	B	=	Bulk Packed										
	D	=	BUIK PACKEU										

EP / AP / SP SERIES

## Amphenol

#### **SP LOUDSPEAKER CONNECTORS**

### PART NUMBER BREAKDOWN

SP SERIES - CHASSIS CONNECTORS

E. G . SP-4-MDHT-8B SP (Series Prefix),4	contacts, M(	Chassis Con	nector), D (D Shell), Horizontal Printed
Circuit Board, Self 1	Tapping mour	nting holes -	8 (Grey), Bulk Packaged.
SERIES PREFIX	SP	=	Series Prefix
CONTACT LAYOUT	2	=	2 Contacts
	4	=	4 Contacts
GENDER	М	=	Chassis Connector
SHELL STYLE	D	=	Standard 'D' Type flange
	С	=	EP Series Circular flange
TERMINATION	Blank	=	Solder tabs - 3/16" terminals
	V	=	Vertical Printed Circuit Board
	Н	=	Horizontal Printed Circuit Board
MOUNTING HOLE	Blank	=	Thru Hole
	т	=	Self Tapping
SHELL COLOUR	Blank	=	Black
	2	=	Red
	8	=	Grey
PACKAGING	Blank	=	Individual Bags
	В	=	Bulk Packed

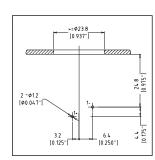
#### EP / AP / SP SERIES

#### **SP LOUDSPEAKER CONNECTORS**

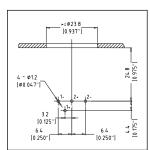
## Amphenol

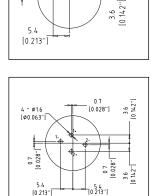
### **SP SERIES**

SP-2-MDH



SP-4-MDH SP-4-MDHT-8 SP-4-MDHT





0.7 [0.028"]

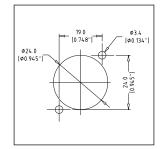
2 ~ Ø1.6 [Ø0.063"]

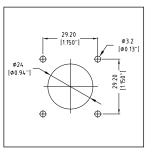
0.7 [0.028"] SP-2-MDV

SP-4-MDV SP-4-MDV-2 SP-4-MDVT-8

#### **SP SERIES PANEL CUTOUT**

SP-2-MD\*\*\_\* SP-4-MD\*\*\_\*





SP-4-MC

**SP LOUDSPEAKER CONNECTORS** 

### **STANDARD DATA SP SERIES CONNECTORS**

umber of contacts ermination (Chassis) ermination (Cable Plugs) ammability nvironmental ervice Voltage RMS est Voltage AC RMS urrent carrying capacity ypical Contact Resistance sulation Resistance (initial) sulation Resistance (after damp heat test) rotection Class perating Temperature feight** - Chassis Connectors	2 or 4 Printed Circuit Board (PCB) or Solder Tabs 3/16" Screw or Solder Terminals UL94HB Complies with EU RoHS 2 Directive 2011/65/EU 133V <sup>1)</sup> 1500V 30A ≤3mΩ ≥2GΩ ≥1GΩ IP54 -25°C to +75°C (-13°F to +167°F)				
ermination (Cable Plugs) ammability nvironmental ervice Voltage RMS est Voltage AC RMS urrent carrying capacity ypical Contact Resistance sulation Resistance (initial) sulation Resistance (after damp heat test) rotection Class perating Temperature (eight** - Chassis Connectors	Screw or Solder TerminalsUL94HBComplies with EU RoHS 2 Directive 2011/65/EU $133V^{10}$ $1500V$ $30A$ $\leq 3m\Omega$ $\geq 2G\Omega$ $\geq 1G\Omega$ IP54				
ammability nvironmental ervice Voltage RMS est Voltage AC RMS urrent carrying capacity ypical Contact Resistance sulation Resistance (initial) sulation Resistance (after damp heat test) rotection Class perating Temperature /eight** - Chassis Connectors	UL94HBComplies with EU RoHS 2 Directive 2011/65/EU $133V^{1)}$ $133V^{1)}$ $1500V$ $30A$ $30A$ $\leq 3m\Omega$ $\geq 2G\Omega$ $\geq 1G\Omega$ IP54				
nvironmental ervice Voltage RMS est Voltage AC RMS urrent carrying capacity ypical Contact Resistance sulation Resistance (initial) sulation Resistance (after damp heat test) rotection Class perating Temperature /eight** - Chassis Connectors	Complies with EU RoHS 2 Directive 2011/65/EU $133V^{11}$ $1500V$ $30A$ $\leq 3m\Omega$ $\geq 2G\Omega$ $\geq 1G\Omega$ IP54				
ervice Voltage RMS est Voltage AC RMS urrent carrying capacity ypical Contact Resistance sulation Resistance (initial) sulation Resistance (after damp heat test) rotection Class perating Temperature leight** - Chassis Connectors	133V <sup>1)</sup> 1500V         30A         ≤3mΩ         ≥2GΩ         ≥1GΩ         IP54				
est Voltage AC RMS urrent carrying capacity /pical Contact Resistance sulation Resistance (initial) sulation Resistance (after damp heat test) rotection Class perating Temperature /eight** - Chassis Connectors	1500V         30A         ≤3mΩ         ≥2GΩ         ≥1GΩ         IP54				
urrent carrying capacity ypical Contact Resistance sulation Resistance (initial) sulation Resistance (after damp heat test) rotection Class perating Temperature /eight** - Chassis Connectors	30A ≤3mΩ ≥2GΩ ≥1GΩ IP54				
ypical Contact Resistance sulation Resistance (initial) sulation Resistance (after damp heat test) rotection Class perating Temperature leight** - Chassis Connectors	≤3mΩ ≥2GΩ ≥1GΩ IP54				
sulation Resistance (initial) sulation Resistance (after damp heat test) rotection Class perating Temperature /eight** - Chassis Connectors	≥2GΩ ≥1GΩ IP54				
sulation Resistance (after damp heat test) rotection Class perating Temperature leight** - Chassis Connectors	≥1GΩ IP54				
rotection Class perating Temperature /eight** - Chassis Connectors	IP54				
perating Temperature /eight** - Chassis Connectors					
/eight** - Chassis Connectors	-25°C to +75°C (-13°F to +167°F)				
•					
loight** Coble Dlug	12g (0.026lb)				
/eight** - Cable Plug Thermoplastic Metal	44g (0.097lb) 65g (0.143lb)				
'eight** - Cable Plug PG Thermoplastic Metal	44g (0.097lb) 65g (0.143lb)				
/eight** - Cable Plug PG S/Relief Thermoplastic Metal	68g (0.150lb) 89g (0.196lb)				
vpical Cable retention force	200N (Subject to cable material and O.D.)				
able O.D range Chuck Clamp PG16 Gland PG16 Gland S/Relief	2 pole4 pole5-10mm (0.19" - 0.39")9-14mm (0.35" - 0.55")6-12mm (0.23" - 0.47")8-14mm (0.31" - 0.55")9-14mm (0.35" - 0.55")9-14mm (0.35" - 0.55")				
echanical Operations	5000				
astening (Chassis Self Tapping)	M3 screw				
onnector Shell / Finish Chassis Cable Plug Thermoplastic Cable Plug Metal	PA66 GF20 / Black PA66 GF30 / Black Diecast Zinc Alloy / Nickel or Black				
sulators Chassis Cable Plugs	PA66 GF20 PA66 GF30				
able Boot / Backshell	Santoprene / PA6 GF 15				
able Clamp (Chuck)	P.0.M				
able Clamp (PG)	Polyemide / EPDM				
eeve	PBT				
ontact Chassis	Phosphor Bronze / Silver Brass / Silver				
M /eihal	etal ight** - Cable Plug PG S/Relief nermoplastic etal ical Cable retention force ble O.D range nuck Clamp G16 Gland G16 Gland S/Relief chanical Operations tening (Chassis Self Tapping) nector Shell / Finish nassis able Plug Thermoplastic able Plug Metal ulators nassis able Plugs ble Boot / Backshell ble Clamp (Chuck) ble Clamp (PG) eve				

<sup>1)</sup>Not suitable for domestic applications above 50V

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#### **EP METAL TYPE - SOLDER**



The EP Series has set the standard in high performance speaker connectors. Apart from its durability and strength, it offers consistent superior power handling capabilities.

#### Features:

- Solder Bucket connections.
- Precision machined contacts.
- Diecast Metal Housings
- High current contacts
- Male and female cable and chassis connectors available.

### Options: Black Finish Shell Panel Cutouts: page 80

#### Specifications: page 79

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
			EP Male cable connector,	3 pole nickel finish	EP-3-12
		TONEHJWV	Machined contacts, Metal Shell	3 pole black finish	EP-3-12B
		64.0 [2.521"]———		4 pole nickel finish	EP-4-12
	85.5	[3.366"]		4 pole black finish	EP-4-12B
		TOR	CLAMP [BUSHING	5 pole nickel finish	EP-5-12
	PIN INSUL	ATOR	TD	5 pole black finish	EP-5-12B
ISO ASSEMBLY OF				6 pole nickel finish	EP-6-12
EP MALE				6 pole black finish	EP-6-12B
				8 pole nickel finish	EP-8-12
				8 pole black finish	EP-8-12B
			EP Female cable connector,	3 pole nickel finish	EP-3-11P
		001132*1 028.88	Machined contacts, Metal Shell	3 pole black finish	EP-3-11PB
		-66.8 [2.63*]		4 pole nickel finish	EP-4-11P
and an	88.0	) [3.465*] — 🛶		4 pole black finish	EP-4-11PB
				5 pole nickel finish	EP-5-11P
	PIN INSU	PIN INSULATOR SHELL	AMP - BUSHING	5 pole black finish	EP-5-11PB
ISO ASSEMBLY OF EP FEMALE	a fort			6 pole nickel finish	EP-6-11P
	( da barren de la companya de la company		6 pole black finish	EP-6-11PB	
				8 pole nickel finish	EP-8-11P
				8 pole black finish	EP-8-11PB

(EP)

**EP METAL TYPE - SOLDER** 

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
			EP Male chassis mount, Round Flange, Machined contacts, Metal Shell	3 pole nickel finish	EP-3-14
				3 pole black finish	EP-3-14B
				4 pole nickel finish	EP-4-14
0 mar				4 pole black finish	EP-4-14B
	ø50.8 [ø2"]	⊶ 31.8 [1.252"]→		5 pole nickel finish	EP-5-14
				5 pole black finish	EP-5-14B
				6 pole nickel finish	EP-6-14
				6 pole black finish	EP-6-14B
				8 pole nickel finish	EP-8-14
				8 pole black finish	EP-8-14B
2		₩ <del>~~~</del> 7.5 [.295*]	EP Female chassis mount, Round Flange,	3 pole nickel finish	EP-3-13P
10			Machined contacts, Metal Shell	3 pole black finish	EP-3-13PB
(; .)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			4 pole nickel finish	EP-4-13P
				4 pole black finish	EP-4-13PB
				5 pole nickel finish	EP-5-13P
				5 pole black finish	EP-5-13PB
				6 pole nickel finish	EP-6-13P
				6 pole black finish	EP-6-13PB
				8 pole nickel finish	EP-8-13P
				8 pole black finish	EP-8-13PB

#### **AP THERMOPLASTIC TYPE - SOLDER**



The AP Series provides the same power handling performance as the EP Series in a cost effective, yet durable Thermoplastic housing.

#### Features:

- Solder Bucket connections.
- Precision machined contacts.
- Thermoplastic Housings
- High current contacts
- Male & Female Cable and Chassis connectors available.

Specifications: page 79

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
		● < 28.8 [1.135′]	AP Male cable	4 pole	AP-4-12
			connector, Machined contacts,	5 pole	AP-5-12
			Thermoplastic Black shell.	6 pole	AP-6-12
	↓ 100.0 [3.937"]-	~		8 pole	AP-8-12
			AP Female cable connector,	4 pole	AP-4-11
CB CB		ø28.8 [1.1,32*]	Machined contacts, Thermoplastic	5 pole	AP-5-11
			Black shell.	6 pole	AP-6-11
	98.7 [3.886*]—	e		8 pole	AP-8-11
			[.244"]	4 pole	AP-4-14
		1 9 1 1 1 1 1 1 1 1 1 1 1 1 1		5 pole	AP-5-14
				6 pole	AP-6-14
				8 pole	AP-8-14
		-7.5 [.295'] [.925'] [	AP Female chassis mount, Round Flange, Machined contacts, Thermoplastic Black shell.	4 pole	AP-4-13
				5 pole	AP-5-13
				6 pole	AP-6-13
	450.8 [42 <sup>+</sup> ]	2.8 [.11"] 	DIACK SHEII.	8 pole	AP-8-13
		2.8 [.117] 	AP Male chassis mount,	4 pole	AP-4-22
100			Rectangular Flange, Machined contacts, Thermoplastic Black shell.	5 pole	AP-5-22
				6 pole	AP-6-22
- unique				8 pole	AP-8-22
		7.5 (395') (905') (9	AP Female chassis mount, Rectangular Flange, Machined contacts, Thermoplastic Black shell.	4 pole	AP-4-21
	0 0 0 29.2 [1.146] -			5 pole	AP-5-21
				6 pole	AP-6-21
The sector	- 29.2 [1.148 <sup>*</sup> ]	2.8 [.11"] 6.2 [.244"] 		8 pole	AP-8-21

Panel Cutouts: page 80

**STANDARD DATA** 

### **STANDARD DATA EP/AP**

				VALUE				
GENERAL	Number of contacts	3	4	5	6	8		
CHARACTERISTICS	Contact Arrangements (Front view of pin insert)		$ \begin{array}{c} 1 & 4 \\ 2 & 3 \\ \bullet & \bullet \end{array} $					
	Termination			SOLDER				
	Wire Gauge - Stranded wire:	12AWG	12AWG	12AWG	12AWG	14AWG		
	Flammability			UL94V-0				
	Environmental		Complies with	EU RoHS 2 Directiv	ve 2011/65/EU			
ELECTRICAL Characteristics	Service Voltage RMS <sup>1)</sup>	460V	660V	200V	200V	100V		
	Test Voltage AC RMS	2400V	3000V	1600V	1600V	1300V		
	Current carrying capacity	20A	20A	20A	20A	15A		
-	Typicial Contact Resistance	≤3mΩ						
	Insulation Resistance			≥1000MΩ				
CLIMATIC	Protection Class			IP40				
CHARACTERISTICS	Operating Temperature		-25°C to	) +75°C (-13°F to	+167°F)			
MECHANICAL	Weight - EP 11 & 12 <sup>2)</sup>	80g	84g	86g	86g	86g		
CHARACTERISTICS		(0.176lb)	(0.185lb)	(0.189lb)	(0.189lb)	(0.189lb)		
	Weight - EP 13 & 14 <sup>2)</sup>	48g	50g	54g	54g	54g		
		(0.105lb)	(0.110lb)	(0.119lb)	(0.119lb)	(0.119lb)		
	Weight - AP 11 & 12 <sup>2)</sup>	N/A	42g	44g	44g	44g		
			(0.092lb)	(0.097lb)	(0.097lb)	(0.097lb)		
	Weight - AP 13, 14, 21 & 22 <sup>2)</sup>	N/A	26g	30g	30g	28g		
			(0.057lb)	(0.066lb)	(0.066lb)	(0.061lb)		
	Typical Cable retention force	22Kg to	44Kg (50lb to 100l	lb) - Dependant on	cable material and	diameter		
	Mechanical operations			1000 mating cycles	S			

 $^{\scriptscriptstyle 1)}$  Not suitable for domestic applications above 50V

Rev 3 - 03/2013

<sup>2)</sup> Approximate weight only, does not include packaging. Please contact us for exact weight for shipping purposes.

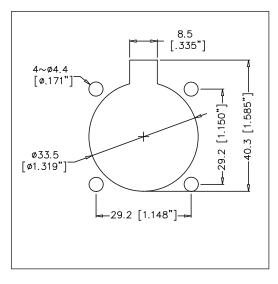
**STANDARD DATA** 

### STANDARD DATA EP/AP (CONT'D)

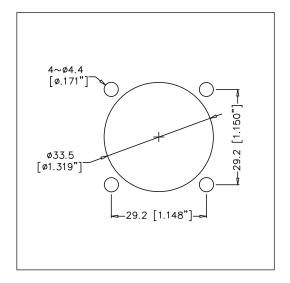
		DET	AILS
MATERIALS	ТҮРЕ	AP	EP
	Connector shell	Modified PPE Resin	Diecast Zinc Alloy
	Shell finish	Black	Satin Nickel or Black
	Insulators	UL94V-0	PBT Resin
	Cable Bushing	Silicon Rubber	UL94 HB Thermoplastic Elastomer
	Male contact Machined - Solder		
	Material / Plating	Brass / E	Bright Tin
	Female contact Machined - Solder		
	Material / Plating	Brass / I	Bright Tin
	Cable OD Range	11mm to 17mm	9mm to 16mm
CHARACTERISTICS		(0.43" to 0.67")	(0.35" to 0.63")
	Retention Method	Two opposing plastic screws	Metal saddle clamp

### **EP/AP SERIES PANEL CUTOUT DATA - FRONT VIEW**

#### EP 13/AP 13/AP 21



EP 14/AP 14/AP 22



XLRnet CABLE CONNECTORS

METAL SHELL TYPE



### **XLRnet SERIES**

- Features/Benefits:
- XLR RJ45 Cable plug housing.
- $\bullet$  Designed for pre-assembled RJ45 cables.
- Quick and simple installation.
- Cost effective method for harsh environments.
- No cabling in field required.
- No tools required for installation.
- Available in Nickel or Black housings.
- Coloured boots / Backshells

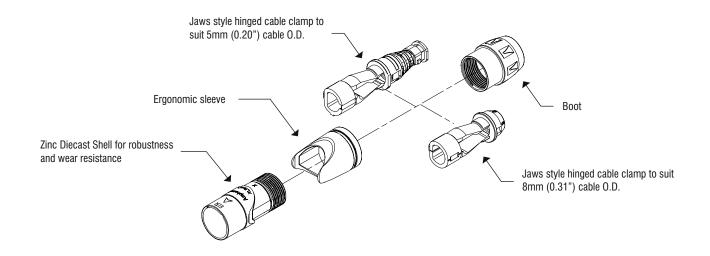
#### Specifications: page 82 Part Number Breakdown : page 82

NOTE\*RJ45 preassembled cable sold separately and is not included with the XLRnet connector.

Assembly Instructions: page 83

**PRODUCT - FIGURE** DRAWING DESCRIPTION VARIATIONS PART NUMBER Dimensions in mm (inches) 84 XLRnet, XLR cable Standard RJX8M [3.31"] plug housing to suit RJX8M BULK **Bulk Pack** preassembled RJ45 cables, Nickel Finish 81 921  $\Box \triangleleft$  $\leq$ RJX8MB XLRnet, XLR cable Standard 84 [3.31"] plug housing to suit RJX8MB BULK **Bulk Pack** preassembled RJ45 cables, Black Finish  $\leq$ 81" ø21  $\Box \triangleleft$  $\leq$ 

### **ISO VIEW OF RJX8M**



**METAL SHELL TYPE** 

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### PART NUMBER BREAKDOWN

**XLRnet SERIES** 

. G . RJX8MB BULK RJX (Series Prefix), Bulk Packaged	8 contacts, M	(Cable Con	nector), B (Black Finish),
ERIES PREFIX	RJX	=	Series Prefix
ONTACT LAYOUT	8	=	RJ45 Cable Housing
ENDER	М	=	Male Cable Plug
SHELL FINISH	Blank	=	Nickel Plated Finish
	В	=	Metal - Black Finish
PACKAGING	Blank	=	Individual Bags
	BULK	=	Bulk Packed

### **STANDARD DATA XLRnet SERIES**

		VALUE		
GENERAL	Termination	Preassembled RJ45 Cable (Not supplied)		
CHARACTERISTICS	Environmental	Complies with EU RoHS 2 Directive 2011/65/EU		
CLIMATIC	Protection Class	IP40		
CHARACTERISTICS	Operating Temperature	-25°C to +75°C (-13°F to -167°F)		
MECHANICAL	Insertion and Withdrawal force	≥10N - ≤20N		
CHARACTERISTICS	Weight <sup>2</sup> )	26g (0.057lb)		
	Cable O.D. range	5 or 8mm (0.20" or 0.31")		
	Mechanical Operations	1000 mating cycles		
MATERIALS	Connector shell - Metal Shell finish	Diecast Zinc Alloy Satin nickel or Black		
	Boot / Backshell Finish	UL94V-0 Noryl N190 / Valox Black		
	Cable clamp	PA6		
	Sleeve	Valox		

<sup>2)</sup> Approximate weight only, does not include packaging. Please contact us for exact weight for shipping purposes.

XLRnet CABLE CONNECTORS

**SERIES CABLE** 

**INSTRUCTIONS** 

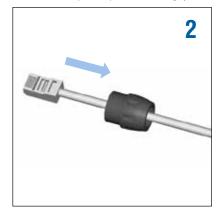
**ASSEMBLY** 

**XLRnet** 

### **ASSEMBLY INSTRUCTIONS**

# 1 "SNAP"

Snap or cut off release tab of the RJ45 plug. Failure to remove the RJ45's Release Tab will make the XLRnet assembly permanently latching. The XLRnet series has an independent panel side latching system.



Slide the nut (backshell) onto the cable.



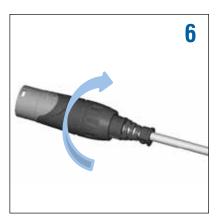
Install the cable clamp-boot.



Close clamp-boot, fasten the two tabs together to lock.



Push clamp-boot & cable together into the shell



Thread the nut (backshell) onto the shell (torque 0.8nM-1.2nM) to close the connector assembly.



XLRnet was designed in conjunction with the Amphenol Data / Telecom product group of Amphenol Canada Corp., a subsidiary of Amphenol Corporation. Utilising our combined expertise and knowledge of the professional audio and high-speed data markets we are proud to offer the XLRnet series. Featuring Class D or CAT 5E performance in A or B type housings with integrated LED's and complete shielding options we have your high-speed data requirements covered.

### Features

- Class D or CAT 5E ethernet performance
- A or B type chassis housings
- · Shielded or non-shielded
- · LED indicators in a variety of colours.
- Compact design
- · Cable plug housings
- Quick and simple installation

### **Options**

- Horizontal PCB contacts
- Bulk Packaging
- LED colour Red, Green, Yellow or Blue combinations

#### **Ordering Codes**

We have listed the more common ordering codes in each section. Please contact us if you need any further assistance.

### XLRnet CONNECTORS

### Simple steps to guide you in using this catalogue

- 1) Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- 3) Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use variations column to determine your choice.
- 6) Identify part number.
- In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.



#### Features:

- RJ45 Class D or CAT 5e performance
- A or B type chassis housings
- · Shielded or non-shielded
- LED indicators in a variety of colours.
- Horizontal PCB
- Mates with XLRnet cable plugs or standard RJ45 plug.

Part Number Breakdown: Page 86 Specifications: Page 88 PCB Footprints: Page 87 Recommended Fastener: Page 134

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	PACK		D* /RHD	PART NUMBER
50			XLRnet chassis, Class D, A type, Horizontal PCB	Bulk Pack	-	-	RJX8FA3HB
			XLRnet chassis CAT 5e, B type, Horizontal PCB	Bulk Pack	-	-	RJX8FB5HB
ALL OF	19.80 2.7	<mark>-≖</mark> _19.7 — <del>■1</del>	XLRnet chassis,		R	G	RJX8FB5HRGB
			CAT 5e, B type, LEDs, Horizontal PCB,		R	Y	RJX8FB5HRYB
		Bulk packed	Bulk Pack	R	R	RJX8FB5HRRB	
	17.2 18				G	R	RJX8FB5HGRB
					G	Y	RJX8FB5HGYB
		·			U	U	RJX8FB5HUUB
			XLRnet chassis, CAT 5e, B type, Shielded Hood, Horizontal PCB, Bulk packed	Bulk Pack	-	-	RJX8FB5HEB
	19.8		XLRnet chassis,		R	G	RJX8FB5HRGEB
17			CAT 5e, B type, Shielded Hood,		R	Y	RJX8FB5HRYEB
			LEDs, Horizontal PCB, Bulk packed	Bulk Pack	R	R	RJX8FB5HRREB
			Бик раскей	DUIK PACK	G	R	RJX8FB5HGREB
		╙╼┉┉┉┉┉┉			G	Y	RJX8FB5HGYEB
2 X 347		1			U	U	RJX8FB5HUUEB

\*Note: LED colours are denoted left to right from the panel side front view. Refer page 87 R = Red, G = Green, Y = Yellow, U = Blue

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A AND B TYPE FLANGE

### PART NUMBER BREAKDOWN

XLRnet A AND B TYPE

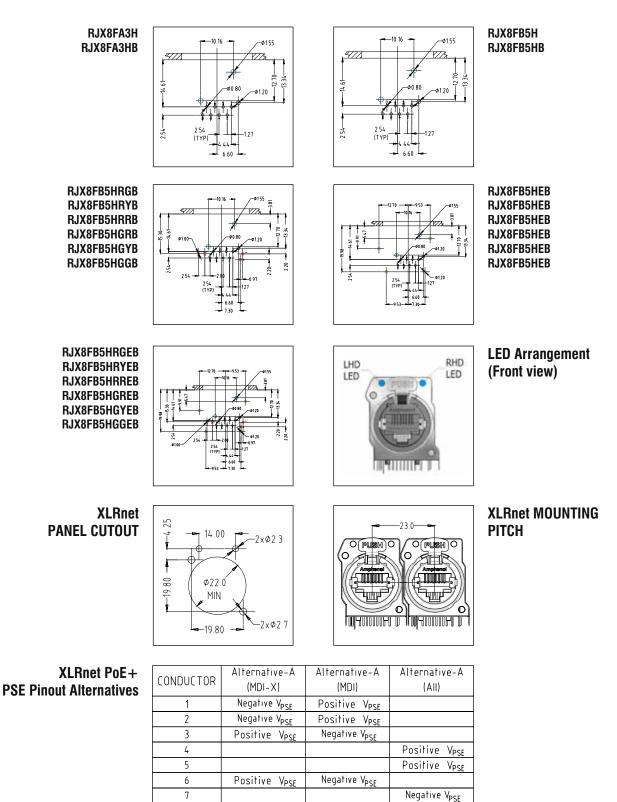
E. G . RJX8FB5HLRREB RJX (Series Prefix), 8 Red - Red LEDs, EMI	G (Contacts), / RFI Hood,	Female <b>B</b> ty <b>Bulk</b> Packag	pe, Horizontal, Latchless, ed.
SERIES PREFIX	RJX	=	Series Prefix
CONTACT LAYOUT	8	=	RJ45 type
GENDER	F	=	Receptacle housing
SHELL SERIES	Α	=	А Туре
	В	=	В Туре
TRANSMISSION	3	=	Class D
CLASS	5	=	CAT 5e
TERMINATION	Н	=	Horizontal Printed Circuit Board
LOCKING	Blank	=	Latching
MECHANISM	L	=	Latchless
LED COLOUR	Blank	=	No LEDs
SEQUENCE*	RG	=	Red / Green
	RY	=	Red / Yellow
	RR	=	Red / Red
	GR	=	Green / Red
	GY	=	Green / Yellow
	GG	=	Green / Green
	YR	=	Yellow / Red
	YY	=	Yellow / Yellow
	YG	=	Yellow / Green
	UU	=	Blue / Blue
EMI / RFI Shielding Hood	Blank	=	No shield hood
	E	=	EMI / RFI shield hood
PACKAGING	Blank	=	Individual
	В	=	Bulk packed

\*Note: LED colours are denoted left to right from the panel side front view. Refer page 87

m

#### A AND B TYPE FLANGE

### **XLRNET A AND B TYPE SERIES**



8

Negative V<sub>PSE</sub>

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www.amphenolaudio.com

### **STANDARD DATA XLRnet CHASSIS RECEPTACLES**

		VALUE - Class D	VALUE - CAT 5e				
GENERAL	Number of contacts	8					
CHARACTERISTICS	Contact Arrangement	RJ45	5				
	Termination	Printed Circuit Board (P	PCB) - through hole				
	Flammability	UL94V-0					
	Environmental	Complies with EU RoHS 2	Directive 2011/65/EU				
	Solderability	MIL-STD 202, N	Aethod 208				
ELECTRICAL	Rated current per contact	1.5 A	4				
CHARACTERISTICS	Rated Voltage	125V /	AC				
	Typical Contact Resistance	20ms	2				
	Insulation Resistance	> 500M	MΩ				
	Dielectric Strength	1000 VAC, (	60 secs				
	Frequency Bandwidth	1 - 100Mhz	1 - 250Mhz				
	Transmission Specification / Class	10/100 Base-T	1000 Base-T				
	PoE+	802.3at T	ype 2				
	LED Type	Round, single po	ole, indicator				
CLIMATIC	Protection Class	IP40 (with EMI/	(RFI shield)				
CHARACTERISTICS	Operating Temperature	-40°C to +	⊦85°C				
MECHANICAL Characteristics	Weight** - A & B Housing - Shielded Housing	11g (0.02 17g (0.02					
	Mechanical Operations	1000	)				
	Insertion and Withdrawal Force	≤ 211	N				
	Latch	Spring S	iteel				
	Panel Thickness	3mm	1				
	Mounting screw torque max.	1.5Nr	n				
	Fastener	Self-Tapping se	crew M2.5				
MATERIALS	Connector Shell / Housing	Thermoplastic, DSM Star	ıyl UL94V-0, 30% GF				
	Flange (A type)	Thermoplastic, DSM Star	nyl UL94V-0, 30% GF				
	Flange (B type)	Diescast Zinc Alloy 3					
	Flange Finish (B type)	Satin Nickel					
	Contact	Phosphor I	Bronze				
	Contact Finish	0.38µm Au over 1.27µm Ni or	1.27µm Au over 1.27µm Ni				
	Metal Hood Shield EMI/RFI	Brass, nickel plated					
	Latch lock and Spring	Spring s	teel				

\*\*Approximate weight in grams not including packaging. Please contact us for exact weight for shipping purposes.

Rev 1 - 03/2013



Amphenol offers a complete range of highperformance BNC plugs for use in digital/ HD video applications. Amphenol's True 75 Ohm BNC connectors perform well up to and beyond 3GHz and are designed to terminate to a variety of popular coaxial cable types. We can also offer custom connectors to suit non-standard cables on request. Plugs feature a precision machined brass body and coupling nut plated with cost effective nickel plating.

### **Applications**

- Broadcast
- · High bandwidth video equipment
- D1/D2 serial digital
- · Graphic work stations
- · Telephony / Workstations

#### **Options**

- Crimp Plugs
- · Jack to Jack adapters
- Patch Panels
- · 'D' Shell Jacks
- · Plug to Plug U-Link connectors
- Crimp Tools

#### **Ordering Codes**

We have listed the more common ordering codes in each section. Amphenol offer an extensive range of RF connectors for most applications.

Please visit www.amphenolconnex.com for further information. Please contact us if you need any further assistance.

### BNC 75 RF CONNECTORS

### Simple steps to guide you in using this catalogue

- Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use variations column to determine your choice.
- 6) Identify part number.
- In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.

BNC 75 RF CONNECTORS

### BNC 75 $\Omega$ RF connectors



Amphenol manufactures a large range of connectors to suit cables other than those listed below, for example Belden YR23769 and 46899, please contact us to discuss your specific requirements.

The complete Amphenol Connex catalogue featuring a wide range of RF connector products is available on request. Item code CAT-CONNEX-01.

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	CABLE TYPE RG-/U	INSULATION	CRIMP TOOL	PART NUMBER
	Straight Crimp Plug - Captive Contact- Stand- ard Cable	59/ 62/ 140/ 210	Delrin	Α	112119
			Teflon	Е	112952*
63		59/ U-20AWG	Delrin	Α	112507
			Teflon	E	112956*
		11/ U-14AWG/ B8213/ B9292/ B7731/ B1859A	Teflon	D	112606
		6/ 143/ 212	Delrin	Е	112508
	مــــــــــــــــــــــــــــــــــــ	B1694A/ B9248	Delrin	Е	112565
	3.7 [.146"]		Teflon	Е	112957*
	RECOMMENDED CABLE STRIPPING DIMS.	6 PLENUM/ B1695A	Delrin	E	112519
		B8281/ B9231/ B9141	Delrin	Е	112509
			Teflon	Е	112953*
		B1505A	Teflon	Е	112951*
	Assembly Instruction A - page 89	B735A1	Teflon	F	112950*
	Straight Crimp Plug-Captive Contact-Miniature Cable (Remark: With Teflon sleeve / Hex crimp size .178")	179/ 187/ B9221	Delrin	В	112133
	(ATER ASSEMBLY)				
	5.2 [.205"]	180/ 195/ 122/ B8218/ B1865A/ B1855	Delrin	В	112521
	RECOMMENDED CABLE STRIPPING DIMS. Assembly Instruction B - page 89		Teflon	F	112955*

Note: \*True 75 ohm.

90

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION & CABLE TYPE RG-/U	INSULATION	CRIMP TOOL	PART NUMBER
			Bulkhead Adapter -Isolated	Teflon	N/A	AC-BNC-JJA-75T*
	12:809 19 10 10 10 10 10 10 10 10 10 10 10 10 10	WASHER NUT	Jack to Jack - Straight Bayonet Lock to Bayonet Lock			
			Bulkhead Adapter -Isolated	Teflon	N/A	AC-BNC-PJA-75T*
		WASHER NUT	Jack to Jack - Straight Push on to Bayonet Lock			
29	311 [12237]	6829 1.200 1.2	Bulkhead Adapter -Isolated, 'D' Shell Housing Jack to Jack,Bayonet Lock to Bayonet Lock, Nickel Finish	Teflon	N/A	AC-BNC-JJ-75*
	Image: Constraint of the second sec		Bulkhead Adapter -Isolated, 'D' Shell Housing Jack to Jack,Bayonet Lock to Bayonet Lock, Black Finish	Teflon	N/A	AC-BNC-JJ-75B*
36	ail (12237)		Bulkhead Adapter -Isolated, 'D' Shell Housing Jack to Jack, Push on to Bayonet Lock, Nickel Finish	Teflon	N/A	AC-BNC-PJ-75*
	-19 [.748']- -26 [1.024']-		Bulkhead Adapter -Isolated, 'D' Shell Housing Jack to Jack,Push on to Bayonet Lock, Black Finish	Teflon	N/A	AC-BNC-PJ-75B*
(A)		A C C S S S S S S S S S S S S S S S S S	Bulkhead Receptacle -Iso- lated, 'D' Shell Housing Jack to Solder Bucket with Ground Tag, Nickel Finish	Nylon	N/A	AC-BNC-JS-75
	-19 [.748']- -26 [1024']-	• • • • • • • • • • • • • • • • • • •	Bulkhead Receptacle -Iso- lated, 'D' Shell Housing Jack to Solder Bucket with Ground Tag, Black Finish	Nylon	N/A	AC-BNC-JS-75B
			U - Link Centre to Centre - 20.6 mm	Teflon	N/A	BNC-U-LINK 75*1
A CONTRACTOR			Note: Custom Sizes available please contact factory.			

### **BNC 75 RF ACCESSORIES AND TOOLING**

PRODUCT - FIGURE	DESCRIPTION	DIE CAVITIES	CABLE TYPE RG-/U	CONNECTOR GUIDE	PART NUMBER
	Crimp tool with Die Set	.255 / .213 / .068	59 / 62	А	47-10070
2		.178 / .128 / .068	179 / 187 / 180 / 195	В	47-10150
		.429 / .100 / .080	11	D	47-10090
		.324/.255/ .068/.042	6 / 59 / B8281	E	47-10110
		.213/.178 /.068/.042	AT&T 735A, B1855A, B8218	F	47-10120

Note: \*True 75 ohm.

#### **BNC PATCH PANELS**

#### Features:

- Amphenol True 75 Ohm Connectors
- Bayonet lock or Push-on types
- Supplied with adhesive strip ID labels

#### **Options:**

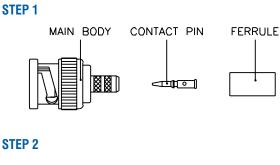
- 1RU, 20 BNC connectors or 2RU, 40 BNC connectors
- Aluminium in Clear or Black anodised
- Steel in Black powder coat
- · Customised versions available on request

PRODUCT - FIGURE DRAWING Dimensions in mm (inches) DESCRIPTION	MATERIAL / FINISH	LOADED WITH (refer to page 84 for specifications)	PART NUMBER
1RU 1X20 Patch Panel, Supplied with 1 ID label	Steel / Black	Empty Panel	AC-BNC20M
	Steel / Black	AC-BNC-JJA-75	AC-BNC20MJ75
	Steel / Black	AC-BNC-PJA-75	AC-BNC20MP75
	Aluminium / Clear	Empty Panel	AC-BNC20A
464.5 [18.287"] TYP 464.5 [18.287"] TYP 465.5 [18.287"] TYP	Aluminium / Clear	AC-BNC-JJA-75	AC-BNC20AJ75
	Aluminium / Clear	AC-BNC-PJA-75	AC-BNC20AP75
20.50 [.807"] TYP	Aluminium / Black	Empty Panel	AC-BNC20B
	Aluminium / Black	AC-BNC-JJA-75	AC-BNC20BJ75
	Aluminium / Black	AC-BNC-PJA-75	AC-BNC20BP75
2RU 2X20 Patch Panel, Supplied with 2	Steel / Black	Empty Panel	AC-BNC40M
ID labels	Steel / Black	AC-BNC-JJA-75	AC-BNC40MJ75
	Steel / Black	AC-BNC-PJA-75	AC-BNC40MP75
•	Aluminium / Clear	Empty Panel	AC-BNC40A
482 [18.976"]	Aluminium / Clear	AC-BNC-JJA-75	AC-BNC40AJ75
464.5 [18.287"] TYP	Aluminium / Clear	AC-BNC-PJA-75	AC-BNC40AP75
	Aluminium / Black	Empty Panel	AC-BNC40B
20.50 [.807"] TYP	Aluminium / Black	AC-BNC-JJA-75	AC-BNC40BJ75
	Aluminium / Black	AC-BNC-PJA-75	AC-BNC40BP75
Panel ID label	Plastic	Not Applicable	AC-BNC-LABEL

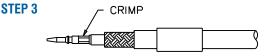
### **BNC 75 RF ASSEMBLY INSTRUCTIONS**

### **ASSEMBLY A**

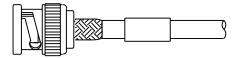
### **ASSEMBLY B**



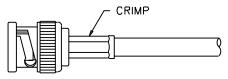




**STEP 4** 

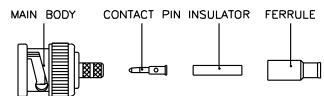


### **STEP 5**

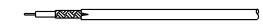


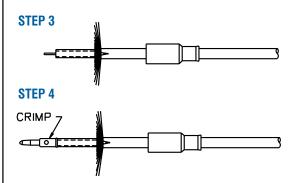
- STEP 1. All parts of the connector are shown. A crimp tool is necessary to complete the connection.
- STEP 2. Strip the cable inner conductor, dielectric, braid, and jacket as per "RECOMMENDED CABLE STRIPPING DIM'S" in catalogue.
- STEP 3. Insert inner conductor into the CONTACT PIN, crimp it with the crimp tool as shown. Then slide the FERRULE onto cable.
- STEP 4. Insert the MAIN BODY into braid and dielectric.
- STEP 5. Slide the FERRULE over braid, crimp it with the crimp tool as shown.

### STEP 1

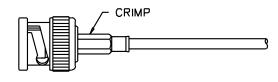


### **STEP 2**





**STEP 5** 



- STEP 1. All parts of the connector are shown. A crimp tool is necessary to complete the connection.
- STEP 2. Strip the inner conductor, dielectric, and jacket as per "RECOMMENDED CABLE STRIPPING DIM'S" in catalogue.
- STEP 3. Slide the FERRULE on to cable, then fold back braid wire and slide the INSULATOR on to dielectric as shown.
- STEP 4. Insert inner conductor into the CONTACT PIN, crimp it with crimp tool as shown.
- STEP 5. Push cable and parts into the MAIN BODY until it stops. Then slide the FERRULE over braid wire and against the MAIN BODY, crimp it with the crimp tool as shown.

**STANDARD DATA** 

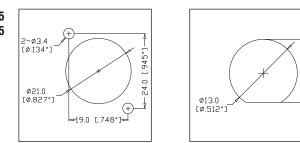
### **STANDARD DATA BNC 75 RF CONNECTORS**

		VA	LUE
GENERAL	Mating	Bayon	et Lock
CHARACTERISTICS	Cable Attachment	Crimp -	Crimp
	Environmental	Complies with EU RoHS	2 Directive 2011/65/EU
ELECTRICAL Characteristics	Impedance	75	Ω
CHARACIERISTICS	Frequency Range - Standard	0 - 1	GHz
	- True 75 Ohm	0 - 4	GHz
	Voltage Rating	500V	RMS
	Dielectric withstanding voltage	1500 V	olts RMS
	VSWR - Standard	1.05+0.1f(GF	Iz) DC to 1 GHz
	- True 75 Ohm	1.5+0.1f(GH	z) DC to 4 GHz
	Contact Resistance		
	Centre Contact	1.5 m	illiohm
	Outer Contact	1.0 m	illiohm
	Insulation Resisance	5000 M	Ω (min.)
MATERIALS	Part	Material	Finish
	Body, Coupling sleeves	Brass	Nickel
	Crimp Ferrule	Annealed Copper	Nickel
	Male Contact	Brass	Gold
	Female Contact	Beryllium Copper or Phosphor Bronze	Gold
	XLR Housing	Diecast Zinc Alloy	Satin Nickel or Black Polyester
	Insulators	Teflon or Delrin	Natural

NOTE: These characteristics are typical and may not apply to all connectors.

### **PANEL CUTOUTS** - FRONT VIEW

AC-BNC-PJ-75 AC-BNC-JJ-75



AC-BNC-PJA-75 AC-BNC-JJA-75

a-12.1 [.476″]⊷

94

 $(\mathbf{0})$ 



### **Applications**

- · Audio Cables and Snakes
- · Amplifiers
- Speakers
- · Mixing desks
- · Rack mount equipment
- · Patch panel

#### Features / Options - PRO RANGE 1/4" Phone Plug T-Series.

- · Mono or Stereo (TRS)
- · Switching Plugs
- · Stylised shell design with Ergonomic grip
- · Nickel or Gold contact plating
- · Straight or Right Angle
- Keved Shell
- · Optional heavy duty metal backshell / boot
- · Great solderability
- · Increased solder area on ground contact
- · "Jaws" Cable Clamp · Precision machined contacts
- · Coloured Grommet
- JUMBO Series Plugs

#### Features / Options – MUSICIAN RANGE 1/4" Phone Plua

- · Mono or Stereo (TRS)
- · Compact Shell
- · Straight or Right angle
- · Stylish shell design
- · Flexible grommet cable protection
- · Nickel or Gold contact plating
- · Satin Nickel or Black finish
- Diecast shell
- · Coloured Grommet

#### Jaws Cable Clamp Options for T-Series\*



#### Standard Jaws cable clamp (Black), Cable O.D 3mm to 6mm (0.118" to 0.236")



Large Jaws cable clamp (Purple), Cable 0.D 6mm to 7mm (0.236" to 0.275")

\*Note: Applicable to T-Series straight cable connectors only. Refer to page 98 for right angle connector Jaws cable clamp specifications.

#### **Musician Range Cable Clamp Options**



M-Series, Cable O.D 3mm to 6.5mm (0.118" to 0.256")



M-Series II, Cable O.D 6.5mm to 8mm (0.256" to 0.315")

### 1/4" PHONE **CONNECTORS**

Amphenol offers two ranges of 1/4" Phone plug connectors to satisfy the needs of the manufacturer and the end user. The PRO - a heavy duty on-road plug and the MUSICIAN - a solid performing general use plug. Both series offer different features and benefits and the most suitable type will be determined by application, budget and personal choice.

### **Ordering Codes**

We have listed the more common ordering codes in each section. Refer to our 1/4" plug product feature matrix found on the next page for assistance on selecting the right plug for your application.

### Simple steps to guide you in using this catalogue

- 1) Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- 3) Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use variations column to determine your choice.
- 6) Identify part number.
- 7) In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.

### **1/4" PLUG FEATURE MATRIX**

		√s <sup>50</sup> th X X	STREET	High and	Static	ALIA SHALL	Street Street	Best mail	N USON
FEAT	URES	]	, stell	JUMBO	SMIC	SMIC	W SHI	WSthi	CUSION
PRECISION MACHINED CONTACTS		X	X	X	X	X	X	X	X
CENTER CONTACT	1 pc. Center Contact	X	X	X	X	X			Х*
	2 pc Press Fit Tip/Center Contact						X	X	Х*
BARREL:	Machined Tube	X	X	X	X	X			
	Precision Extruded Tube						X	X	X
JAWS CABLE CLAMP		X	X		X	X			
MIN. CABLE OD	Black Jaw: 3mm/0.118"	X	X		X	X			
	Purple Jaw: 6mm/0.236"	X			X				
	Purple Jaw: 5.5mm/0.216"		X			X			
MAX. CABLE OD	Black Jaw: 6mm/0.236"	X			Х				
	Black Jaw: 5.5mm/0.216"		X			X			
	Purple Jaw: 7.5mm/0.295"	X			Х				
	Purple Jaw: 6.5mm/0.255"		Х			X			
STANDARD CABLE CLAMP	I			X			X	X	X
MIN. CABLE OD	7.5mm/0.295"			Х					
MAX. CABLE OD	6mm/0.236"						X		
	8mm/0.315"							X	
	8.8mm/0.345"								X
	10.5mm/0.413"			X					
BACKSHELL FINISH	Satin Nickel	X	Х	X	X	X	X	X	
	Black	X	X	X	X	X	X	X	
	Bright Nickel								X
	Bright Gold								X
CONTACT MATERIAL/	Brass/Nickel (Ni)	X	Х	X	X	X	X	X	X
FINISH OPTIONS	Brass/Gold over 2µm (Ni)	X	X	X	X	X	X	X	X

<sup>1</sup>Custom Series - Minimum order quantities apply. Contact us for further details.



1/4" PHONE PLUGS

**T-SERIES** 



#### Features:

- Mono or Stereo (TRS).
- Stylised shell design with Ergonomic grip.
- Straight or Right Angle.
- Robust diecast shell in Satin nickel or Black finish.
- Nickel or Gold contact plating.
- Keyed shell.
- Optional heavy duty metal backshell / boot.
- · Great solderability.
- · Increased solder area on ground contact.
- "Jaws" Cable Clamp.
- Precision machined contacts.
- Quick and easy assembly.

Options: Gold Contacts, Large or Small Jaws Cable Clamp, Black Shell, Metal Backshell / Boot, Bulk Pack. Coloured grommets (ordered separately) Part Number Breakdown: Page 97 Specifications: Page 98

PRODUCT - FIGURE	DRAWING	DESCRIPTION	VARIATIONS	PART NUMBER
	P94 [3.685"]	1/4" (6.35mmø) Mono Phone plug,	Standard	TM2P
	30.0	Jaws cable clamp, Thermoplastic back- shell,	Gold Plated Contacts	TM2P-AU
Contrast of the second		Satin finish.	Large Cable Clamp	TM2PJ
-423 			Bulk Pack	TM2P BULK
		1/4" (6.35mmø) Mono Phone plug,	Standard	TM2PB
Sector March	94 [3.685"] 	Jaws cable clamp, Thermoplastic back- shell,	Gold Plated Contacts	TM2PB-AU
		Black finish.	Large Cable Clamp	TM2PBJ
-81			Bulk Pack	TM2PB BULK
	94 [3.685"]	1/4" (6.35mmø) Stereo Phone plug,	Standard	TS3P
		Jaws cable clamp, Thermoplastic back- shell,	Gold Plated Contacts	TS3P-AU
Constant of the second	AMPNENOL	Satin finish.	Large Cable Clamp	TS3PJ
No. 1			Bulk Pack	TS3P BULK
	94 [3.685"]	1/4" (6.35mmø) Stereo Phone plug,	Standard	TS3PB
Contraction of the second seco	94 [3.685"] 	Jaws cable clamp, Thermoplastic back- shell,	Gold Plated Contacts	TS3PB-AU
		Black finish.	Large Cable Clamp	TS3PBJ
WEL			Bulk Pack	TS3PB BULK



1/4" PHONE PLUGS

### **T-SERIES (PRO RANGE)**

PRODUCT - FIGURE	DRAWING	DESCRIPTION	VARIATIONS	PART NUMBER
	₽	1/4" (6.35mmø) Mono Phone plug,	Standard	TM2PN
	94 [3.685"] O C C C C C C C C C C C C C C C C	Jaws cable clamp, Metal backshell,	Gold Plated Contacts	TM2PN-AU
		Satin finish.	Large Cable Clamp	TM2PNJ
No.			Bulk Pack	TM2PN BULK
	94 [3.685"]	1/4" (6.35mmø) Mono Phone plug,	Standard	TM2PBM
	94 [3.685"] 	Jaws cable clamp, Metal backshell,	Gold Plated Contacts	TM2PBM-AU
		Black finish.	Large Cable Clamp	TM2PBMJ
No.			Bulk Pack	TM2PBM BULK
	94 [3.685"] 9	1/4" (6.35mmø) Stereo Phone plug,	Standard	TS3PN
	94 [3.685"] 	Jaws cable clamp, Metal backshell,	Gold Plated Contacts	TS3PN-AU
		Satin finish.	Large Cable Clamp	TS3PNJ
Nr.			Bulk Pack	TS3PN BULK
•	94 [3.685"]	1/4" (6.35mmø) Stereo Phone plug,	Standard	TS3PBM
	94 [3.685"] 	Jaws cable clamp, Metal backshell,	Gold Plated Contacts	TS3PBM-AU
		Black finish.	Large Cable Clamp	TS3PBMJ
The second			Bulk Pack	TS3PBM BULK
	6151242	1/4" (6.35mmø) Mono Phone plug,	Standard	TM2RJ
		Right angle, Jaws cable clamp*,	Gold Plated Contacts	TM2RJ-AU
Th	90 5   1 20  1 3 1 20	Thermoplastic back- shell,	Small Cable Clamp	TM2R
-		Satin finish.	Bulk Pack	TM2RJ BULK
	615 [2 42]	1/4" (6.35mmø) Mono Phone plug,	Standard	TM2RBJ
		Right angle, Jaws cable clamp*,	Gold Plated Contacts	TM2RBJ-AU
The	131 21 22 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Thermoplastic back- shell,	Small Cable Clamp	TM2RB
		Black finish.	Bulk Pack	TM2RBJ BULK
	615 [2 42]	1/4" (6.35mmø) Stereo Phone plug,	Standard	TS3RJ
		Right angle, Jaws cable clamp*,	Gold Plated Contacts	TS3RJ-AU
The second se		Thermoplastic back- shell,	Small Cable Clamp	TS3R
29		Satin finish.	Bulk Pack	TS3RJ BULK
	615  2 4 2	1/4" (6.35mmø) Stereo Phone plug,	Standard	TS3RBJ
		Right angle, Jaws cable clamp*,	Gold Plated Contacts	TS3RBJ-AU
In	00 51 2 10 00 51 2 00 00 51 2 00	Thermoplastic back- shell,	Small Cable Clamp	TS3RB
		Black finish.	Bulk Pack	TS3RBJ BULK

\*NOTE: Refer to page 98 for Jaws cable clamp specifications applicable to right angle connectors.

ENTERTAINMENT INTERCONNECT CATALOGUE - Amphenol Australia Pty Ltd Telephone 61 3 8796 8888 Fax 61 3 8796 8801





**T-SERIES SWITCHPLUG** 

**NEW ITEM** 

AWS



The Amphenol T series SwitchPlug uses a unique 360 degree precision sliding helical spring contact design to quietly and accurately switch the signal circuit safely to ground during instrument changes under load, thereby avoiding annoying thumps, pops and squeals. The sliding ring contact self-cleans every time the plug is connected preventing excessive build up of oxidization and contamination. Activation is directly off the jacks full front face assuring a positive reference point every time, and as it works instantaneously on the main circuits there is no need for the use of magnets or other elaborate switching mechanisms.

#### WARNING! For use with instrument (guitar)

applications only.

#### Part Number Breakdown: page 102 **Specifications: page 103**

US Patent No.8,162,697

PRODUCT - FIGURE	DRAWING	DESCRIPTION	VARIATIONS	PART NUMBER
	_	1/4" (6.35mmø) Switch Phone plug,	Standard	TM1P
	98.6 [3.883"] 98.6 [3.883"] 99.6 [3.883"]	Jaws cable clamp, Thermoplastic back- shell,	Gold Plated Contacts	TM1P-AU
and a manual of		Satin finish.	Large Cable Clamp	TM1PJ
			Bulk Pack	TM1P BULK
		1/4" (6.35mmø) Switch Phone plug,	Standard	TM1PB
0	98.6 [3.883"]	Jaws cable clamp, Thermoplastic back- shell,	Gold Plated Contacts	TM1PB-AU
1		Black finish.	Large Cable Clamp	TM1PBJ
			Bulk Pack	TM1PB BULK
-	615 [2 4 20"]	1/4" (6.35mmø) Switch Phone plug,	Standard	TM1RJ*
		Right angle, Jaws cable clamp*, Thermoplastic back-	Gold Plated Contacts	TM1RJ-AU*
		shell, Satin Finish.		
	- 30.31		Bulk Pack	TM1RJ BULK*
	615  2 4 20°1	1/4" (6.35mmø) Switch Phone plug,	Standard	TM1RBJ*
		Right angle, Jaws cable clamp*, Thermoplastic back-	Gold Plated Contacts	TM1RBJ-AU*
1		shell, Black Finish.		
			Bulk Pack	TM1RBJ BULK*

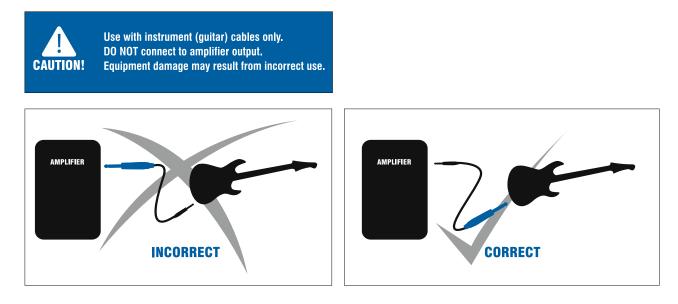
\*NOTE: Refer to page 98 for Jaws cable clamp specifications applicable to right angle connectors.

SwitchPlug

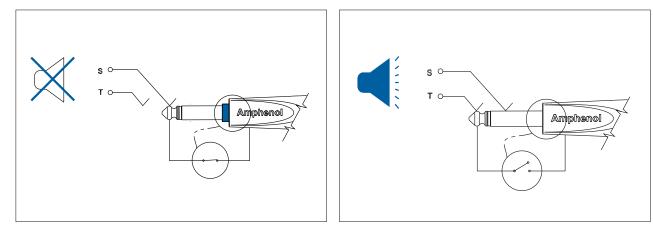
1/4" PHONE PLUGS T-SERIES (PRO RANGE)

WS

### SwitchPlug - User Instruction



### SwitchPlug - Technology\*



\*US Patent No. 8,162,697

100

### JUMBO T-SERIES (PRO RANGE)



#### Features:

- JUMBO Cable clamping capacity
- Suits Cable OD 7.5mm (0.295") to 10.5mm (0.413")
- Mono or Stereo (TRS).
- Stylised shell design with Ergonomic grip.
- Robust diecast shell in Satin nickel or Black finish.
- Nickel or Gold contact plating.
- Keyed shell.
- Great solderability.
- · Increased solder area on ground contact.
- Precision machined contacts.
- Quick and easy assembly.
- Options: Gold Contacts, Bulk Pack.

#### **Specifications: page 103**

PRODUCT - FIGURE	DRAWING	DESCRIPTION	VARIATIONS	PART NUMBER
	94 [3.690"]	1/4" (6.35mmø) JUMBO Mono Phone plug,	Standard	JM2P
	63 [2.489"]	Thermoplastic back- shell,	Gold Plated Contacts	JM2P-AU
		Satin finish.	Bulk Pack	JM2P BULK
	94 [3.690"]	1/4" (6.35mmø) JUMBO Mono	Standard	JM2PB
Sec.	63 [2.489"]	Phone plug, Thermoplastic back- shell,	Gold Plated Contacts	JM2PB-AU
		Black finish.	Bulk Pack	JM2PB BULK
		1/4" (6.35mmø) JUMBO Stereo	Standard	JS3P
	63 [2.489"]	Phone plug, Thermoplastic back- shell,	Gold Plated Contacts	JS3P-AU
		Satin finish.	Bulk Pack	JS3P BULK
		1/4" (6.35mmø) JUMBO Stereo	Standard	JS3PB
	63 [2.489"]	Phone plug, Thermoplastic back- shell,	Gold Plated Contacts	JS3PB-AU
A Has		Black finish.	Bulk Pack	JS3P BULK

NOTE: Contact factory for availability of metal backshells.





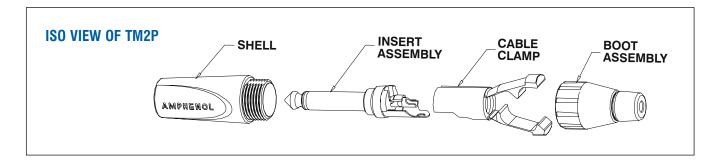
**STANDARD DATA** 

### PART NUMBER BREAKDOWN

T-SERIES (PRO RANGE)

					EFIT	apt	e AM		FINIS	SHILSTUE CHELSTUE J -
				SERIE	PRI CONT	ACT T. SHEL	TYPEBACK	2	HEL.	CABLEC
E. G . TS3PBMJ-AU BUL T (Series Prefix), S - AU (Gold Plated C	3(Stereo), Plu	g Black, Meta	al Nut (Black), <b>J</b> (Large Jaws),	Τ	S3	PB	Μ		J	J -
- AU (Gold Plated C	Jontaets), Bun	K Packaged.								
				- I						
SERIES PREFIX	Т	=	Series Prefix							
CONTACT TYPE	M1	=	Switch Plug							
	M2	=	2 Pole (mono)							
	S3	=	3 Pole, tip/ring/sleeve (stereo)							
SHELL TYPE	Р	=	Plug Satin Nickel	]						
AND FINISH	РВ	=	Plug Matt Black							
	R	=	Right Angle Plug Satin Nickel							
	RB	=	Right Angle Plug Matt Black							
BACKSHELL TYPE	Blank	=	Plastic Nut	]						
	М	=	Metal Nut - Black							
	Ν	=	Metal Nut - Satin Nickel							
CABLE CLAMP	Blank	=	Small Jaws	]						
	J	=	Large Jaws							
CONTACT PLATING	Blank	=	Nickel Plated Contacts (Standard)	1						
	AU	=	Gold Plated Contacts							
PACKAGING	Blank	=	Individual Bags	]						
	BULK	=	Bulk Packed						_	





1/4" PHONE PLUGS

### 1/4" PHONE PLUG TECHNICAL DATA

			VALUE				
		Straight	Right Angle	Jumbo			
GENERAL	Number of Contacts		3 Pole Tip Ring Sleeve (Stereo)				
CHARACTERISTICS	Termination		Solder				
	Max. Wire Gauge - Stranded Wire		2 Pole (Mono): AWG 16~1.5mm	2			
			3 Pole (Stereo): AWG 18~1mm <sup>2</sup>				
	Flammability rating of insulating plastics		UL94V-0				
	Solderability, complies with		IEC 68-2-20				
	Environmental	Complie	es with EU RoHS 2 Directive 2011	/65/EU			
ELECTRICAL	Current Carrying Capacity	1	OA (Depends on Mating Connector and Cal	ble)			
CHARACTERISTICS	Typical Contact Resistance		Depends on Mating Connector				
	Insulation resistance (initial)		>2GΩ				
	After Damp Heat Test		≥1GΩ				
	Dielectric Withstand Voltage		2 Pole : 1.5 kV dc				
			3 Pole : 1 kV dc				
CLIMATIC	Protection Class		IP40				
CHARACTERISTICS	Operating Temperature	-	25°C to +75°C (-13°F to + 167°	°F)			
MECHANICAL	Insertion and Withdrawal Force		≥10N - ≤30N				
CHARACTERISTICS	Weight <sup>1)</sup> Thermoplastic Backshell Weight <sup>1)</sup> Metal Backshell		28g (0.061lb) 35g (0.077lb)				
	Typical Cable Retenton Force	22kg to 44kg (50lb t	to 100lb) - Dependent on cable m	naterial and diameter.			
	Cable O.D Standard Jaw	3mm to 6mm (0.118" to 0.236")	3mm to 5.5mm (0.118" to 0.216")	NA			
	Cable O.D Large Jaw	6mm to 7mm (0.236" to 0.275")	5.5mm to 6.5mm (0.216" to 0.255")	NA			
	Cable O.D Jumbo	NA	NA	7.5mm to 10.5mm (0.295" to 0.413")			
	Mechanical Operations		1000				
MATERIALS	Connector Shell Material		Diecast Zinc Alloy EZDA No.3				
	Shell Finish	Satin Nickel or Black Polyester					
	Insulators	UL94 V-0 F	PBT Resin or Modified PPE Resin	- Black			
	Boot / Backshell	UL94 V-0 PBT Resi	n or Modified PPE Resin - Black o	or Metal CuZn <sup>39</sup> Pb <sup>3</sup>			
	Cable Clamp	U	L94 V-0 PBT Modified PPO Resin	- Black			
	Cable Bushing		Santoprene				
	Contacts / Plating		Brass/Ni or Au over 2µm Ni				
	1						

n Approximate weight only, does not include packaging. Please contact us for exact weight for shipping purposes.

#### 1/4" PHONE PLUGS

### **MUSICIAN SERIES II**



#### Features:

- · Mono or Stereo (TRS).
- AX Series inspired shell design.
  Large cable O.D. Entry to 8mm (0.315")
- · Robust diecast shell in Satin nickel or Black finish.
- Nickel or Gold contact plating.
- Flexible grommet cable protection.Improved solderability.
- Precision machined contacts.
- Standard or Bulk packaging.

Options: Black Shell, Gold contacts. Coloured grommets (ordered separately)

#### **Specifications: Page 112**



Cable O.D 6.5mm to 8mm (0.256" to 0.315")

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	ka		1/4" (6.35mmø) Mono Phone plug, Diecast Shell, Satin finish,	Standard	ACPM-KN
			Flexible grommet.	Gold Plated Contacts	ACPM-KN-AU
				Bulk Pack	ACPM-KN-BULK
			1/4" (6.35mmø) Mono Phone plug, Diecast Shell, Black finish,	Standard	АСРМ-КВ
			Flexible grommet.	Gold Plated Contacts	ACPM-KB-AU
S.				Bulk Pack	ACPM-KB BULK
1	5		1/4" (6.35mmø) Stereo Phone plug, Diecast Shell, Satin finish,	Standard	ACPS-KN
			Flexible grommet.	Gold Plated Contacts	ACPS-KN-AU
·				Bulk Pack	ACPS-KN BULK
			1/4" (6.35mmø) Stereo Phone plug, Diecast Shell, Black finish,	Standard	ACPS-KB
STATE OF			Flexible grommet.	Gold Plated Contacts	ACPS-KB-AU
1				Bulk Pack	ACPS-KB BULK

1/4" PHONE PLUGS

### M SERIES II (MUSICIAN RANGE)

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	ТҮРЕ	PART NUMBER
			1/4" (6.35mmø) Mono Phone plug, Right angle, Diecast Shell, Satin finish,	Standard	ACPM-TN
		G C C C C C C C C C C C C C C C C C C C	Gold contacts	ACPM-TN-AU	
No.	₹	. 20 . 20 . 6 . 6 . 6 . 6 . 6 . 6 . 6 . 6 . 6 . 6		Bulk Pack	ACPM-TN BULK
			1/4" (6.35mmø) Mono Phone plug, Right angle, Diecast Shell, Black finish,	Standard	ACPM-TB
		MAX. 51.2057	Flexible grommet.	Gold contacts	ACPM-TB-AU
No.				Bulk Pack	ACPM-TB BULK
			1/4" (6.35mmø) Ste- reo Phone plug, Right angle, Diecast Shell,	Standard	ACPS-TN
		MAX. MAX. MAX. MAX. MAX. MAX. MAX. MAX.	Satin finish, Flexible grommet.	Gold contacts	ACPS-TN-AU
New Sector	₹	20°0		Bulk Pack	ACPS-TN BULK
			1/4" (6.35mmø) Ste- reo Phone plug, Right angle, Diecast Shell, Black finish, Flexible	Standard	ACPS-TB
			grommet.	Gold contacts	ACPS-TB-AU
No.		20.0		Bulk Pack	ACPS-TB BULK

### **M SERIES (MUSICIAN RANGE)**



#### Features:

- Mono or Stereo (TRS).
- Stylish shell design.Robust diecast shell in Satin nickel or Black finish.
- Nickel or Gold contact plating.
- Flexible grommet cable protection.
- · Improved solderability.
- Precision machined contacts.
- Standard or Bulk packaging.Cable OD Entry to 6.5mm (0.256")

**Options:** Black Shell, Gold contacts. Coloured grommets (ordered separately) **Specifications: page 117** 



Cable 0.D 3mm to 6.5mm (0.118" to 0.256")

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	2		1/4" (6.35mmø) Mono Phone plug, Diecast Shell, Satin finish,	Standard	ACPM-GN
			Flexible grommet.	Gold Plated Contacts	ACPM-GN-AU
Va.	~ <del>~</del>			Bulk Pack	ACPM-GN BULK
	2		1/4" (6.35mmø) Mono Phone plug, Diecast Shell, Block finish	Standard	ACPM-GB
	Amphenol Black finish, Flexible grommet.		,	Gold Plated Contacts	ACPM-GB-AU
1	С ш			Bulk Pack	ACPM-GB BULK
	ka		1/4" (6.35mmø) Stereo Phone plug, Diecast Shell, Satin finish,	Standard	ACPS-GN
		Amphenol	Flexible grommet.	Gold Plated Contacts	ACPS-GN-AU
he was a second				Bulk Pack	ACPS-GN BULK
			1/4" (6.35mmø) Stereo Phone plug, Diecast Shell, Black finish,	Standard	ACPS-GB
			Flexible grommet.	Gold Plated Contacts	ACPS-GB-AU
100	~ <u></u>			Bulk Pack	ACPS-GB BULK

### **M SERIES (MUSICIAN RANGE)**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	ТҮРЕ	PART NUMBER
100 m			1/4" (6.35mmø) Mono Phone plug, Right angle, Diecast Shell, Satin finish,	Standard	ACPM-RN
C.		49.3	Flexible grommet.	Gold contacts	ACPM-RN-AU
				Bulk Pack	ACPM-RN BULK
		-61 [2.402"]	1/4" (6.35mmø) Mono Phone plug, Right angle, Diecast Shell, Black finish,	Standard	ACPM-RB
			Flexible grommet.	Gold contacts	ACPM-RB-AU
	₹	30.6 5.0		Bulk Pack	ACPM-RB BULK
			1/4" (6.35mmø) Ste- reo Phone plug, Right angle, Diecast Shell,	Standard	ACPS-RN
	=	MAX. (1205") MAX. (1205") MAX. (120") MAX. (120") (	Satin finish, Flexible grommet.	Gold contacts	ACPS-RN-AU
A.				Bulk Pack	ACPS-RN BULK
			1/4" (6.35mmø) Ste- reo Phone plug, Right angle, Diecast Shell,	Standard	ACPS-RB
		.30.6 [1.205"] MAX. 5.0 [.197"] - 49.3 [1.	Black finish, Flexible grommet.	Gold contacts	ACPS-RB-AU
All a	Ę	30 9.C		Bulk Pack	ACPS-RB BULK

1/4" PHONE PLUGS

M SERIES / M SERIES II (MUSICIAN RANGE)

### PART NUMBER BREAKDOWN

M / M SERIES II (MUSICIAN RANGE)

SERIES PREIN
ACP S
E. G. ACPM-GB-AU BULK ACP (Series Prefix), Male, G(Shell Type), Black, - AU (Gold Plated Contacts), Bulk Packaged.
ERIES PREFIX ACP = Series Prefix
ONTACT TYPE M = 2 pole (Mono)
S = 3 pole Tip/Ring/Sleeve (Stereo)
HELL TYPE G = M Series Straight
K = M Series II Straight
R 💻 M Series Right Angle
T = M Series II Right Angle
HELL FINISH N = Satin Nickel
B = Matt Black
ONTACT PLATING Blank — Nickel Plating
AU = Gold Plated
ACKAGING Blank — Individual Bags
BULK = Bulk Packed



### **Applications**

- · Audio Cables and Snakes
- Amplifiers
- Speakers
- Mixing desks
- Rack mount equipment
- Patch panel

#### Features / Options – OEM RANGE Phone Jack

- Mono or Stereo (TRS)
- Stackable (Piggy back) mounting
- Vertical or horizontal PCB mount
- Mono and Stereo switched contacts
- Solder contacts
- · Combo Contacts
- Metal nut
- Plastic Nut
- 1/4" (6.35mm)
- 3.5mm
- Dual 1/4" (6.35mm) and 3.5mm
- EMI Shielding plates
- Metal Mounting threads
- Plastic Mounting threads
- Chassis Ground connections
- · Half, Full or No threads
- · Grounded or Isolated Jacks

#### 1/4" Phone Jack Grounding/ Shielding Options



1/4" Gripper - Grounding points



1/4" Shielding Plate

### 1/4" PHONE JACK CONNECTORS

Amphenol phone connectors are available in 1/4" (6.35mm) and 3.5mm jack sockets or dual jack socket versions featuring combinations of both sizes. The standard heavy duty contacts provide excellent signal performance and the rugged designs excel in professional audio applications. Our wide range of options ensures we have the connector to suit your specific requirements. Custom jacks can also be developed to suit unique applications on request.

### **Ordering Codes**

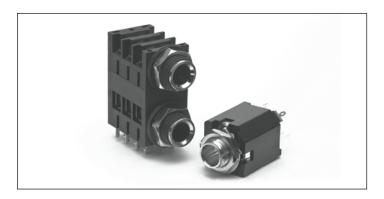
We have listed the more common ordering codes in each section. Please contact us if you need any further assistance.

### Simple steps to guide you in using this catalogue

- 1) Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- 3) Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use variations column to determine your choice.
- 6) Identify part number.
- In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.

#### 1/4" PHONE PLUGS

### **MUSICIAN / OEM RANGE**



#### Features:

- 3.5mm and 6.35mm (1/4") options
- Mono or Stereo (TRS)
  Single or Dual mounting
- Single of Dual mounting
  Vertical or Horizontal PCB mount
- Mono and Stereo with switching contacts
- Solder or Combo contacts
- Various mounting option

#### Schematic Chart: page 117 Panel Cutouts: page 114 PCB Footprints: page 116 Specifications: page 117

	PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
3.5N	AM PHONE JACKS		16 [[250]] 15 [[250]] 15 [[250]]	3.5mm Jack, Horizon- tal PCB, Plastic housing, Metal entry bore	Mono	ACJM-NH35
	Stall Sta				Stereo	ACJS-NH35
		[""		3.5mm Jack, Vertical	Refer to Schematic	ACJM-NV35-2
		=24 [.943"]== <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>6</sup> <sup>2</sup> == 23 [.896"] == <sup>6</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup>		PCB mount, Needle eye contacts, Plastic	Chart on Page 110	ACJM-NV35-2S
				housing, Metal entry bore		ACJS-NV35-3
						ACJS-NV35-3S
		⊨ 30.4 [1.195"]⇒	-⊶ [.620*] <sup> </sup> ⊶-			ACJS-NV35-5
			MASHER mm THICK 10 10 10.39*]	3.5mm Jack, Vertical PCB mount, Needle eye contacts, Plastic housing, Metal thread and entry bore	Refer to Schematic Chart on Page 110	ACJM-MV35-2
		4 [.159"]-+				ACJM-MV35-2S
						ACJS-MV35-3
						ACJS-MV35-3S
			↓ W6x0.5 WETAL T NUT 2.5mm THICK			ACJS-MV35-5
				3.5mm / 1/4" (6.35mmø) Dual Phone Jack, (Piggy- back), Horizontal PCB, Plastic housing, Metal nut and entry bore	Mono	ACJM-MHD985
					Stereo	ACJS-MHD985
	and the second	35 [1.360'] -24 [.931'] SDE VEW 24 [.947'] -27 [1.061']	][	3.5mm / 1/4" (6.35mmØ) Dual Phone Jack, Vertical PCB mount, Needle eye contacts, Plastic housing, Metal nut and entry bore	Refer to Schematic Chart on Page 110	ACJM-MVD985-2
						ACJM-MVD985-2S
						ACJS-MVD985-3
						ACJS-MVD985-3S
			[.620*] ***			ACJS-MVD985-5
1/4"	" PHONE JACKS HORI			1/4" (6.35mmø) Phone Jack, Horizontal Snap-fit PCB, Plastic housing, Half thread,	Mono	ACJM-HHDR
				Metal entry bore. Sup- plied without mounting hardware.	Stereo	ACJS-HHDR

### **MUSICIAN / OEM RANGE**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
an.			1/4" (6.35mmø) Phone Jack, Horizontal Snap-fit PCB, Plastic housing, Metal nut and	Мопо	ACJM-MHDR
	(1177)	<u>╣╣╎╫╫</u> ╫╴╴ <u>┉╢╔┿╬╾╣╾</u> ┧╝╴╴╴	entry bore	Stereo	ACJS-MHDR
	8.6 [.339"]		1/4" (6.35mmø) Phone Jack, Horizontal Snap-fit PCB, Plastic housing, Metal thread, nut, washer and entry bore	Mono	ACJM-MHDRM
	6.50 [.256"]	╨╫╫╖╺╖ <del>╝╍</del> ╍╍┙ <sub>┍</sub> ╸		Stereo	ACJS-MHDRM
1110			1/4" (6.35mmø) Offset Jack, Horizontal PCB mount, Plastic housing and entry bore with Half thread. Supplied without mounting hardware.	Refer to Schematic Chart on Page 110	АСЈМ-ННОР
THE CO	6.4 [.253"] 15.8 [.620"] - 10	8.9 [.350"] [.841"] -			ACJS-HHOP
ALCO.	2.7 001]+ 6.5 [.2567]		1/4" (6.35mmø) Offset Jack, Horizontal PCB mount, Plastic housing and entry bore with Half thread. Supplied without mounting hardware.	Refer to Schematic Chart on Page 110	ACJM-HHOP-1
- The second	6.4 [.253"] 15.8 [.620"] - N	8.9 [.350"]			ACJS-HHOP-1
	(1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	24.3 [* [.957*]	1/4" (6.35mmø) Offset Jack, Horizontal PCB mount, Plastic housing, thread and entry bore	Mono - Plastic Nut	ACJM-PHOP
1. 1. 1.				Mono - Metal Nut	ACJM-MHOP
		- 8.9 .[.350"]		Stereo - Plastic Nut	ACJS-PHOP
-		2		Stereo - Metal Nut	ACJS-MHOP
<i>A</i>	997 15.8 1.620*] 15.8 1.620*]	24.3 [.957"]	1/4" (6.35mmø) Offset Jack, Horizontal PCB mount, Plastic housing, thread and entry bore. Non-switching sleeve contact with separate grounding to panel.	Refer to Schematic Chart on Page 110 PHOP - Denotes Plastic Nut MHOP - Denotes	ACJM-PHOP-1
2200					ACJM-MHOP-1
- HELO		8.9 [.350"] 21.36 [.841"]			ACJS-PHOP-1
				Metal Nut	ACJS-MHOP-1
ill 2	(15.53°) (15.8°) (1		1/4" (6.35mmø) Offset Jack, Horizontal PCB mount, Plastic housing, Metal thread and entry bore with Chassis ground con- nection	Mono - Metal Nut	ACJM-MHOM
		8.2 [.323"] 0.5 [.323"] 0.5 [.860"] -		Stereo - Metal Nut	ACJS-MHOM
FRAM	8.0 [.315"]		1/4" (6.35mmø) Jack, Horizontal PCB mount, Plastic housing with metal insert	Mono - Plastic Nut	ACJM - PH
The Co		╟┵┶╟┝┵┈╤╴╺╧╢╠╊╬╌╬╅╢┈┈┊		Mono - Metal Nut	ACJM - MH

### MUSICIAN/OEM RANGE

PRODUCT - FIGURE	DRAWING	Dime	ensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
SEE.	8.0 [.315"] 			1/4" (6.35mmø) Jack, Horizontal PCB mount, Plastic housing with metal insert	Stereo - Plastic Nut	ACJS - PH
- Martin		┶╢┶┧┶┧┶┚───┰	╶╵╧╨╊╋╋╋┙┈╺╡		Stereo - Metal Nut	ACJS - MH
Pa	-======================================		[.976"]	1/4" (6.35mmø) Jack, Horizontal	Mono - Plastic Nut	ACJM-PHR
2227	8.0 [.315"			Snap-fit PCB mount, Plastic housing with	Mono - Metal Nut	ACJM-MHR
1140		┖╢┝┧┟┙┟┙╧┈╴╺		metal insert	Stereo - Plastic Nut	ACJS-PHR
	4.00 [.157 <sup>°</sup> ТҮР				Stereo - Metal Nut	ACJS-MHR
	o 💭 8.0 [.315"			1/4" (6.35mmø)	Mono - Plastic Nut	ACJM-PC
Seco	8.0 [.315"			Jack, Combination Horizontal PCB and	Mono - Metal Nut	ACJM-MC
100			╹╣┠╣╫┙╵╵╧	Solder lug, Plastic housing with metal insert	Stereo - Plastic Nut	ACJS-PC
6					Stereo - Metal Nut	ACJS-MC
				1/4" (6.35mmø) Jack, Solder Lug, Plastic housing with metal insert	Mono - Plastic Nut	ACJM-PHS
SER					Mono - Metal Nut	ACJM-MHS
1540					Stereo - Plastic Nut	ACJS-PHS
					Stereo - Metal Nut	ACJS-MHS
<u>g</u> an		0 [.433"] -		1/4" (6.35mmø) Jack, Solder Lug, Plastic housing and Bezel with threaded Metal nut.	Mono	ACJM-IHS
000 C					Stereo	ACJS-IHS
<u> Ann</u>	Horizontal PCB r Plastic housing a	1/4" (6.35mmø) Jack, Horizontal PCB mount, Plastic housing and Bezel with threaded	Mono	ACJM-IH		
ALL C	4.00 [157]	Ŵ <u>ĨĨŮŮŮ</u> ╵ <sup>₽</sup> ╩ ŴĨ <u>ĨŮŮŮ</u> ╵		Metal nut.	Stereo	ACJS-IH
4" PHONE JACKS HORIZ	ZONTAL DUAL	9.1 - 33.5 [1.319"] - .358"]		1/4" (6.35mmø) Dual Phone Jack (Compact Piggyback), Horizontal Snap-fit PCB, Plastic housing, Metal nut and entry bore	Mono	ACJM-MHDC*
					Stereo	ACJS-MHDC*
ALLA.				1/4" (6.35mmø) Dual Phone Jack (Compact Piggyback), Horizontal Snap-fit PCB, Plastic	Mono	ACJM-MHDCM
A DE LE		┶┿═┹┠╁╫╫╵ <sup>ଌୢଌ</sup>		housing, Metal thread, nut and entry bore	Stereo	ACJS-MHDCM

### MUSICIAN/OEM RANGE

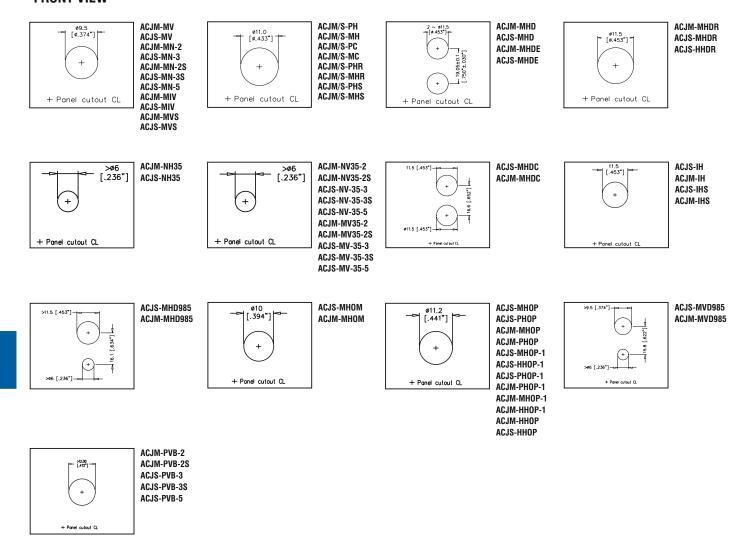
PRODUCT - FIGURE	DRAWING	Dim	ensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
			1/4" (6.35mmø) Dual Phone Jack (Piggyback) Horizontal Snap-fit PCB, Plastic	Mono	ACJM-MHD*	
HALL CO	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,		┉ <sub>Ҷ┟</sub> <u>╞┧╞┧╞┧</u> ╡ <sup>╵╳</sup> ╩ ╷	housing, Metal nut and entry bore	Stereo	ACJS-MHD*
aller.	3.8 [1.260] 			1/4" (6.35mmø) Dual Phone Jack (Pig- gyback) Shielding plate, Horizontal Snap-fit PCB, Plastic housing, Metal nut and entry bore	Mono	ACJM-MHDE*
	4,50 1,177 1		┉ <u>┩⊌╧</u> ┪╧┧╞┧╛ <u></u>		Stereo	ACJS-MHDE*
	1.81.8 [1.260 <sup>*</sup> ] - 1.260 <sup>*</sup> ] -			1/4" (6.35mmø) Dual Phone Jack (Pig- gyback), Horizontal Snap-fit PCB, Plastic housing, Metal thread, nut, washer and entry bore	Mono	ACJM-MHDM*
	<u>``</u> + <b>\}</b> ' ' +		₩ <u><u></u> <u><u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u></u></u>		Stereo	ACJS-MHDM*
elle.				1/4" (6.35mmø) Dual Phone Jack (Piggy- back), Shielding plate Horizontal Snap-fit PCB, Plastic housing, Metal thread, nut and entry bore	Mono	ACJM-MHDEM*
					Stereo	ACJS-MHDEM*
" PHONE JACKS VER	PHONE JACKS VERTICAL			1/4" (6.35mmØ) Jack,	Refer to Schematic	ACJM-PVB-2
				Vertical PCB mount, Plastic housing,	Chart on Page 110	ACJM-PVB-2S
			nut and entry bore		ACJS-PVB-3	
				ACJS-PVB-3S		
Alla		[0.047 -0.0	*/ -0.009 ] _= 24.0 [.945"]  =-			ACJS-PVB-5
	7 [.280"] 7 [.280"] 7 [.622"] 7 [.622"]	16	16	1/4" (6.35mmø) Jack, Vertical PCB mount,	Refer to Schematic	ACJM-MIV-2
			Needle eye contacts,	Chart on Page 110	ACJM-MIV-2S	
		Plastic thread, Metal nut and insert		ACJS-MIV-3		
-0		2 [.087*]			ACJS-MIV-3S	
						ACJS-MIV-5
	⊨24 [.945"]⊨ı			1/4" (6.35mmø) Jack, Vertical PCB mount,	Refer to Schematic Chart on Page 110	ACJM-MN-2
2		[.e30"]	Needle eye contacts, Star washer, Metal nut and insert	Ghait Un Faye 110	ACJS-MN-3	
					ACJM-MN-2S	
4600						ACJS-MN-3S
						ACJS-MN-5
			76"]	1/4" (6.35mmø) Jack, Vertical PCB mount, Metal nut and insert	Refer to Schematic Chart on Page 110	ACJM-MV-2
2		➡ 7 [.276"]				ACJM-MV-2S
		Ì				ACJS-MV-3
60.		μ.				ACJS-MV-3S
						ACJS-MV-5

PHONE JACKS

### **MUSICIAN/OEM RANGE**

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)		DESCRIPTION	VARIATIONS	PART NUMBER
			1/4" (6.35mmø) Jack, Solder Lug, Metal nut and insert	Refer to Schematic Chart on Page 110	ACJM-MVS-2
					ACJM-MVS-2S
The					ACJS-MVS-3
- 160					ACJS-MVS-3S
		-			ACJS-MVS-5

### PANEL CUTOUTS



PHONE JACKS

#### MUSICIAN/OEM RANGE

### **SCHEMATIC CHART**

PART NO.	ACJM-MV35-2 ACJM-MN-2 ACJM-NV35-2 ACJM-PVB-2 ACJM-MV-2 ACJM-MV5-2 ACJM-MIV-2	ACJM-MV35-28 ACJM-MV-28 ACJM-NV35-28 ACJM-PVB-28 ACJM-MV-28 ACJM-MVS-28 ACJM-MVS-28 ACJM-MIV-28	ACJS-MV35-3 ACJS-MN-3 ACJS-NV35-3 ACJS-PVB-3 ACJS-MV-3 ACJS-MVS-3 ACJS-MIV-3	ACJS-MV35-3S ACJS-MN-3S ACJS-NV35-3S ACJS-PVB-3S ACJS-MV-3S ACJS-MVS-3S ACJS-MVS-3S	ACJS-MV35-5 ACJS-MN-5 ACJS-NV35-5 ACJS-PVB-5 ACJS-MV-5 ACJS-MVS-5 ACJS-MIV-5
GENERAL Schematic	[ 3 1		↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	4	4 5 2 3 1

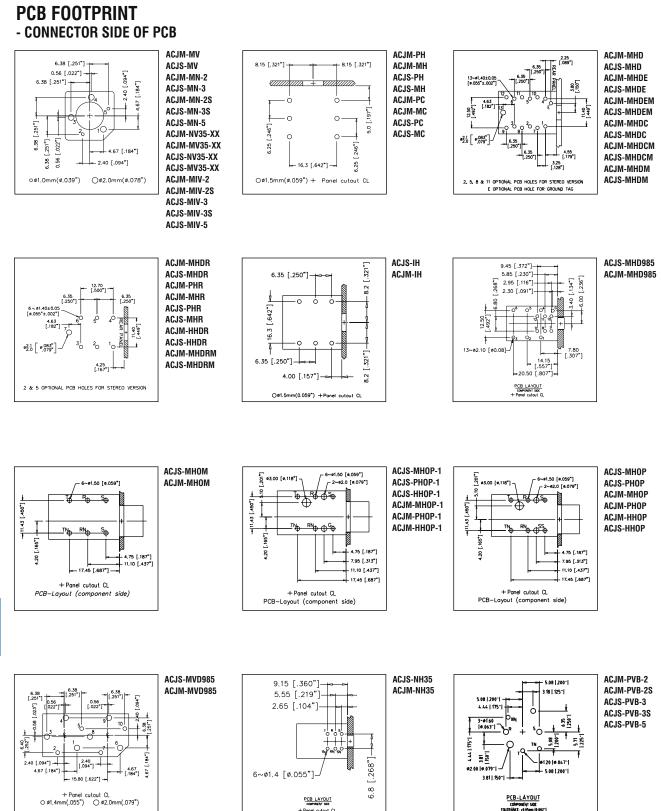
PART NO.	ACJM-MVD985-2	ACJM-MVD985-2S	ACJS-MVD985-3	ACJS-MVD985-3S	ACJS-MVD985-5
SCHEMATIC	[] 0 8 0 6		0 9 0 8 0 6	0 9 0 7 0 8 0 8 0 6	0 9 0 10 0 7 0 8 0 8
	[ 	[ 	0 4	$\begin{bmatrix} \sqrt{2} & \sqrt{2} \\ \sqrt{2} & \sqrt{2} $	$\begin{bmatrix} \sqrt{} & 0 & 4 \\ 0 & 5 & 0 & 5 \\ 0 & 2 & 0 & 3 \\ 0 & 3 & 0 & 1 \end{bmatrix}$

PART NO.	ACJM-HHOP-1	ACJS-HHOP-1	АСЈМ-ННОР	ACJS-HHOP
	ACJM-PHOP-1	ACJS-PHOP-1	Асјм-рнор	ACJS-PHOP
	ACJM-MHOP-1	ACJS-MHOP-1	Сјм-мнор	ACJS-MHOP
GENERAL SCHEMATIC				

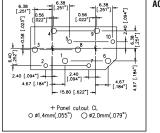


PHONE JACKS

#### **MUSICIAN/OEM RANGE**



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PHONE JACKS

MUSICIAN/OEM RANGE

### PLUG AND JACKS TECHNICAL DATA

		VALUE				
GENERAL Characteristics	Nunber of Contacts	2 Pole (Mono)				
CHARACIERISIICS		3 Pole Tip Ring Sleeve (Stereo)				
	Termination	Solder, PCB or Combo				
	Max. Wire Gauge - Stranded Wire	2 Pole (Mono): AWG 16~1.5mm <sup>2</sup>				
		3 Pole (Stereo): AWG 18 - 1mm <sup>2</sup>				
	Flammability rating of insulating plastics	UL94V-0				
	Solderability, complies with	IEC 68-2-20				
	Environmental	Complies with EU RoHS 2 Directive 2011/65/EU				
ELECTRICAL	Current Carrying Capacity	10A (Depends on Mating Connector and Cable)				
CHARACTERISTICS	Typical Contact Resistance	Depends on Mating Connector				
	Insulation resistance (initial)	>2GΩ				
	After Damp Heat Test	≥1GΩ				
	Dielectric Withstand Voltage	2 Pole : 1.5 kV dc				
		3 Pole : 1 kV dc				
CLIMATIC	Protection Class	IP40				
CHARACTERISTICS	Operating Temperature	-25°C to +75°C (-13°F to + 167°F)				
MECHANICAL	Insertion and Withdrawal Force	≥10N - ≤30N				
CHARACTERISTICS	Cable O.D. (Plugs)	6mm (0.236")				
MATERIALS	Connector Shell Material (Plugs)	Diecast Zinc Alloy EZDA No.3				
	Connector Shell Material (Jacks)	UL94 V-0 PBT Modified PPO Resin - Black				
	Connector Shell Finish	Satin Nickel, Nickel or Black Polyester				
	Insulators	UL94 V-0 PBT Resin or Modified PPE Resin and fibreglass laminate				
	Cable Bushing	Santoprene				
	Contacts / Plating (Plugs)	Brass / Ni over Cu (Copper)				
	Contacts / Plating (Jacks)	Brass / Sn (Tin) over Cu (Copper)				

<sup>1)</sup> Approximate weight only, does not include packaging. Please contact us for exact weight for shipping purposes.

Rev 3 - 03-2013



#### **Applications**

- · Audio Cables and Snakes
- Amplifiers
- Speakers
- Mixing desks
- Rack mount equipment
- Patch panel

### Features / Options – RCA Plugs and Jacks

- Red, Black, White, Yellow, Blue or Green shell
- colours
- Stylish shell design
- Flexible grommet cable protection
  Gold Plated Contacts

#### · Gold Plated Coll

#### Features / Options – Miniature XLR

- 3,4,5, or 6 contacts
- Solder cup
- Printed Circuit Board
- Vertical or Horizontal mounting
- · Positive locking latch
- Flexible cable clamp
- Metal cable clamp
- · Locking rings
- · Chassis front mount
- Chassis middle or rear mount (on request)
- Optional black finish (on request)

#### Features / Options – 3.5mm Plugs Phone Jack

- Mono / Stereo TRS
- Nono / Stereo Tr
  Solder contacts
- Suits cable 0.D 2.5mm to 5mm
- Stylised shell design
- Flexible cable grommet
- Metal cable clamp
- Ivietal cable clamp
- Nickel or Gold contact plating
  Satin Nickel or Black finish

#### **Cable Clamp Options**



RCA Cable Clamp - M-Series, Cable 0.D 3mm to 6.5mm (0.118" to 0.256")



K-Series, Cable O.D 3mm to 5mm (0.118" to 0.196")

PLUGS AND SOCKETS

**M / K SERIES** 

### PLUGS AND SOCKETS

Amphenol's plugs and sockets range continually expands to meet the needs of our customers. The success of the M-Series phone plugs led to the RCA series being developed. The Miniature XLR range was a natural progression from our standard XLR series as demand for smaller interconnects increased. The latest addition to the range is a professional grade 3.5mm phone plug designed for applications that require a robust interconnect.

#### **Ordering Codes**

We have listed the more common ordering codes in each section. Please contact us if you need any further assistance.

### Simple steps to guide you in using this catalogue

- 1) Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use variations column to determine your choice.
- 6) Identify part number.
- In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.

#### 3.5mm K-SERIES



#### Features:

- Mono or TRS (Stereo).
- AX Series inspired shell design.
  Suits Cable O.D from 2.5mm to 5mm (0.098" to 0.196")
- Robust diecast shell in Satin nickel or Black finish.
- Nickel or Gold contact plating.
- Flexible grommet cable protection.
- Improved solderability.Precision machined contacts.
- Standard or Bulk packaging.
- Options: Black Shell, Gold contacts.

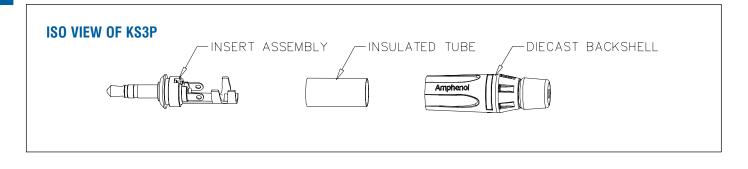
PRODUCT - FIGURE	DRAWING Dimensions in mm (i	nches) DESCRIPTION	VARIATIONS	PART NUMBER
	49 [1.911"]	3.5mm,	Standard	KM2P
100		Mono Phone plug, Diecast Shell, Satin finish,	Gold Plated Contacts	KM2P-AU
- Charles		Flexible grommet.	Bulk Pack	KM2P BULK
	49 [1.911"]	3.5mm, Mono Phone plug,	Standard	KM2PB
		Diecast Shell, Black finish,	Gold Plated Contacts	KM2PB-AU
and a		Flexible grommet.	Bulk Pack	KM2PB BULK
	49 [1.911"]	3.5mm, Stereo Phone plug,	Standard	KS3P
		Diecast Shell, Satin finish,	Gold Plated Contacts	KS3P-AU
- AD		Flexible grommet.	Bulk Pack	KS3P BULK
	لم الم الم الم الم الم الم الم الم الم ا	3.5mm, Stereo Phone plug,	Standard	KS3PB
		Diecast Shell, Black finish.	Gold Plated Contacts	KS3PB-AU
- HD		Flexible grommet.	Bulk Pack	KS3PB BULK
Marine.		3.5mm, Stereo Phone plug	Standard	KS3PC
Constant of the second	51 [2.008"] 37 [1.467"] 3.10 [.122"] 3.10 [.122"]	with extended shaft for mobile phones fitted with covers. Diecast Shell, Black Chrome finish, Flexible grommet	Gold Plated Contacts	KS3PC-AU

**STANDARD DATA** 

### PART NUMBER BREAKDOWN

**K-SERIES** 

E. G . <b>KS3P-AU BULK</b> K (Series Prefix), <b>S3</b> - <b>AU</b> (Gold Plated Co				sentes K	S3	SHELL P	WPE ANY BAC	LINISH LINISH	connet AU	PLATING BL
SERIES PREFIX	К	=	Series Prefix	]						
CONTACT TYPE	M2	=	2 Pole (mono)	1						
	S3	=	3 pole TRS (Stereo)							
SHELL TYPE	Р	=	Plug Satin Nickel	1						
AND FINISH	РВ	=	Plug Matt Black							
	PC	=	Plug Black Chrome							
BACKSHELL TYPE AND CABLE CLAMP	Blank	=	K Series to suit Cable 0.D 2.5mm to 5mm (0.098" to 0.196")	-						
CONTACT PLATING	Blank	=	Nickel Plated Contacts (Standard)	1						
	AU	=	Gold Plated Contacts							
PACKAGING	Blank	=	Individual Bags	]						
	BULK	=	Bulk Packed							



PLUGS AND SOCKETS

#### **RCA SERIES**



- Features: Stylish design Flexible grommet cable protection
- Robust diecast shell
  Gold plated contacts
- Colour coded
- Good solderability
- · Quick and easy assembly · Panel mount utilises standard 'D' type housing

#### Part Number Breakdown: page 122

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	COLOUR	PART NUMBER
	٣ ٣	RCA Plug, Diecast Shell,	Red	ACPR-RED
	62 [2.445"]	Gold plated contacts, Col-	Black	ACPR-BLK
N May		oured finish, Flexible coloured grommet.	Yellow	ACPR-YEL
	8		White	ACPR-WHT
	Amphenol		Blue	ACPR-BLU
all all			Green	ACPR-GRN
	5"]	RCA Plug, Diecast Shell,	Satin / Red	ACPR-SRD
	62 [2.445"]	Gold plated contacts,	Satin / Black	ACPR-SBK
		Satin finish, Flexible coloured grommet.	Satin / Yellow	ACPR-SYL
	8		Satin / White	ACPR-SWH
			Satin / Blue	ACPR-SBL
and the			Satin / Green	ACPR-SGR
		RCA Jack, Diecast Shell, Gold plated contacts, Coloured finish, Flexible coloured grommet.	Red	ACJR-RED
	54 [2.130"]		Black	ACJR-BLK
No.			Yellow	ACJR-YEL
			White	ACJR-WHT
			Blue	ACJR-BLU
~			Green	ACJR-GRN
	. [ ب	RCA Jack, Diecast Shell, Gold	Satin / Red	ACJR-SRD
	54 [2.130"]	plated contacts,	Satin / Black	ACJR-SBK
We then	=54 [2.130 ]= ∞ mi s	Satin finish, Flexible coloured grommet.	Satin / Yellow	ACJR-SYL
			Satin / White	ACJR-SWH
	Amphenol		Satin / Blue	ACJR-SBL
			Satin / Green	ACJR-SGR
	50.5 [1.988"]——I	RCA Plug, Shortened Diecast	Red	ACPL-CRD
	8 8 10.0 11.000 ] → 10.0 10.00 1	Shell, Gold plated contacts,	Black	ACPL-CBK
	<u> </u>	Black Chrome finish, Flexible coloured grommet.	Yellow	ACPL-CYL
			White	ACPL-CWH
			Blue	ACPL-CBL
			Green	ACPL-CGR

NOTE: RCA Series comply with EU RoHS 2 Directive 2011/65/EU

PLUGS AND SOCKETS

**M SERIES RCA** 

			RCA Jack, Diecast Shell,	Red	ACJD-RED
0			Gold plated contacts, Nickel	Black	ACJD-BLK
	11.22-1 1.945-1 0.921-1 0.921-1	\$20.6 \$20.6 [\$.811*]	finish shell, coloured insulator.	Yellow	ACJD-YEL
				White	ACJD-WHT
				Blue	ACJD-BLU
C. Description	- 26 [1.024"]			Green	ACJD-GRN

NOTE: RCA Series comply with EU RoHS 2 Directive 2011/65/EU

### PART NUMBER BREAKDOWN

VI SERIES RCA	A			SERIES	PREFIX	ACT TYPE SHELL TYPE	SHELFIN	pheratemic
E. G . ACPR-RED BULK AC (Series Prefix), F Bulk Packaged.	Plug, <b>R</b> (Shell	type), <mark>RED</mark> (	Shell and Grommet Colour),	AC	P	R -	RED	BULK
SERIES PREFIX	AC	=	Series Prefix	1				
CONTACT TYPE	J P	=	RCA Female Jack RCA Male Plug	<b> </b>				
SHELL TYPE	R L D	= = =	Regular Shell Length Short Shell Length Chassis Jack 'D' Shell	<b> </b>				
SHELL AND GROMMET COLOUR	RED BLK YEL WHT BLU GRN SRD CRD SBK CBK SYL CYL SWH CWH		Red, Red Grommet Black, Black Grommet Yellow, Yellow Grommet White, White Grommet Blue, Blue Grommet Green, Green Grommet Satin Nickel, Red Grommet Black Chrome, Red Grommet Black Chrome, Black Crommet Black Chrome, Black Crommet Black Chrome, Yellow Grommet Satin Nickel, White Grommet Black Chrome, White Grommet					
			Satin Nickel, Blue Grommet Black Chrome, Blue Grommet Satin Nickel, Green Grommet Black Chrome, Green Grommet pur of insulator only on shell type D, nell. Shell finish is Nickel.					
PACKAGING	Blank	=	Individual Bags					
	BULK	=	Bulk Packed					

#### **G-TYPE MINIATURE XLR**



#### Features:

- Miniature version of the standard XLR series
- Diecast or Precision machined metal housings
- Metal cable clamp
- Precision machined pin contacts
- Stamped socket contacts
- Solder cup or Printed Circuit board contacts
- Available in 3, 4, 5 or 6 contacts
- Postive latchlock
- Flexible cable grommet

### Part Number Breakdown: page 124Specifications: page 125PCB Footprints: page 126Panel Cutouts: page 126

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
		Male cable connector,	3 pole	AG3M
	610.5 [.4137]7	Machined contacts, Nickel Finish	4 pole	AG4M
	1		5 pole	AG5M
	L→52 [2.055*]		6 pole	AG6M
		Female cable con-	3 pole	AG3F
Cin		nector, Stamped contacts,	4 pole	AG4F
	40.5 [1.596"]	Nickel Finish	5 pole	AG5F
	49 [1.910"]		6 pole	AG6F
	→ 36 [1.398*] → → 9 [.339*]	Female cable connec-	3 pole	AG3FL
		tor with locking ring, Stamped contacts,	4 pole	AG4FL
A Carl		Nickel Finish.	5 pole	AG5FL
20	49 [1.929"]		6 pole	AG6FL
1 Com	1.0 [.039 <sup>*</sup> ]	Male chassis con- nector, Machined contacts, Nickel Finish	3 pole	AG3MCC
			4 pole	AG4MCC
0			5 pole	AG5MCC
			6 pole	AG6MCC
	-22.1 [.870*] 2.5 [.098*] -14.4 [.567*] -1.0	Female chassis	3 pole	AG3FCE
		connector, Stamped contacts,	4 pole	AG4FCE
	-16.6 [ 4500]	Nickel Finish	5 pole	AG5FCE
	B.6 [.337"]		6 pole	AG6FCE
	26.8 [1.056"] +15.5 [.610"]	Male chassis	3 pole	AG3MCCH
	2.5 [0987]	connector, Horizontal PCB,	4 pole	AG4MCCH
	2.51	Machined contacts, Nickel Finish	5 pole	AG5MCCH
No. of Concession, Name			6 pole	AG6MCCH
	2.6 [.098 <sup>-</sup> ] 8.4 [.335 <sup>-</sup> ]	Female chassis	3 pole	AG3FCCH
		connector, Horizontal PCB,	4 pole	AG4FCCH
		Stamped contacts, Nickel Finish	5 pole	AG5FCCH
			6 pole	AG6FCCH

ENTERTAINMENT INTERCONNECT CATALOGUE - Amphenol Australia Pty Ltd Telephone 61 3 8796 8888 Fax 61 3 8796 8801

PLUGS AND SOCKETS

#### **G TYPE CONNECTORS**

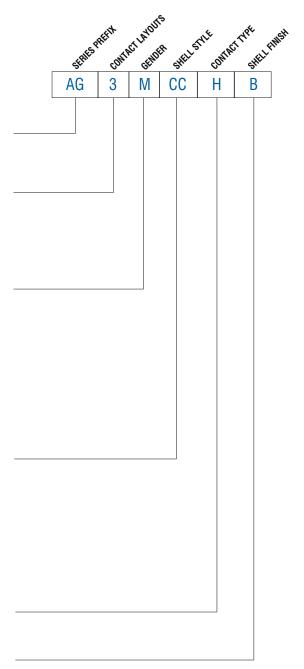
10	7.1 [.28"] 7.1 [.	Image: Construction of the second	4 pole	AG4MPCH
		Female chassis con-	3 pole	AG3FCRV
1 States	-["5-3"]- -["1-1]- -["1-1]- -["1-1]- -["1-1]-	Linector,	4 pole	AG4FCRV
		ិទួ Nickel Finish	5 pole	AG5FCRV
			6 pole	AG6FCRV

### **PART NUMBER BREAKDOWN** G TYPE CONNECTORS

#### E. G . AG3MCCHB

AG (Series Prefix), 3 contacts, Male, Chassis Connector, Horizontal PCB Contacts, Black finish.

SERIES PREFIX	AG	=	Series Prefix
CONTACT LAYOUTS	3	=	3 Contacts
	4	=	4 Contacts
	5	=	5 Contacts
	6	=	6 Contacts
GENDER	F	=	Female Socket Contacts
	М	=	Male Pin Contacts
	Blank	=	Cable Connector Standard (Male or Female)
SHELL STYLE	J	=	Cable Connector Large Cable clamp / boot O.D (Male or Female)
	L	=	Cable Connector with locking ring (Female)
	LL	=	Latchless (Chassis Connector)
	CC	=	Chassis Connector Circular Metal (Male)
	CE	=	Rear Mount (Chassis Connector)
	СМ	=	Mid Mount (Chassis Connector)
	CR	=	Chassis Connector Rectangular Metal (Female)
	PC	=	Chassis Connector Plastic (Male)
	Blank	=	Solder Buckets (All styles except PC, CR)
CONTACT TYPE	Н	=	Horizontal PCB (Style CC, PC only)
	V	=	Vertical PCB (Style CR only)
	Blank	=	Nickel Plated Finish
SHELL FINISH	В	=	Black Finish



**G TYPE CONNECTORS** 

### **STANDARD DATA G TYPE**

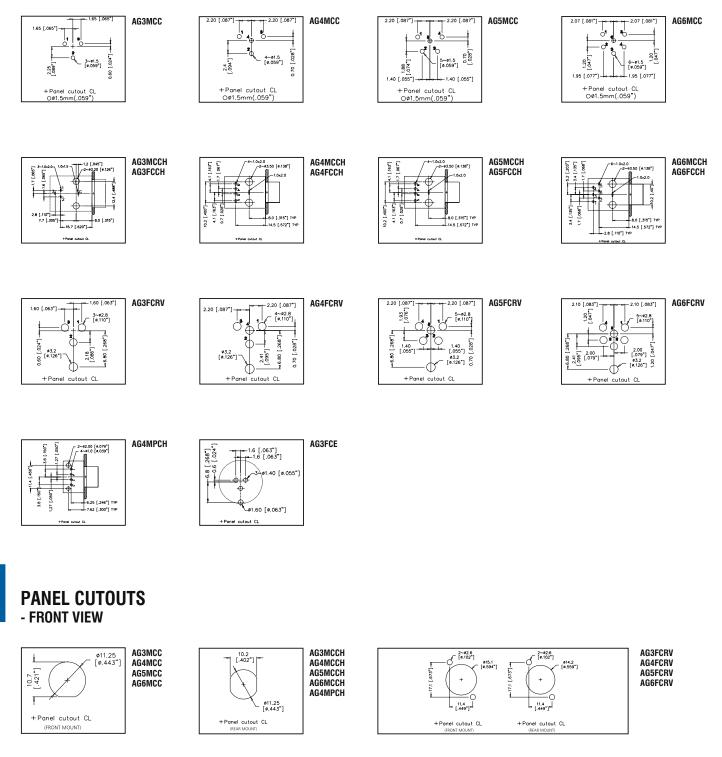
			VAL	.UE					
GENERAL	Number of contacts	3	4	5	6				
CHARACTERISTICS	Termination		Printed Circuit Board (	(PCB) or Solder Bucket					
	Flammability		UL9	4V-0					
	Environmental		Complies with EU RoHS	2 Directive 2011/65/El	J				
ELECTRICAL CHARACTERISTICS	Service Voltage RMS <sup>1)</sup>	Ditage RMS <sup>1)</sup> 1000V 1000V 22		250V					
CHARACTERISTICS	Test Voltage AC RMS		125	V AC					
	Current carrying capacity	5A	5A	4A	1.2A				
	Typicial Contact Resistance		≤10	)mΩ					
	Insulation Resistance (initial)		≥51	0ΜΩ					
	Insulation Resistance (After damp heat test)		≥10	ΙΜΩ					
CLIMATIC Characteristics	Protection Class		IP	00					
CHARACTERISTICS	Operating Temperature		-30°C to +80°C	C (-20F - +176F)					
MECHANICAL Characteristics	Weight **		13.	.5g					
			(0.02	29lb)					
	Insertion Spring Separating Force		≥2	ON					
	Mechanical Operations	5000 mating cycles	5000 mating cycles	5000 mating cycles	2000 mating cycles				
	Cable O.D. range	2mm to 3.5mm (I	0.078" to 0.137")	3mm to 5mm (0.	118" to 0.196")				
MATERIALS	Connector Shell		Bronze	& Zinc					
	Shell Finish		Nickel	Plated					
	Insulators		PPS -	Black					
	Male Contact - Material		Brass	C3604					
	- Plating		Gold over S	Silver plated					
	Female Contact - Material		Brass C	C5210P					
	- Plating		Gold over S	Silver plated					
	Latch Lock and Spring		SUS (AISI - 301	) - Nickel Plated					
	Adaptor	PPS - Black							
	Cable Clamp		Bronze - N	ickel Plated					
	Boot/Backshell		ABS -	Black					
	Grommet		PU -	Black					

\*\*Approximate weight in grams not include packaging. Please contact us for exact weight for shipping purposes.

PLUGS AND SOCKETS

**G TYPE CONNECTORS** 

#### PANEL CUTOUTS - CONNECTOR SIDE OF PCB



126

Ro



Amphenol has an extensive range of circular and rectangular multi-pin connectors ideally suited to the entertainment industry. Featuring rugged housings and precision made contacts these connectors have proven themselves in the most demanding of applications. The extensive arrangement of different connector sizes and contact numbers ensure we can offer a solution to your multi-pin wiring applications.

#### **Applications**

- · Audio Cables and Snakes
- Lighting control
- Concert Touring Systems
- · Outside Broadcast Systems

#### Features / Options - MP-41 Series

- 13 to 85 pins with Crimp / Solder bucket contacts
- 150 pins with Crimp contacts only
- 4 to 48 channel
- Gold plated contacts
- Synthetic inserts
- Environmental resistant
- · Positive Bayonet locking
- PG cable gland
- 2000 mating cycles
- Bayonet wear pins
- Extended coupling ring
- Metal Housings

#### Features / Options - MP-62 Series

- 39 or 61 Solder bucket contacts
- Gold plated contacts
- Neoprene inserts
- Environmental resistant
- Positive Bayonet locking
- PG cable gland or NPT thread
- Metal Housings

#### **Ordering Codes**

We have listed the more common ordering codes in each section. For further options please contact us.

### MULTIPIN CONNECTORS

### Simple steps to guide you in using this catalogue

- 1) Identify the product group listed in Contents on page 1 and go directly to that page number.
- 2) Each product group cover page then details information and options available.
- 3) Refer to the product detail pages and identify the product you require pictorially.
- 4) Read the product description column for the products standard features.
- 5) Use pins column to determine number of contacts.
- 6) Identify part number.
- In the event the particular option you require is not listed please refer to the part number breakdown page at the end of each section.
- 8) Please contact us directly if you have any further problems.

#### MULTIPIN CONNECTORS

#### **MP-41 SERIES**



Amphenol's MP-41 series of multipin connectors utilise the same design principals of the rugged Mil-C-5015 military connectors. They can withstand high shock and vibration environments and are ideal for tough on-road applications. Featuring a quick mating bayonet coupling with an audible full mating feature ensures a positive connection every time. Available from 13 to 150 pins with contacts supplied with each connector as standard.

#### Features:

- · 13 to 85 pins with Crimp/Solder bucket contacts
- · 150 pins with Crimp contacts only
- 4 to 48 channels
- · Gold plated contacts
- · Synthetic insert
- Protective dust caps

· Industry standard compatible

- 2000 mating cycles Black finish
- · Positive bayonet locking
  - PG cable glands
- · IP67 rated
- · Metal housings

lls. Crimp Tooling: page 131 Part Number Breakdown: page 131

			ive dust ( NPT three ations: Informate	eaded page	132	Metal housings nells. Crimp Tooling: page 1 Part Number Breakdown: page 1		
PRODUCT - FIGURE	Dimensions in mm (inches) DRAWING	Dimensio A	ns in mm (iı B	nches) PG	PINS	PART NUMBER	PART NUMBER With Dustcap	
	Straight cable plug with socket	40.5	160					
	contacts, Black finish, supplied complete with contacts.	(1.60)	(6.30)	11	13	MP-4106-13S	MP-4106-13S-C	
CONCELLENCE OF THE OWNER		44	171					
and the second sec	+ <del>-</del> B	(1.73)	(6.73)	13.5	19	MP-4106-19S	MP-4106-19S-C	
		46.6	193					
1/10		(1.83)	(7.60)	16	25	MP-4106-25S	MP-4106-25S-C	
		54.3	210					
711	13, 19, 25, 37 and 54 contact type	(2.14)	(8.26)	21	37	MP-4106-37S	MP-4106-37S-C	
	B	60.1	210	01	54	MD 4100 540	MD 4100 E40 0	
		(2.36)	(8.26)	21	54	MP-4106-54S	MP-4106-54S-C	
		(2.88)	(5.40)	29	85	MP-4106-85S	MP-4106-85S-C	
		73.3	145	23	00	WII -4100-030	Wii -4100-030-0	
	85 and 150 contact type	(2.88)	(5.70)	36	150	MP-4106-150S	MP-4106-150S-C	
		37.8	160					
	Cable connecting receptacle with pin contacts, black finish, supplied	(1.49)	(6.30)	11	13	MP-4101-13P	MP-4101-13P-C	
all the second s	complete with contacts.	41.1	171					
1 Car		(1.62)	(6.73)	13.5	19	MP-4101-19P	MP-4101-19P-C	
(A)	B-B-B-B-B-B-B-B-B-B-B-B-B-B-B-B-B-B-B-	41.5	193					
		(1.63)	(7.60)	16	25	MP-4101-25P	MP-4101-25P-C	
VIII		Ny 51	210					
	PG 13, 19, 25, 37 and 54 contact type	(2.00)	(8.26)	21	37	MP-4101-37P	MP-4101-37P-C	
	H	57.1	210					
		(2.25)	(8.26)	21	54	MP-4101-54P	MP-4101-54P-C	
		70	137					
		(2.75)	(5.40)	29	85	MP-4101-85P	MP-4101-85P-C	
	85 and 150 contact type	70	145		1-0			
		(2.75)	(5.70)	36	150	MP-4101-150P	MP-4101-150P-C	

Note: NPT threaded backshells available on request. Please contact us.

**MP-41 SERIES** 

	Dimensions in mm (inches)		Di	mensions	in mm (inc	:hes)				
PRODUCT - FIGURE	DRAWING	A	В	C	D	E	F	PINS	PART NUMBER	PART NUMBER With Dustcap
0	Panel plug with socket contacts,	38	29.4	3.2	40.5	38.8	1	1		
	black finish, supplied complete	(1.49)	(1.15)	(0.13)	(1.60)	(1.53)	N/A	13	MP-4164-13S	MP-4164-13S-C
1/1/00	with contacts.	41	31.8	3.2	44	38.8	N1/A	10	MD 4104 100	MP-4164-19S-C
1 6883		(1.61) 44.5	(1.25) 34.9	(0.13) 3.73	(1.73) 48.51	(1.53) 40.6	N/A	19	MP-4164-19S	WII -4104-190-0
6888	A	(1.75)	(1.37)	(0.14)	(1.91)	(1.60)	N/A	25	MP-4164-25S	MP-4164-25S-C
A 1. (200)		50.8	39.7	3.73	54.3	42	,			
		(1.99)	(1.56)	(0.14)	(2.14)	(1.65)	N/A	37	MP-4164-37S	MP-4164-37S-C
111		57	44.5	4.39	60.8	45				
		(2.24)	(1.75)	(0.17)	(2.40)	(1.77)	N/A	54	MP-4164-54S	MP-4164-54S-C
		69.8 (2.74)	55.5 (2.18)	4.39 (0.17)	73.3 (2.88)	45 (1.77)	N/A	85	MP-4164-85S	MP-4164-85S-C
		69.8	55.5	4.39	73.3	45	IN/A	00	IVIF-4104-033	Mil 4104 000 0
		(2.74)	(2.18)	(0.17)	(2.88)	(1.77)	N/A	150	MP-4164-150S	MP-4164-150S-C
		38	29.4	3.23	34.2	34.5	29			
a series	Panel receptacle with pin contacts, black finish, supplied complete with	(1.49)	(1.15)	(0.13)	(1.34)	(1.35)	(1.14)	13	MP-4102-13P	MP-4102-13P-C
SA P	contacts.	41	31.8	3.23	37.4	34.5	32.2			
		(1.61)	(1.25)	(0.13)	(1.47)	(1.35)	(1.26)	19	MP-4102-19P	MP-4102-19P-C
15 689		44.5 (1.75)	34.9 (1.37)	3.73 (0.14)	40.9 (1.61)	35.7 (1.40)	35.3 (1.38)	25	MP-4102-25P	MP-4102-25P-C
		50.8	39.7	3.73	46.7	36.5	41.4	23	WII -4102-231	
		(1.99)	(1.56)	(0.14)	(1.83)	(1.44)	(1.62)	37	MP-4102-37P	MP-4102-37P-C
11/1/		57	44.5	4.30	53.4	38.5	47.8			
		(2.24)	(1.75)	(0.17)	(2.10)	(1.52)	(1.88)	54	MP-4102-54P	MP-4102-54P-C
		69.8	55.5	4.30	65.5	38.5	59			
		(2.74)	(2.18)	(0.17)	(2.57)	(1.52)	(2.32)	85	MP-4102-85P	MP-4102-85P-C
		69.8 (2.74)	55.5 (2.18)	4.30 (0.17)	65.5 (2.57)	38.5 (1.52)	59 (2.32)	150	MP-4102-150P	MP-4102-150P-C
		34.16	31.5	110	4.7	(1.02)	(2.02)	100	101 4102 1001	
	Plug protective dustcap to suit MP-	(1.35)	(1.24)	(4.33)	(0.18)	-	-	13	MP-25042-13S	-
	4164 type.	37.36	31.5	110	4.7					
		(1.47)	(1.24)	(4.33)	(0.18)	-	-	19	MP-25042-19S	-
		40.87	31.5	110	4.7			0.5		
	<b>_</b>	(1.61) 46.68	(1.24) 31.5	(4.33)	(0.18)	-	-	25	MP-25042-25S	-
1 8		(1.84)	(1.24)	(4.33)	(0.18)	_	-	37	MP-25042-37S	-
		53.36	31.5	110	5.5					
Sec.		(2.10)	(1.24)	(4.33)	(0.22)	-	-	54	MP-25042-54S	-
		65.48	31.5	110	5.5					
		(2.58)	(1.24)	(4.33)	(0.22)	-	-	85	MP-25042-85S	-
		65.48	31.5	110 (4.33)	5.5 (0.22)	_		150	MP-25042-150S	
		(2.58) 38.8	(1.24) 20.7	(4.33)	(0.22)		-	150	IVIE-20042-1008	-
	Receptacle protective dustcap to	(1.53)	(0.81)	(8.07)	-	-	-	13	MP-25042-13L	-
	suit MP-4106 types.	41.6	20.7	255						
		(1.64)	(0.81)	(8.07)	-	-	-	19	MP-25042-19L	-
		45.3	20.7	255						
	r	(1.78)	(0.81)	(8.07)	-	-	-	25	MP-25042-25L	-
		52.15 (2.05)	20.7 (0.81)	255 (8.07)		_		37	MP-25042-37L	-
		58.6	20.7	255				01	WI -20042-07L	
$\bigcirc$		(2.30)	(0.81)	(8.07)	-	-	-	54	MP-25042-54L	-
		70.7	20.7	255						
		(2.78)	(0.81)	(8.07)	-	-	-	85	MP-25042-85L	-
		70.7	20.7	255						
		(2.78)	(0.81)	(8.07)			-	150	MP-25042-150L	-

ACCESSORIES

PRODUCT - FIGURE	Dimensions in mm (inches)	Di	mensions	in mm (inc	hes)		PINS	PART NUMBER	
THOBOUT THUCKE	DRAWING	A	B	C	D	E	F		
		34.16	31.5	110	4.7				
	Plug protective dustcap to suit MP-	(1.35)	(1.24)	(4.33)	(0.18)	-	-	13	MP-25043-13S
	4102 types.	37.36	31.5	110	4.7				
		(1.47)	(1.24)	(4.33)	(0.18)	-		19	MP-25043-19S
		40.87	31.5	110	4.7				
		(1.61)	(1.24)	(4.33)	(0.18)	-	-	25	MP-25043-25S
1 8		46.68	31.5	110	4.7				
		(1.84)	(1.24)	(4.33)	(0.18)	-		37	MP-25043-37S
X	<b>® 1</b>	53.36	31.5	110	5.5				
		(2.10)	(1.24)	(4.33)	(0.22)	-	-	54	MP-25043-54S
	- •••	65.48	31.5	110	5.5				
		(2.58)	(1.24)	(4.33)	(0.22)	-	-	85	MP-25043-85S
		65.48	31.5	110	5.5				
		(2.58)	(1.24)	(4.33)	(0.22)	-	-	150	MP-25043-150S
		38.8	20.7	255					
	Receptacle protective dustcap to	(1.53)	(0.81)	(8.07)	-	-	-	13	MP-25043-13L
	suit MP-4101 types.	41.6	20.7	255					
		(1.64)	(0.81)	(8.07)	-	-	-	19	MP-25043-19L
		45.3	20.7	255					
		(1.78)	(0.81)	(8.07)	-	-		25	MP-25043-25L
1 2		52.15	20.7	255					
		(2.05)	(0.81)	(8.07)	-	-	-	37	MP-25043-37L
O		58.6	20.7	255					
		(2.30)	(0.81)	(8.07)	-	-		54	MP-25043-54L
		70.7	20.7	255					
		(2.78)	(0.81)	(8.07)	-	-	-	85	MP-25043-85L
		70.7	20.7	255					
		(2.78)	(0.81)	(8.07)				150	MP-25043-150L

#### MULTIPIN CONNECTORS

**ACCESSORIES** 

### Amphenol

PRODUCT - FIGURE	DRAWING	DESCRIPTION	NO. OF PINS	PART NUMBER
	N/A	Crimp Tool	All	M22520/1-01
	N/A	Positioner / Turret	All	TH29-1
	N/A	Insertion tool	13-85	MP-INS-16
	N/ / Y		150	MP-INS-18
	N/A	Extraction tool	All	MP-EXT-16/18
	N/A	Contact Pilot Pin	13-85	MP-GUIDE-16
	IN/ A		150	MP-GUIDE-18
	NI/A	Solder/Crimp Pin Contact	13-85 (Size 16)	MP-108400
	N/A	Crimp Pin Contact (Soldering of this contact is not recommended)	150 (Size 18)	MP-108300
	N/A	Solder/Crimp Socket Contact	13-85 (Size 16)	MP-108600
	IN/A	Crimp Socket Contact (Soldering of this contact is not recommended)	150 (Size 18)	MP-108500

NOTE: Complete instructions for providing reliable crimped wire to contact terminations and inserting proprietary contacts in MP-41 Series connectors are available in publication Pi523 located on our website www.amphenolaudio.com.

### **PART NUMBER BREAKDOWN MP-41 SERIES**

E. G . MP-4106-85S Multipin, 4106 Cable	e Plug, <b>85</b> Con	tacts, <mark>S</mark> Fe	male Socket Contacts,	SERIES PREEM			aff of contracts	R OPT
SERIES PREFIX	MP	=	Series Prefix	MP -	4106	- 85	S	C
HOUSING TYPE	4101	=	Inline cable connecting receptacle					
	4102	=	Panel receptacle					
	4106	=	Cable plug					
	4164	=	Panel plug					
	25042S	=	Dustcap for panel plug					
	25042L	=	Dustcap for cable plug					
	25043S	=	Dustcap for panel receptacle					
	25043L	=	Dustcap for cable receptacle					
NO. OF CONTACTS			13, 19, 25, 37, 54, 85, 150					
GENDER	Р	=	Male pin contacts					
*Not required for dustcap part numbers	S	=	Female socket contacts					
OPTIONS	С	=	Supplied with Dustcap					

ENTERTAINMENT INTERCONNECT CATALOGUE - Amphenol Australia Pty Ltd Telephone 61 3 8796 8888 Fax 61 3 8796 8801

MULTIPIN CONNECTORS

**STANDARD DATA** 

### **STANDARD DATA MP-41 SERIES**

					VALUE			
GENERAL	Number of contacts	13	19	25	37	54	85	150
CHARACTERISTICS	Number of channels	4	6	8	12	16	28	48
	Termination			Solder / Crir	np "Combo"			Crimp
	Wire Gauge - Stranded Wire			16AWG - 2	20AWG			18AWG
	Environmental		Complies	with EU RoHS	2 Directive 2	011/65/EU		
ELECTRICAL	Operating Voltage at Sea level - DC			250	)V*			250V*
CHARACTERISTICS	Operating Voltage at Sea level - AC			200	)V*			200V*
	Test Voltage AC RMS			100	)0V			1000V
	Current Carrying Capacity			13	A			7.5A
	Typical Contact Resistance			3.46	imΩ			11.25mΩ
	Insulation Resistance			5000	)ΜΩ			
CLIMATIC Characteristics	Protection Class			IP67 (wi	nen mated)			
CHARACTERISTICS	Operating Temperature		-55°	°C to +125°C	(-67°F to +2	57°F)		
MECHANICAL	Cable Retention			PG	Gland			
CHARACTERISTICS	Mechanical Operations			2000 ma	ting cycles			
MATERIALS	Connector / Shell Finish			Aluminium	Alloy / Black			
	Insert		S	ynthetic Inser	t to MIL-R-30	65		
	Male pin contact / Plating			Brass / G	old plated			
	Female socket contact / Plating	Brass / Gold plated						
CLAMPING	PG Gland	11	13.5	16	2	29	36	
CHARACTERISTICS	Cable Clamping range mm	4-10	5-12	9-14	13	-18	14-25	19-32
	(inches)	(0.15"- 0.39")	(0.19"- 0.47")	(0.35"- 0.55")	(0.51"	- 0.70")	(0.55"- 0.98")	(0.74"- 1.25")

\*Not suitable for domestic applications above 50V

Rev 2 - 03/2013

#### MP-62/MP-65 SERIES



Amphenol's Multipin MP-62 series of circular connectors utilise the same design principles as the Mil-C-26482 military connectors. Featuring a three point quick mating bayonet coupling and five key polarisation ensuring a positive connection every time. Available in two contact pin layouts 39 and 61 with gold plated solder contacts fitted as standard.

#### Features:

- 39 or 61 pins.
- Gold plated solder contacts.
- Neoprene insert.
- Protective dust caps
- Metal housings

#### Specifications: page 135

#### • Environmental resistant.

- Black finish.
- · Positive bayonet locking
- PG cable glands

#### Wiring Info: page 140

PRODUCT - FIGURE	Dimensions in mm (inches) DRAWING		ns in mm (in		PINS	PART NUMBER	PART NUMBER
		A	В	PG			With Dustcap
	Straight cable plug with pin contacts, Black finish, Gold plated solder contacts.	38.9	181.5	16	39		
	►B	(1.53)	(7.15)			MP-6216-39P	MP-6216-39P-C
		45.5	193	21	61		
		(1.80)	(7.60)			MP-6216-61P	MP-6216-61P-C
	Cable connecting receptacle with socket contacts, Black finish, Gold plated solder contacts.	36.7	181.5	16	39		
and the second	8	(1.45)	(7.15)			MP-6211-39S	MP-6211-39S-C
		43.0	193	21	61		
		(1.70)	(7.60)			MP-6211-61S	MP-6211-61S-C
	Straight cable plug with pin contacts, NPT 3/4" threaded backshell, Black finish, Gold plated	38.9	90	NPT	39		
	solder contacts.	(1.53)	(3.54)	3/4"		MP-6516-39P	MP-6516-39P-C
		45.5	100	NPT	61		
		(1.80)	(3.94)	3/4"		MP-6516-61P	MP-6516-61P-C
	Cable connecting receptacle with socket contacts, NPT 3/4" threaded backshell, Black finish,	36.7	90	NPT	39		
	Gold plated solder contacts.		(3.54)	3/4"		MP-6511-39S	MP-6511-39S-C
			100	NPT	61		
		(1.70)	(3.94)	3/4"		MP-6511-61S	MP-6511-61S-C

#### ACCESSORIES

PRODUCT - FIGURE	Dimensions in mm (inches)		Dime	nsions i	n mm (ii	nches)		PINS	PART	PART NUMBER
	DRAWING	A	В	C	D	E	F	1 1110	NUMBER	With Dustcap
-	Panel plug with pin contacts, Black fin- ish, Gold plated solder contacts.	38.86	29.36	6-32	39.0	32	-			
1		(1.53)	(1.16)	UNC	(1.54)	(1.26)	-	39	MP-6256-39P	MP-6256-39P-C
		43.94	34.93	6-32	45.5	35	-			
			(1.38)	UNC	(1.80)	(1.38)	-	61	MP-6256-61P	MP-6256-61P-C
·	Panel receptacle plug with socket contacts, Black finish, Gold plated solder contacts.	36.7	29.36	3.05	31.8	22.3	30.1			
( ALEX	A B ØC	(1.44)	(1.15)	(0.12)	(1.25)	(0.87)	(1.18)	39	MP-6212-39S	MP-6212-39S-C
			34.93	3.74	38.1	22.3	36.4			
		(1.69)	(1.38)	(0.15)	(1.50)	(0.87)	(1.43)	61	MP-6212-61S	MP-6212-61S-C

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION		imensions	· · ·	ches)	PINS	PART NUMBER
			A	В	C			
		Plug protective dustcap to suit MP-6256	31.7	15.9	127	4.40	39	MP-742-39S
and the second			(1.25)	(0.62)	(4.99)	(0.17)		111 1 12 000
			38.05	16.70	127 (4.99)	4.40	61	MP-742-61S
		Receptacle protective				(0.17)		
	ر	dustcap to suit MP-6216	36.9 (1.45)	13.13 (0.52)	127 (4.99)	-	39	MP-742-39L
			43.14 (1.70)	14.15 (0.56)	127 (4.99)	-	61	MP-742-61L
<b>C</b> 24	c	Plug protective dustcap to suit MP-6212	31.7 (1.25)	15.9 (0.62)	127 (4.99)	4.40 (0.17)	39	MP-738-39S
			38.05 (1.50)	16.70 (0.66)	127 (4.99)	4.40 (0.17)	61	MP-738-61S
	г <i>с</i>	Receptacle protective dustcap to suit MP-6211	36.9 (1.45)	13.13 (0.52)	127 (4.99)	-	39	MP-738-39L
0			43.14 (1.70)	14.15 (0.56)	127 (4.99)	-	61	MP-738-61L

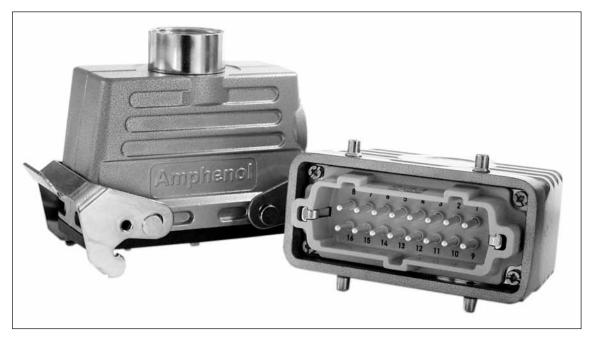
ACCESSORIES

### **STANDARD DATA MP-62 SERIES / MP - 65 SERIES**

		VAI	LUE			
GENERAL	Number of contacts	39	61			
CHARACTERISTICS	Number of channels	12	20			
	Termination	Sol	der			
	Wire Gauge - Stranded Wire	37 x 24AWG-20AWG	24AWG-20AWG			
		2 x 20AWG-16AWG				
	Environmental	Complies with EU RoHS	2 Directive 2011/65/EU			
ELECTRICAL	Operating Voltage at Sea level - DC	600	YV*			
CHARACTERISTICS	Operating Voltage at Sea level - AC	600	YV*			
	Test Voltage AC RMS	150	00V			
	Current Carrying Capacity	37 x 7.5A	7.5A			
		2 x 13A				
	Insulation Resistance	500	ΟΜΩ			
CLIMATIC	Protection Class	IP67 (wh	en mated)			
CHARACTERISTICS	Operating Temperature	-55°C to +125°C (	-67°F to +257°F)			
MECHANICAL	Cable Retention	PG Glar	nd / NPT Thread			
CHARACTERISTICS	Mechanical Operations	500 mating cy	cles (minimum)			
MATERIALS	Connector / Shell Finish	Aluminium /	Alloy / Black			
	Insert	Neop	prene			
	Male pin contact machined - Plating	Brass / Gold plated				
	Female socket contact machined - Plating	g Brass / Gold plated				
CLAMPING	PG Gland	16	21			
CHARACTERISTICS	Cable Clamping range mm (inches)	9-14 (0.35"-0.55")	13-18 (0.51"-0.70")			

\*Not suitable for domestic applications above 50V

#### **COMPLEMENTARY PRODUCTS**



#### **146 SERIES RECTANGULAR CONNECTORS**

Amphenol Tuchel C146 series rectangular connectors feature modular components ensuring a vast range of different features and benefits for the end user. The zinc diecast aluminum housings are finished in a durable powder coat and available in either top or side entry. Connector coupling is achieved via a positive locking lever ensuring a positive rapid connection. The C146 series is suitable for general-purpose audio and lighting applications and is completely intermateable with all competitor connectors.



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#### FIBRE OPTIC

Amphenol has over 25 years experience in fibre optics dating back to their development of the first industry standard connector, the SMA. Today we can offer a complete range of products including Hybrid Fibre optic connectors for HDTV broadcast cameras SMPTE 304M compliant and ruggedised connectors and cable assemblies for indoor or outdoor applications.

AC SERIES

ACCESSORIES



### ACCESSORIES

- Colour coded boots(backshells) and rings to assist in cable identification.
- In-line adaptors. Pre-wired for convenience.
- Termination tool for fast assembly of cable connectors.
- Mounting hardware.
- Metal boots(backshells) for rugged environments.

PRODUCT - FIGURE	DRAWING Dimensions in mm	(inches) DESCRIPTION	VARIATIONS	PART NUMBER
	60.4 [2.378*]	XLR 3 pole male to 3 pole male adapter,	Nickel Finish	AC3M3MW
	AMPHENOL [0.748"]	Pre wired, Metal Shell	Black Finish	AC3M3MBW
		XLR 3 pole female to 3 pole female adapter,	Nickel Finish	AC3F3FW
	60.4 (2.378°)	Pre wired, Metal Shell	Black Finish	AC3F3FBW
and the second	ANDHENOL [8,745 <sup>-</sup> ]	XLR 3 pole female to 3 pole male adapter,	Nickel Finish	AC3F3MW
		Pre wired, Metal Shell	Black Finish	AC3F3MBW
		XLR 3 pole female to 5 pole male adapter, Pre wired, Metal Shell	Nickel Finish	AC3F5MW
		XLR 3 pole male to 5 pole female adapter, Pre wired, Metal Shell	Nickel Finish	AC3M5FW
	€ € 0.245°]	XLR 5 pole male to 5 pole male adapter, Pre wired, Metal Shell	Nickel Finish	AC5M5MW
		Termination Tool	For IDC and Solder cable connectors	T2860
A LAND		Termination Tool	For AC Series Right Angle cable con- nectors	T2880
		Termination Tool	For AX Series cable connectors	T2890
~		A Type / C Type Connector Mounting, Self-Tapping Screw	2.9 x 1.06 Tri-rondular	52500002-734
~	M2.5 04.50	B Type Connector Mounting, Self-Tapping Screw	M2.5	52500005-732

AC SERIES

ACCESSORIES

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
		AX Series	Brown	AX-BOOT-1
		Coloured Boot	Red	AX-BOOT-2
			Orange	AX-BOOT-3
	<u>+</u>		Yellow	AX-BOOT-4
	1687		Green	AX-BOOT-5
	Ø 212 (83)		Blue	AX-BOOT-6
			Violet	AX-BOOT-7
	' ل <b>م</b> ــــــــــــــــــــــــــــــــــــ		Grey	AX-BOOT-8
			White	AX-B00T-9
			Black	AX-BOOT
			Clear	AX-BOOT-CLR
<b>A</b>		AC Coloured	Brown	AC-NUT-BRN
		Boot / Backshell	Red	AC-NUT-RED
	49.5 [1.949"]		Orange	AC-NUT-ORG
			Yellow	AC-NUT-YEL
	\$20.2 [[a.795"]		Green	AC-NUT-GRN
	<u>8</u> 8	Note: Number Identifi-	Blue	AC-NUT-BLU
	h	cation optional. (Please contact us.)	Violet	AC-NUT-VIO
			Grey	AC-NUT-GRY
			White	AC-NUT-WHT
-		Description: Coloured Grommets to suit AC Series, T Series and	Brown	AC-GROMMET-BRN
			Red	AC-GROMMET-RED
		Musician range	Orange	AC-GROMMET-ORG
			Yellow	AC-GROMMET-YEL
			Green	AC-GROMMET-GRN
			Blue	AC-GROMMET-BLU
•			Violet	AC-GROMMET-VIO
			Grey	AC-GROMMET-GRY
			White	AC-GROMMET-WHT
		AC Coloured Identifica-	Brown	AC-RING-BRN
200		tion Rings	Red	AC-RING-RED
		– Plain and Numbered	Orange	AC-RING-ORG
0			Yellow	AC-RING-YEL
0	4.7 LIBB ] Ø17.0 [Ø.652*]		Green	AC-RING-GRN
			Blue	AC-RING-BLU
			Violet	AC-RING-VIO
	[.6.858.]		Grey	AC-RING-GRY
			White	AC-RING-WHT
	ø 21.6		Red #1-24	AC-RING-RED-PK1
		Noto: Oustan and the	Yellow #1-24	AC-RING-YEL-PK1
		Note: Custom number Identification optional.	Blue #1-24	AC-RING-BLU-PK1
		(Please contact us.)	Red #1-48	AC-RING-RED-PK2
			Yellow #1-48	AC-RING-YEL-PK2
			Blue #1-48	AC-RING-BLU-PK2

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AC SERIES

ACCESSORIES

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
	49.5 [1.949"]	AC Metal Boot / Back- shell, Black Finish	Not Applicable	AC-NUT-METAL
	49.5 [1.949"] 	AC Thermoplastic Boot / Backshell. Suitable for use with 8.5mm (0.33") O.D. cable.	Not Applicable	AC-NUT-J-BLK

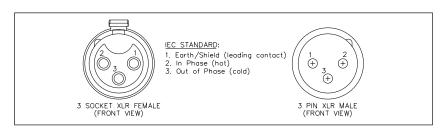
ACC.

THERMOPLASTIC TYPE

#### AC SERIES PANEL MOUNT CONNECTORS

### **CONNECTOR WIRING INFORMATION**

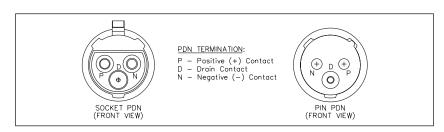
#### XLR (Microphone / Patch Cables)



The standard XLR 3 contact pin outs are as shown above for a balanced lead. In such a configuration audio "Hot" (pin 2) is the in-phase connection whilst audio "Cold" (pin 3) is the out-of-phase connection. For an unbalanced lead however, you may connect pin 1 to either pin 2 or pin 3, but not both. In such a configuration the remaining pin is used for the audio signal.

When terminating the cable shielding to pin 1 it is suggested that the shield be only grounded at one end of the cable to avoid inducing "hum". Pin 1 is a leading contact that engages at interconnection, before pin 2 or pin 3.

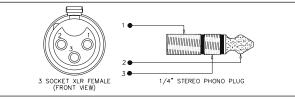
#### PDN (Speaker Cables)



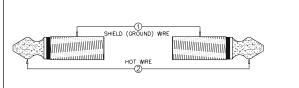
The PDN stands for Positive, Drain and Negative. P pin is used for the Positive (+) line and the N pin is for the return line. D pin is a leading contact that engages at interconnection, before the major contacts. If applicable, solder the cable screen to this contact.

#### 1/4" Phono (6.35mm) (Standard Applications)

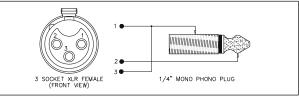
#### MICROPHONE CABLE - BALANCED



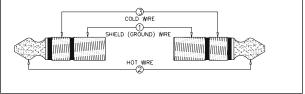
#### **INSTRUMENT / LINE CABLE (MONO)**



#### **MICROPHONE CABLE - UNBALANCED**



#### **INSTRUMENT / LINE CABLE (STEREO)**



(i)

### **CONNECTOR WIRING INFORMATION**

ΑE

DН

ML

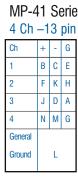
Q P

т х

z v

a

#### **MP Series**



S	MP-4 6 Ch		-	-	MP-4 8 Ch			
	Ch	+	-	G		Ch	+	
	1	L	М	U		1	Α	1
	2	А	N	В		2	G	(
	3	К	J	т		3	D	1
	4	v	Ρ	С		4	м	1
	5	н	S	G		5	Q	1
	6	R	D	Е		6	w	:
	General					7	т	;
	Ground		F			8	Z	١
				_	1	General		
				$\hat{\mathbf{N}}$		Ground		ł

MP-62 Series

20 Ch-61 pin

+ - G

Ch

#### MP-62 Series

12 Ch	1-3	39	pin
Ch	+	-	G
1	р	n	q
2	w	A	Х
3	N	f	Ρ
4	L	е	М
5	J	d	К
6	G	С	Н
7	E	b	F
8	D	a	Z
9	С	В	Y
10	U	j	۷
11	i	h	т
12	R	g	S
General			
Ground		N/A	



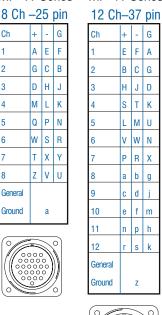
1	JJ	нн	NN
2	мм	KK	PP
3	BB	AA	CC
4	s	FF	W
5	r	EE	۷
6	е	D	х
7	f	E	у
8	q	DD	U
9	S	р	Т
10	Ρ	Ν	R
11	m	k	n
12	L	K	М
13	J	i	j
14	Н	G	h
15	g	F	z
16	d	С	w
17	В	A	C
18	b	a	Ζ
19	۷	u	Y
20	t	GG	Х
General			



Ground

N/A

Series	MP-41	Series



16 CI	า—:	54	pin
Ch	+	-	G
1	w	f	r
2	J	R	a
3	k	v	AC
4	Е	М	V
5	е	q	у
6	В	Н	Р
7	Z	j	u
8	D	L	U
9	d	р	x
10	Α	G	0
11	Y	h	t
12	С	К	т
13	с	n	w
14	F	N	Х
15	g	s	AB
16	S	b	m
General			

Ground

AG

MP-41 Series

			P
Ch	+	-	G
1	А	В	С
2	Е	F	Н
3	J	K	L
4	Ν	Ρ	R
5	S	Т	U
6	х	Y	Z
7	a	b	С
8	d	f	g
9	h	i	j
10	k	m	n
11	р	q	r
12	t	u	v
13	w	х	у
14	z	AA	AB
15	AC	AD	AE
16	AF	AH	AJ
17	AK	AL	AM
18	AP	AR	AS
19	AT	AU	AV
20	AW	AX	AY
21	AZ	BA	BB
22	BC	BD	BE
23	BJ	BK	BL
24	BM	BN	BP
25	BS	BT	BU
26	BV	BR	BF
27	BH	AN	s
28	W	М	D
General			
Ground		V	

MP-41 Series

28 Ch-85 pin

# $\cap$

MP-41 Series 48 Ch - 150 pin

Ch	+	-	G
1	1	2	3
2	5	6	7
3	8	9	10
4	11	12	13
5	14	15	16
6	17	18	19
7	21	22	23
8	24	25	26
9	27	28	29
10	20	30	31
11	32	33	34
12	35	36	37
13	38	39	40
14	41	42	43
15	44	45	46
16	47	48	49
17	50	51	52
18	53	54	55
19	57	58	59
20	60	61	62
21	63	64	65
22	66	67	68
23	69	70	71
24	72	73	74
25	75	76	77
26	78	79	80
27	82	83	84
28	85	86	87
29	88	89	90
30	91	92	93
31	94	95	96
32	97	98	99
33	100	101	102
34	103	104	105
35	56	81	106
36	107	108	109
37	110	111	112
38	113	114	115
39		117	
40	119	120	121
41	122	123	124
42	125	126	127
43	139	128	129
44	130	131	132
45	133	134	135
46	136	137	138
47	140	141	142
48	140	141	142
General	1-10	1.44	140
Ground		150	
around		100	

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Symbols         ACCRNDTP-JULE         41         ACCRNDTP-JULE         42         ACCRNDTP-JULE         42         ACCRNDTP-JULE         44         ACCRNDTP-	Part Number	Page	Part Number	Page	Part Number	Page	Part Number	Page	Part Number	Page
47-1070         9         A CS98009-AU-B         4         ACSMADP         BOD         ACSMADP         BID         ACSMADP         ACSMADP	Symbols		AC3FBVB1-AU-B	41	AC3MAV1-AU-B	36	AC3MMCP BULK	14	AC4FR	15
47-10000         91         ACSHMPS-BULS         14         ACSMMPS-BULS         10         ACSMMPS-BULK         10         11           47-1010         91         ACSHMPS-BULS         42         ACSMMPS-BULS         60         ACMBB BULK         11           47-1010         91         ACSHMPS-BULS         42         ACSMMPS-BULS         60         ACMBB BULK         11           11213         90         ACSHMPS-BULS         42         ACSMMPS-BULS         33         ACSMMPCB-BULK         60         ACMBB BULK         11           112307         90         ACSHMPCL-AUB         42         ACSMMPS-BULS         33         ACSMMPCB-BULK         23         ACMMPCL         44           112307         90         ACSHMPCL-AUB         44         ACSMMPS-BULS         33         ACSMMPCB-BULK         23         ACMMPCB-AUB         44           112301         90         ACSHMPCH-AUB         84         ACSMMPCB-AUB         33         ACSMMPCB-BULK         23         ACMMPCB-AUB         44         ACSMMPCB-AUB         34         ACSMMPCB-BULK         23         ACMMPCB-AUB         44         ACSMMPCB-AUB         34         ACSMMPCB-BULK         23         ACMMPCB-AUB         44         ACSMMPCB-BULK         24 <td>47 10070</td> <td>01</td> <td>AC3FBVB2-AU-B</td> <td>41</td> <td>AC3MAV2-AU-B</td> <td>36</td> <td></td> <td></td> <td></td> <td></td>	47 10070	01	AC3FBVB2-AU-B	41	AC3MAV2-AU-B	36				
47-10110         9         ACHEMPICI-LINE         14         ACHEMPICI-LINE         14         ACHEMPICI-LINE         14         ACHEMPICI-LINE         11           47-10120         91         ACHEMPICI-LINE         42         ACAME         10         ACHEMPICI-LINE         11           47-10120         91         ACHEMPICI-LINE         42         ACAME         10         ACHEMPICI-LINE         11           1111313         ACHEMPICI-LINE         42         ACAME         10         ACHEMPICI-LINE         11           1112597         90         ACHEMPICI-LINE         42         ACAMEMPICI-LINE         31         ACHEMPICI-LINE         31         ACHEMPICI-LINE         32         ACHEMPICI-LINE         32           1112590         90         ACHEMPICI-LINE         41         ACAMEMPICI-LINE         33         ACHEMPICI-LINE         32         ACHEMICI-LINE         34           1112590         90         ACHEMPICI-LINE         41         ACAMEMPICI-LINE         33         ACHEMPICI-LINE         34         ACHEMPICI-LINE         34         ACHEMICI-LINE         34         ACHEMPICI-LINE         34         ACHEMPICI-LINE         34         ACHEMPICI-LINE         34         ACHEMPICI-LINE         34         ACHEMPICI-LINE										
47-10120         91         ACCHMONE PULK         90         ACCHMONE PULK         90         ACCHMONE PULK         91										
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112133         90         ACGRENT, AL-B         22         ACMMORPHICALE         23         ACAMORD         24           112566         60         ACGRENT, AL-B         42         ACMMORPHICALE         23         ACMMORPHIC         23         ACMMORPHICALE         24           112567         60         ACGRENT, AL-B         44         ACGMORPHICALE         23         ACMMORPHICK         24         ACMMORPHICK         24         ACMMORPHICK         24         ACMMORPHICK         24         ACMMORPHICK         23         ACMMORPHICK         24	112119									
112507         99         ACCENTIZALLE         42         ACAMEZALE         99         ACCENTIZALLE         42           112508         90         ACCENTIZALLE         42         ACAMEZALLE         39         ACAMATZE BULK         23         ACAMATZE BULK         24           112519         90         ACSERVI-ALLE         44         ACAMEZALLE         39         ACAMATZE BULK         23         ACAMATZE BULK         24           1125261         90         ACSERVI-ALLE         44         ACAMEZALLE         39         ACAMATZE BULK         23         ACAMATZE BULK         24           1125261         90         ACSERVI BULK         14         ACAMERALLE         39         ACAMATAU         26         ACAMAY         27           1125261         90         ACSERVI BULK         16         ACAMATUR BULK         39         ACAMATPAU         26         ACAMAP         27           1125261         90         ACSERVI BULK         16         ACAMATUR BULK         30         ACAMATPAU         26         ACAMAP         27           1125263         90         ACSERVI BULK         16         ACAMATUR AU         30         ACAMATRAUK         27           1125264         90         ACC										
11208         99         ACSFRV.A.B.4.B         42         ACMM025         99         ACSM022 BULK         23         ACMM025         24           112051         90         ACSFV.A.B.B         44         ACSM022 BULK         23         ACM025         24           112051         90         ACSFCP         14         ACSM024-ALB         38         ACSM027         23         ACM025         24           112056         90         ACSFCP         14         ACSM024-ALB         38         ACSM027         28         ACM027         24           112056         90         ACSFCP         14         ACSM014-ALB         39         ACSM0P         25         ACM07         27           112051         90         ACSFCP         14         ACSM014-ALB         39         ACSM0PB UK         26         ACM0PB UZ         27           112052         90         ACSFCP         14         ACSM014-ALB         40         ACSM0PB UK         26         ACM0PB UZ         27         ACM0PB UZ         27         ACM0PB UZ         27         ACM0PB ULK         27         ACM0PB ULK <td></td>										
112519         00         ACCENTPALL         41         ACCENTPAL         53         ACCENTPAL         53         ACCENTPAL         54         ACCENTPAL         54           112525         00         ACCENTPAL         14         ACCENTPAL         53         ACCENTPAL         53         ACCENTPAL         54         ACCENTPAL         54         ACCENTPAL         53         ACCENTPAL         54         ACCENTPAL         54         ACCENTPAL         56         ACCENTPAL         57         ACCENTPAL         56         ACCENTPAL         57         ACCENTPAL         56         ACCENTPAL         57         ACCENTPAL         56         ACCENTPAL         56         ACCENTPAL         57         ACCENTPAL         60					AC3MBH3-AU-B	39	AC3MMDZB BULK		AC4MDZB	24
112251         90         ACCOMPLATION         14         ACCOMPTION         23         ACCOMPTION         24           112266         90         ACSTCP BULK         18         ACCOMPTION         24           112800         90         ACSTCPLAU         18         ACCOMPTION         24           112810         90         ACSTCPLAU         18         ACCOMPTION         25         ACAMP         27           112810         90         ACSTCPLAU         18         ACCOMPTION         39         ACCOMPTION         26         ACAMP         27           112815         90         ACSTCPL         10         ACCOMPTION         30         <										
112656         90         ACCUP BULK         14         ACCURATE         35         ACCUMPT         10         ACCURATE         21           112606         90         ACCIPCP         11         ACCURATE         11         ACCURATE         11           112801         90         ACCIPCP         11         B         ACCURATE         31         ACCURATE         26         ACAMP         27           112821         90         ACCIPCP BULK         B         ACCURATE         10         ACCURATE         26         ACAMPE AU         27           112856         90         ACCIP BULK         60         ACCURATE         40         ACCUMPE AU         25         ACAMPE AU         27           112856         90         ACCIP BULK         60         ACCURATE         40         ACCUMPE AU         27           25200005-732         137         ACCIPIPH AU         80         ACCURATE         40         ACCUMPE AU         27           A         ACCEPIPH AU         80         ACCURATE         40         ACCUMPE AU         27           25200005-732         137         ACCEPIPH AU         82         ACCUMPE AU         27         ACCUMPE AU         27										
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112850         90         ACSTCP-JUL         18         ACSMPER_UL-JLB         59         ACSMMP-AU         26         ACAMP         27           112851         90         ACSTPL BULK         ACSMMPL-JLB         91         ACSMMPL         27         ACSMMPL         27           112856         90         ACSTPD         Ed.         ACSMMPL         10         ACSMMPL         28         ACAMPS BULK         27           112856         90         ACSTPD BULK         60         ACSMMPLAL         40         ACSMMPLUK         28         ACAMPS BULK         27           25200005-734         137         ACSTPDH         BULK         80         ACSMMPLAL         40         ACSMMPLAL         28         ACAMPRUE         28         ACAMPRUE         27           25200005-732         137         ACSTPDH         BULK         80         ACSMMPR2-JLB         40         ACSMMPRUE         28         ACAMPR2BULK         27           ACSTPDH         BULK         BO         ACSMMPR2-JLB         40         ACSMMPR2B-JLK         27         ACSMPR2BULK         27           ACSTPDH         BULK         BO         ACSMMPR3-JLB         39         ACSMMPR2BULK         27         ACSMPR2BULK <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>										
11281         90         ACSTEP ILLK         18         ACSMPILALE         59         ACSMMPB         26         ACAMPAU         27           112852         90         ACSTEP         60         ACSMMPL         10         ACSMMPB-ULK         26         ACAMPB         27           112853         90         ACSTEP         60         ACSMMPL         10         ACSMMPB         26         ACAMPB         27           112854         90         ACSTEP         60         ACSMMPLALE         40         ACSMMPLALE         26         ACAMPB         27           112854         90         ACSTEPH         60         ACSMMPLALE         40         ACSMMPLALE         27         25         ACSMPLALE         27         25         ACSMPLALE         27         25         ACSMPLALE         27         25         ACSMPLALE         27         ACSMPLALE         27         ACSMPLALE         27         ACSMPLALE         26         ACSMPLALE         27         ACSMPLALE         26         ACSMPLALE         27         ACSMPLALE         27         ACSMPLALE         27         ACSMPLALE         27         ACSMPLALE         27         ACSMPLALE         27         ACSMPLAE         27         ACSMPLAE <td< td=""><td>112950</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	112950									
112832         90         AC3RCP1         14         AC3MBJ         10         AC3MPB-AU         26         AC4MPB         27           112855         90         AC3ROP         60         AC3M Bulk         A0         AC3MMP Bulk         26         AC4MPB         27           112855         90         AC3ROP Bulk         60         AC3MPV-ALB         40         AC3MMP Bulk         25         AC4MPB Bulk         27           128567         90         AC3ROP Bulk         60         AC3MPV-ALB         40         AC3MMPRZ         25         AC4MPZ         27           52500005-732         137         AC3ROP Bulk         60         AC3MPVALB         40         AC3MMPRZ         25         AC4MPZZ         27           A         AC3ROP BULK         60         AC3MPVALB         40         AC3MMPRZ         25         AC4MPZZ         27           AC3ROP BULK         62         AC3MPVALB         40         AC3MMPRZ         26         AC4MPZZ         27           AC3ROP BULK         62         AC3MPZALB         40         AC3MMPXD         26         AC4MPZ         27           AC3ROP BULK         62         AC3MPZALB         40         AC3MMPXD         28										
112855         00         ACCOMPT BULK         00         ACCOMPT BULK <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>										
112856         00         Add Step PULK         B0         Add Step PULK         B0         Add Step PULK         20         Add Step PULK         21           112856         00         ACSIMPL AUG         00         ACSIMPL AUG         20         ACSIMPL AUG         21           25200005-732         137         ACSIMPL AUG         00         ACSIMPL AUG         31         ACSIMPL AUG         21           A         ACSIMPL AUG         00         ACSIMPL AUG         00         ACSIMPL AUG         22         A           A         ACSIMPL AUG         00         ACSIMPL AUG         00         ACSIMPL AUG         22         A           A         ACSIMPL AUG         00         ACSIMPL AUG         00         ACSIMPL AUG         28         ACMMPLZA UUG         27           ACSIMPL AUG         62         ACSIMPL AUG         62         ACSIMPL AUG         28         ACMMPLZA UUG         27           ACSISFEW         117         ACSISFEW         00         ACSIMPL AUG         ACSIMPL AUG         27         ACSIMPL AUG         27           ACSISFEW         137         ACSISFEW         00         ACSIMPL AUG         ACSIMPL AUG         ACSIMPL AUG         27         ACSIMPL AUG         27			AC3FDP	60	AC3M BULK	10				
112867         00         Accompt Buck         B0         Accompt Buck         B2         CACCOMPC Buck <td></td>										
52500002-732         137         ACSTPPT, IDULX         B0         ACSIMPT, PB         10         ACSIMPT, PB         20         ACSIMPT, PB         21         ACSIMPT,										
52500005-732         137         ACSTPHL BULK         B0         ACSTPHL BULK         53         ACSTPHL BULK         25         ACSTPHL BULK         25           A         ACSTPHL BULK         64         ACSTPHL BULK         25         ACSTPHL BULK         25         ACSTPHL BULK         25           ACST         ID         ACSTPHL BULK         26         ACSTPHL BULK         25         ACSTPHL BULK         27           ACST         ID         ACSTPHL BULK         26         ACSTPHL BULK         27         ACSTPHL BULK         27           ACSTPHL         60         ACSTPHL         60         ACSTPHL BULK         60         ACSTPHL         81         ACSTPHL         ACSTPHL         81         ACSTPHL         81         ACSTPHL         81         ACSTPHL         81         ACSTPHL         83         ACSTPHL         83         ACSTPHL         83         ACSTPHL         83         ACSTPHL         83         ACSTPHL         83         ACSTPLL         ACSTPLL         ACSTPLL <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
A         ACSPEP IBLL         62         ACSIMIVID-24-UI-B         40         ACSIMIPUZ-BUIK         26         ACAMPYZB BUIK         27           ACSF         10         ACSPEP IBLL         62         ACSIMIVID-AU-B         39         ACSIMIVID-AU-IK         26         ACAMPYZ BUIK         27           ACSISTERW         137         ACSPDIL         60         ACSIMOPALI         14         ACSIMIVID-AU-IK         26         ACAMPYZ BUIK         27           ACSISTERW         137         ACSPDIL         60         ACSIMOPALI         14         ACSIMIVID-X         26         ACAMPYZ BUIK         27           ACSISTERW         137         ACSIDPU         60         ACSIMOPALI         18         ACSIMPYB         26         ACAMPYC         27           ACSISTER         137         ACSIDPV         60         ACSIMOPALI         18         ACSIMPIL         27         ACSIF         ACSIMPIL         60         ACSIMPIL         27         ACSIF         ACSIF         ACSIMPIL         60         ACSIMPIL         27         ACSIF         ACSIF         ACSIF         ACSIMPIL         40         ACSIMPIL         40         ACSIMPIL         40         ACSIMPIL         40         ACSIMPIL         40         AC	52500005-732									
A         Constrained         Constrained <thconstrained< th=""> <thconst< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></thconst<></thconstrained<>										
AC3F         10         AC3FPPIL         62         AC3MPA-L/B         39         AC3MMPR/27         26         AC4MPR/2012         27           AC3F3FEW         137         AC3FPPL         60         AC3MOP         14         AC3MMPR/27         26         AC4MPR/2012         27           AC3FSFW         137         AC3FPPL         60         AC3MOP         14         AC3MMPV         26         AC4MPV         27           AC3FSMW         137         AC3FPPL         60         AC3MOP         18         AC3MMPV         27         AC4MP         15           AC3FMW         137         AC3FPPL         60         AC3MOP BULK         18         AC3MP         27         AC3FH         14           AC3FMAP.AU-B         37         AC3FPPL         60         AC3MOP BULK         18         AC3MPB         27         AC3FH         43           AC3FMAP.AU-B         37         AC3FPPL         23         AC3MOP BULK         60         AC3MPB         11         AC3FH         43           AC3FMAP.AU-B         37         AC3FP2B-BULK         23         AC3MOP BULK         60         AC3MPF         44         AC3MPF         44         AC3MPF         44         AC3MPF <td>A</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	A									
AGSFERW         137         ACSFDPL         BULK         62         ACGM/P         14         ACGMMPVB         25         AC4MPR/V         27           AGSFERW         137         ACSFDPL         600         ACGM/P         14         ACGMMPVB         26         AC4MPR/V         27           AGSFBMW         137         ACSFDPL BULK         60         ACGM/P         14         ACGMMPVB         26         AC4MPV         27           AGSFBMW         137         ACSFDPV BULK         60         ACGM/P         18         ACGMPV         27         ACSFMV         15           AGSFMH         37         ACSFDPV BULK         60         ACGM/P         14         ACGM/P         27         ACSFA-U         11           AGSFMH         37         ACSFDPV BULK         60         ACGM/P         14         ACGM/P         27         ACSFA-U         11           AGSFMH         37         ACSFDPV BULK         60         ACGM/P         14         ACGM/P         27         ACSFA         43           AGSFMH         37         ACSFDP2         23         ACGM/P         10         ACSFDP2         44         45         ACSM/P         24         ACSFP         44	AC3E	10					AC3MMPNZV		AC4MPNZ BULK	27
ACSERNW         137         AC3TDPL         60         ACSMOPAU         14         ACSMMPV         26         AC4MPV/VB         27           ACSESMUM         137         AC3TDPL         60         ACSMOP         18         ACSIMMRVE         26         AC4MPV         27           ACSESMUM         137         AC3TDPV         60         ACSMOPH         18         ACSIMP         27         AC4MPK         27           ACSESMUM         137         AC3TDPVL         60         ACSMOPH         18         ACSIMP-AU         27         ACSFH-14U-B         33           ACSPARLA-LALB         37         AC3TDPVL         60         ACSMOPH         60         ACSIMP-AU         27         ACSFH-14U-B         33           ACSPARLA-LALB         37         AC3TDZ         23         ACSMOPH         60         ACSIMPLAU         7         ACSFH-14U-B         33           ACSPARLA-LALB         37         AC3TDZB         23         ACSMOPH BULK         60         ACSIMPLSULK         7         ACSFH-3U-B         33           ACSPARLA-LALB         37         AC3TDZB BULK         23         ACSMOPH BULK         60         ACSIMPLAU         60         ACSIMPLSULK         60         ACSIMPLAU <td></td> <td></td> <td>AC3FDPIL BULK</td> <td>62</td> <td>AC3MCP</td> <td>14</td> <td>AC3MMPNZVB</td> <td></td> <td></td> <td></td>			AC3FDPIL BULK	62	AC3MCP	14	AC3MMPNZVB			
ACSTSMBW         137         ACSTDPL         BOL         BOL         ACSMCPP BULK         14         ACSMMVPL         20         ACMPVPL         27           ACSTSMW         137         ACSTDPV BULK         60         ACSMCPP-10         18         ACSIMPP         27         ACAMPV 27         ACAMPV 27         ACAMPV 27         ACSFA         11           ACSTANULL         60         ACSMCPF BULK         18         ACSIMPV 27         ACSFA-1U-18         ACSMPV 27         ACSFA         11           ACSTANLAULB         37         ACSTDPVL BULK         60         ACSMCPB BULK         27         ACSFA-1U-18         37         ACSTDP2         23         ACSMDP BULK         60         ACSMPB BULK         27         ACSFA-1U-11         11           ACSTANLAULB         37         ACSTDZAU         23         ACSMDPH BULK         60         ACSMPLZ         26         ACSFB BULK         11         ACSTANLAULB         7         ACSFB BULK         11         ACSTANLAULB         37         ACSTDZVB         23         ACSMDPH BULK         60         ACSMPLZ         26         ACSFB BULK         11         ACSTANLAULB         37         ACSTDZVB         23         ACSMDPH BULK         62         ACSMPLZ         24         AC										
ALS-FNWW         137         ACSIPPU BULK         60         ACSIMPLAU         18         ACSIMP         27         ACAMR         15           ACSIFMUW         137         ACSIPPU BULK         60         ACSIMPAU         27         ACSIMP         43           ACSIMPLAUB         37         ACSIPPU BULK         60         ACSIMPB         27         ACSFAU-AUB         43           ACSIMPLAUB         37         ACSIPDZ         23         ACSIMPP BULK         60         ACSIMPB BULK         27         ACSFAU-B         43           ACSIMPLAUB         37         ACSIPDZAU         23         ACSIMPP HULK         60         ACSIMPEZ         26         ACSFB-U         11           ACSIPALI-AUB         37         ACSIPDZB-U         23         ACSIMPHUBULK         60         ACSIMPZ-AU         26         ACSFB BULK         11           ACSIPAL-AUB         37         ACSIPDZ BULK         23         ACSIMPHUBULK         60         ACSIMPZ-AU         26         ACSFB AU         11           ACSIPAU-AUB         37         ACSIPDZ         23         ACSIMPHUBULK         62         ACSIMPZ-AU         26         ACSFPC         24           ACSIPAU-AUB         37         ACSIPDZ										
ALSTRAW         137         ACSTPP1_         60         ACSM(P) BÜLK         18         ACSM(P)         27         ACSF         11           ACSTAHT_AU-B         36         ACSM(P)         23         ACSM(P)         40         ACSM(P)         14         ACSM(P)         27         ACSFAL-AU-B         31           ACSTAHT_AU-B         37         ACSTDZ-AU         23         ACSM(P)         60         ACSM(P)         ACSM(P)         ACSM(P)         ACSM(P)         ACSM(P)         ACSM(P)         ACSTMPALAU-B         31           ACSTALT_AU-B         37         ACSTDZEAU         23         ACSM(P)         ACSM(P)         ACSM(P)         26         ACSFB_U         11           ACSTALT_AU-B         37         ACSTDZEAU         23         ACSM(P)         ACSM(P)         26         ACSFB_U         11           ACSTAL_AU-B         37         ACSTDZ BULK         23         ACSM(P)         ACSM(P)         26         ACSFB_U         12         24           ACSTAL_AU-B         37         ACSTDZ/B         23         ACSM(P)         10         ACSFF         24         ACSFF         24         ACSFF         24         ACSFF         24         ACSFF         24         ACSFF <td< td=""><td>AC3F3MW</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	AC3F3MW									
ALSPRIPAL         30         ACSPPT         BULK         60         ACSMPL         14         ACSMPB         27         ACSFAL+AU-B         43           ACSFAH2-AU-B         37         ACSIDZ-AU         23         ACSMPP 60         ACSMPB BULK         27         ACSFAL-AU-B         43           ACSFAH2-AU-B         37         ACSIDZ-AU         23         ACSMPP BULK         60         ACSMPB BULK         27         ACSFB         11           ACSFAH2-AU-B         37         ACSFDZB         23         ACSMPP BULK         60         ACSMPAL         28         ACSFB         11           ACSFAH2-AU-B         37         ACSFDZB BULK         23         ACSMPPH BULK         60         ACSMPVZ-AU         28         ACSFB         11           ACSFAH1         10         ACSFDZB BULK         23         ACSMPPH BULK         60         ACSMPVZ-BULK         26         ACSFB         11           ACSFAH2-AU-B         37         ACSFDZD BULK         23         ACSMPH BULK         60         ACSMPVZ-BULK         26         ACSFDZ         24           ACSFAU-AU-B         37         ACSFDZ         24         ACSFDZ         24         ACSFDZ         24           ACSFAU-AU-B         <										
AGSTARIA-AU-B         37         ACSFAU         23         ACAMP         60         ACAMPE-AU         27         ACSFAU         11           ACSTARIA-AU-B         36         ACSTDZ         23         ACAMDP BULK         60         ACAMPE-AU         27         ACSFAU-AU-B         33           ACSTARIA-AU-B         37         ACSTDZ-AU         23         ACAMDPH BULK         60         ACAMPZ-AU         26         ACSTB-AU         11           ACSTARIA-AU-B         37         ACSTDZB-AU         23         ACAMDPH BULK         60         ACAMPZ-AU         26         ACSTB-AU         11           ACSTAUL-AU-B         37         ACSTDZ BULK         23         ACAMDPHL BULK         60         ACAMPZB-AU         26         ACSTP BULK         11           ACSTAU-AU-B         37         ACSTDZ BULK         23         ACAMDPIL BULK         60         ACAMPZB-AU         26         ACSTP AU         11           ACSTAU-AU-B         37         ACSTDZ BULK         23         ACAMDPIL BULK         62         ACSMPZB-AU         26         ACSTDZ AU         24           ACSTAU-AU-B         38         ACSTB         16         ACAMDPL BULK         62         ACSMPZD-AU         24										
ACGRAN-LAU-B         36         ACGRD2AU         23         ACGMPP BULK         60         ACGMPP BULK         27         ACGRAV-AU-B         43           ACGRAVLL-LAU-B         37         ACGRD2B         23         ACGMPPH         60         ACGMPPLZ         26         ACGRPB         11           ACGRAVL-AU-B         37         ACGRD2B         ACGMPPH         60         ACGMPPLZ         26         ACGRPB         ACGRPCAU         26         ACGRPB         11           ACGRAVLAU-B         37         ACGRD2 BULK         23         ACGMPPLU         60         ACGMPRZB         26         ACGRPL         24           ACGRAV-AU-B         37         ACGRD2 VB         23         ACGMPPLBULK         60         ACGMPRZB         26         ACGRPL         24           ACGRAV-AU-B         38         ACGRPL         16         ACGMPPLBULK         62         ACGMPRZBULK         26         ACSFD2AU         24           ACGRAV-AU-B         38         ACGRPL         16         ACGMPPLBULK         60         ACGMPRZBULK         26         ACSFD2AU         24           ACGRAVAL-AU-B         38         ACGRPL         16         ACGMPPLBULK         60         ACGMPPLBULK         62 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>										
AC3FAHL1-AU-B         37         AC3FD2B         23         AC3MDPH         60         AC3MPLZ         27         AC3FD3         11           AC3FAHL2-AU-B         37         AC3FD2B-AU         23         AC3MDPH BULK         60         AC3MPLZ-AU         26         AC5FB-AU         11           AC3FAHL2-AU-B         37         AC3FD2B BULK         23         AC3MDPH BULK         60         AC3MPLZB-AU         26         AC5FB         111           AC3FAHL3-AU-B         37         AC3FD2V         23         AC3MDPH         60         AC3MPLZB-AU         26         AC5FB         111           AC3FAU-AU-B         37         AC3FD2V         23         AC3MDPI BULK         62         AC3MPUZB BULK         26         AC5FD2         24           AC3FAU-AU-B         38         AC3FH         16         AC3MDPIL         62         AC3MPUZB BULK         26         AC5FD2-AU         24           AC3FAU-AU-B         38         AC3FHB         16         AC3MDPL         60         AC3MPPIZB BULK         24         AC3FD2B BULK         24							AC3MPB BULK	27	AC5FAV-AU-B	43
AC37AHL2-AU-B         37         AC37D25-AU         23         AC3MDPH         60         AC3MPKZ         26         AC3FD3-AU         11           AC3FAHL3-AU-B         37         AC3FD2 BULK         23         AC3MDPHL         60         AC3MPKZB         26         AC3FB ULK         11           AC3FAHL3-AU-B         37         AC3FD2 BULK         23         AC3MDPHL         60         AC3MPKZB-JU         26         AC3FB ULK         11           AC3FAH         10         AC3FD2VB         23         AC3MDPHL         62         AC3MPKZB-JULK         26         AC3FD2L         24           AC3FAVA-AU-B         38         AC3FH         16         AC3MDPL         62         AC3MPKZ         26         AC3FD2AU         24           AC3FAVA-AU-B         37         AC3FB         16         AC3MDPL         60         AC3MPRIZ         26         AC3FD2B         24           AC3FAVA-U-B         37         AC3FB         AC3FB         16         AC3MDPL         60         AC3MPPIZVB         26         AC3FD2B         24           AC3FAVL-AU-B         38         AC3FB         AC3FB         10         AC3MDPV BULK         60         AC3MPPH BULK         62         AC3MPVL										
AGSTANL-AND-B         37         AGSTAPIL         23         AGSMDPL BULK         60         AGSMPNZB         26         AGSFBUL         11           AGSTANL         10         AGSTDZ         23         AGSMDPI         62         AGSMPNZB         26         AGSFBULK         11           AGSTAVI         10         AGSTDZVB         23         AGSMDPI         62         AGSMPNZB         40         AGSFDZ         24           AGSTAVI-AU-B         38         AGST         16         AGSMDPIL         62         AGSMPNZVB         26         AGSFDZ-AU         24           AGSTAVI-AU-B         38         AGSTB         AGSTBAU         16         AGSMDPL         60         AGSMPNZV         26         AGSFDZ-AU         24           AGSTAVI-AU-B         38         AGSTB BULK         16         AGSMDPU BULK         60         AGSMPPI BULK         62         AGSFDZ V         24           AGSTAVI-AU-B         38         AGSTP BULK         16         AGSMDPV         60         AGSMPPI BULK         62         AGSMPV         27         AGSFDZ         24           AGSTAVI-AU-B         38         AGSTPPI BULK         62         AGSMDZ         23         AGSMPVL         27 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
AGSTAUL-AU-B         SJ         ACSPDZV         23         AC3MDPI         62         AC3MPRZB-AU         26         ACSFBULK         11           ACGTAV2-AU-B         37         ACSFDZVB         23         AC3MDPI         62         AC3MPRZB BULK         26         ACSFDZ         24           ACGTAV2-AU-B         38         ACGT         16         ACSMDPIL         62         ACSMPRZB BULK         26         ACSFDZ-AU         24           ACGTAV2-AU-B         38         ACGTB-AU         16         ACSMDPL         60         ACGMPRZW         26         ACSFDZB-AU         24           ACGTAVL2-AU-B         38         ACGTB BULK         16         ACSMDPL BULK         60         ACGMPPI         62         ACSFDZB-AU         24           ACGTAVL2-AU-B         38         ACGTB BULK         16         ACSMDPV         60         ACGMPPI         62         ACSFDZV         24           ACGTAVL2-AU-B         38         ACGTF         10         ACGMDPV         60         ACGMPPIL         62         ACSFDZV         24           ACGTAVL2-AU-B         38         ACGTF         11         ACGTPZ         24         ACGTAVL2-AU-B         36         ACGTFDZ         24         ACGTAVL3	AC3FAHL3-AU-B	37								
AG3FAV1-AU-B         TO         AC3FD2VB         23         AC3MDPI BULK         62         AC3MPNZ BULK         26         ACSFD2         24           AC3FAV2-AU-B         38         AC3FL         16         AC3MDPIL         62         AC3MPNZ BULK         26         AC3FD2-AU         24           AC3FAV3-AU-B         38         AC3FLAU         16         AC3MDPL         00         AC3MPNZVB         26         ACSFD2B         24           AC3FAV3-AU-B         37         AC3FB-AU         16         AC3MDPL         00         AC3MPNZVB         26         ACSFD2B BULK         24           AC3FAV1-AU-B         38         AC3FB BULK         16         AC3MDPL         00         AC3MPPIL         62         ACSFD2 BULK         24           AC3FAV1-AU-B         38         AC3FD         10         AC3MDPV U         60         AC3MPPIL         62         AC3MPVL         27         AC3FJ         11           AC3FB         10         AC3FDPI UBULK         62         AC3MD2VL BULK         60         AC3MPVL         27         AC3FJ         11           AC3FB         10         AC3FPD1L BULK         62         AC3MD2VL BULK         60         AC3MPVL BULK         62         AC3M										
ACSTRV2-AU-B         37         ACST         16         ACSMDPL         62         ACSMPX BULK         26         ACSFD2-AU         24           ACSTAV2-AU-B         38         ACST         ACSTBE         16         ACSMDPL         BULK         62         ACSMPXV         26         ACSFD2B         24           ACSTAV2-AU-B         37         ACSTBE         16         ACSMDPL         BULK         60         ACSMPVIV         26         ACSFD2B-UL         24           ACSTAV1-AU-B         38         ACSTB BULK         16         ACSMDPL BULK         60         ACSMPPI BULK         62         ACSFD2 BULK         24           ACSTAV1-AU-B         38         ACSTB BULK         16         ACSMDPV BULK         60         ACSMPPI BULK         62         ACSTD2V         24           ACSTAV1-AU-B         38         ACSTP BULK         16         ACSMDPV BULK         60         ACSMPPI BULK         62         ACSMDPV         27         ACSFL         11           ACSTP         ACSTPPI BULK         62         ACSMDPV BULK         60         ACSMPVB         27         ACSFL         28           ACSTB         ACSTPPI BULK         62         ACSMDZU         23         AC4F         11										
ACSTRUZ-AU-DB         36         ACSTRUZ-AU-B         36         ACSTRUZ-AU-B         37         ACSTRUZ-AU-B         37         ACSTRUZ-AU-B         37         ACSTRUZ-AU-B         37         ACSTRUZ-AU-B         38         ACSTRUZ-AU-D         38         ACSTRUZ-AU-D         38         ACSTRUZ-AU-D         38         ACSTRUZ-AU-D         38         ACSTRUZ-AU-D         38         ACSTRUZ-AU-D         30         ACSTRUZ-AU-D         24           ACSTRUZ-AU-B         38         ACSTPU         10         ACSMPPU         ACSMPUL         60         ACSMPUL         62         ACSMPUL         44           ACSTRUZ-AU-B         38         ACGTRUZ-AU-D         27         ACSMDPUL         80         ACSTPUZ         424         ACSTPUZ         424         ACSTPUZ         425										
AC3FAV-AL-B       37       AC3FIB       16       AC3MDPL       60       AC3MMPL/VB       26       AC5FD2B AUL       24         AC3FAVL-AU-B       38       AC3FIB BULK       16       AC3MDPV       60       AC3MPPI       62       AC5FD2B BULK       24         AC3FAVL-AU-B       38       AC3FI BULK       16       AC3MDPV BULK       60       AC3MPPI BULK       62       AC5FD2B BULK       24         AC3FAVL-AU-B       38       AC3FI       10       AC3MDPV BULK       60       AC3MPPI BULK       62       AC5FD2V       24         AC3FAVL-AU-B       38       AC3FI       10       AC3MDPV BULK       60       AC3MPPI BULK       62       AC5FD2V       28         AC3FB       10       AC3FPFI BULK       62       AC3MDZ       23       AC4F       11       AC5FP2 AU       28         AC3FB1-AU-B       40       AC3FP2-AU       27       AC3MDZ BULK       23       AC4FB       11       AC5FP2 AU       28         AC3FB1-AU-B       40       AC3FP2-AU       27       AC3MDZ BULK       23       AC4FB       11       AC5FP2 BULK       28         AC3FB1-AU-B       40       AC3FP2-AU       27       AC3MDZ BULK       23									AC5FDZB	24
AC3FAVL1-AU-B       38       AC3FIB-AU       16       AC3MDPL BULK       60       AC3MPPI       62       AC3FID2 BULK       24         AC3FAVL2-AU-B       38       AC3FI BULK       16       AC3MDPV       60       AC3MPPI BULK       62       ACSFD2 ULK       24         AC3FAVL3-AU-B       38       AC3FI BULK       16       AC3MDPV       60       AC3MPPI BULK       62       ACSFD2 V       24         AC3FAVL3-AU-B       38       AC3FP       AC3FPPI       62       AC3MDPVL BULK       60       AC3MPVL BULK       62       AC3FD2 V       24         AC3FB       10       AC3FPPI BULK       62       AC3MDZ LUK       23       AC4F       11       AC5FP2 V       28         AC3FB BULK       10       AC3FPPI BULK       62       AC3MDZB       23       AC4F-AU       11       AC5FP2 AU       28         AC3FBH-AU-B       40       AC3FP2 AU       27       AC3MDZB-AU       23       AC4FB       11       AC5FP2 BULK       28         AC3FBH3-AU-B       40       AC3FP2 AU       27       AC3MDZB BULK       23       AC4FB AU       11       AC5FP2 BULK       28         AC3FBH3-AU-B       40       AC3FP2 AU       27       AC3			AC3FIB	16	AC3MDPL	60	AC3MPNZVB		AC5FDZB-AU	
AC3FAVL2-AU-B       38       AC3H B ULK       16       AC3MDPV       60       AC3MPP B ULK       62       AC5FD2 VU       24         AC3FAVL3-AU-B       38       AC3FI       10       AC3MDPV BULK       60       AC3MPPIL       62       AC5FD2 VU       24         AC3FAVL3-AU-B       38       AC3FJ       10       AC3MDPVL       60       AC3MPPIL       62       AC5FD2 VU       24         AC3FB       10       AC3FPPI       62       AC3MDPVL       60       AC3MPVB       27       AC5FJ       11         AC3FB       10       AC3FPPI BULK       62       AC3MDZ       23       AC4F       11       AC5FP2       28         AC3FB BULK       10       AC3FPPIL       62       AC3MDZB-AU       23       AC4F       11       AC5FP2.AU       28         AC3FBH1-AU-B       40       AC3FP2       27       AC3MDZB-AU       23       AC4FB       11       AC5FP2.B-AU       28         AC3FBH3-AU-B       40       AC3FP2.AU       27       AC3MDZB BULK       23       AC4FB       11       AC5FP2.BULK       28         AC3FBH3-AU-B       40       AC3FP2.BULK       27       AC3MDZVB       23       AC4FB       11										
ACSTRVLS-AU-B         33         AC3FJ         10         AC3MDPVL         60         AC3MPPIL BULK         62         ACSTPIL         24           ACSFAUL-AU-B         10         ACGFPPI         62         ACGMDPVL BULK         60         ACGMPVL         27         ACSFJ         11           ACGFB         10         ACGFPPI         62         ACGMDZ         23         ACGMPVB         27         ACSFPZ         28           ACGFB BULK         10         ACGFPPIL BULK         62         ACGMDZ-AU         23         AC4F         11         ACSFPZ-AU         28           ACGFB BULK         10         ACGFPPIL BULK         62         ACGMDZB         23         AC4FB         11         ACSFPZ-AU         28           ACGFBH2-AU-B         40         ACGFPZA         27         ACGMDZB BULK         23         AC4FB         11         ACSFPZA BULK         28           ACGFBH3-AU-B         40         ACGFPZA BULK         27         ACGMDZVB         23         AC4FB AULK         11         ACSFPZA BULK         28           ACGFBH3-AU-B         40         ACGFPZA BULK         27         ACGMDZVB         23         AC4FB AULK         11         ACSFPZ         28	AC3FAVL2-AU-B									
AC3FR         10         AC3FP         62         AC3MDPVL BULK         60         AC3MPV         27         AC3FJ         11           AC3FB         10         AC3FPPI         62         AC3MDPVL BULK         60         AC3MPV         27         AC3FPJ         28           AC3FB         10         AC3FPPIL BULK         62         AC3MDZ-AU         23         AC4F         11         AC5FPZ-AU         28           AC3FB         0         AC3FPPIL BULK         62         AC3MDZB         23         AC4F-AU         11         AC5FPZA         28           AC3FBH1-AU-B         40         AC3FPZA         27         AC3MDZB BULK         23         AC4FB         11         AC5FPZA-U         28           AC3FBH3-AU-B         40         AC3FPZA         27         AC3MDZ BULK         23         AC4FB         11         AC5FPZB BULK         28           AC3FBH3-AU-B         40         AC3FPZB-AU         27         AC3MDZ BULK         23         AC4FB AULK         11         AC5FPZ BULK         28           AC3FBH3-AU-B         40         AC3FPZB BULK         27         AC3MDZ VE         23         AC4FB AULK         11         AC5FPZV         28           AC3FBH	AC3FAVL3-AU-B									
AC3FD         10         AC3FPP BULK         62         AC3MDZ         23         AC3MPVB         27         AC3FPZ         28           AC3FB         10         AC3FPPIL         62         AC3MDZ-AU         23         AC4F         11         AC5FPZ-AU         28           AC3FB         40         AC3FPPIL         62         AC3MDZB         23         AC4F-AU         11         AC5FPZ-AU         28           AC3FB         40         AC3FPZ         27         AC3MDZB-AU         23         AC4FB         11         AC5FPZB-AU         28           AC3FBH-AU-B         40         AC3FPZ-AU         27         AC3MDZB BULK         23         AC4FB AU         11         AC5FPZB-AU         28           AC3FBH-AU-B         40         AC3FPZB-AU         27         AC3MDZVB         23         AC4FB BULK         11         AC5FPZ BULK         28           AC3FBHB-AU-B         40         AC3FPZB-AU         27         AC3MDZVB         23         AC4FB ULK         11         AC5FPZV         28           AC3FBHB-AU-B         40         AC3FPZ BULK         27         AC3MIZ         23         AC4F DZ         24         AC5M         11           AC3FBHB-AU-B										
AC3FB BULK       10       AC3FPPIL       62       AC3MDZ-AU       23       AC4F       11       AC5FPZ-AU       28         AC3FB BULK       10       AC3FPPIL BULK       62       AC3MDZB       23       AC4F-AU       11       AC5FPZ-AU       28         AC3FB H1-AU-B       40       AC3FPZ       27       AC3MDZB-AU       23       AC4FB       11       AC5FPZB-AU       28         AC3FBH2-AU-B       40       AC3FPZ-AU       27       AC3MDZB BULK       23       AC4FB-AU       11       AC5FPZB BULK       28         AC3FBH3-AU-B       40       AC3FPZ-B       27       AC3MDZB BULK       23       AC4FB-AU       11       AC5FPZB BULK       28         AC3FBHB1-AU-B       40       AC3FPZB-AU       27       AC3MDZ BULK       23       AC4FB BULK       11       AC5FPZ BULK       28         AC3FBHB1-AU-B       40       AC3FPZB BULK       27       AC3MDZVB       23       AC4FB BULK       11       AC5FPZ BULK       28         AC3FBHB1-AU-B       40       AC3FPZ BULK       27       AC3MI       16       AC4FDZ       24       AC5M       11         AC3FBHB1-AU-B       41       AC3FR       15       AC3MIBAU       16										
AC3FBH1-AU-B       40       AC3FPP1L BULK       62       AC3MD2B       23       AC4F-AU       11       AC5FP2B       28         AC3FBH2-AU-B       40       AC3FPZ       27       AC3MD2B-AU       23       AC4FB       11       AC5FPZB-AU       28         AC3FBH3-AU-B       40       AC3FPZ-AU       27       AC3MD2B BULK       23       AC4FB       11       AC5FPZB AU       28         AC3FBHAU-B       40       AC3FPZ-AU       27       AC3MD2 BULK       23       AC4FB BULK       11       AC5FPZB BULK       28         AC3FBHAU-B       40       AC3FPZB-AU       27       AC3MD2V       23       AC4FB BULK       11       AC5FPZ BULK       28         AC3FBHB2-AU-B       40       AC3FPZB-BULK       27       AC3MD2V       23       AC4F BULK       11       AC5FPZV       28         AC3FBHB3-AU-B       40       AC3FPZ BULK       27       AC3MIN       16       AC4FD2       24       AC5M       11         AC3FBFBA3-AU-B       40       AC3FPZ BULK       27       AC3MIB-AU       16       AC4FD2       24       AC5M       11         AC3FBFBA3-AU-B       40       AC3FPZ BULK       27       AC3MIB-AU       16 <t< td=""><td></td><td></td><td></td><td></td><td>AC3MDZ-AU</td><td></td><td>AC4F</td><td></td><td></td><td></td></t<>					AC3MDZ-AU		AC4F			
AC3FBH2-AU-B       40       AC3FPZ       27       AC3MD2FAU       23       AC4FB       11       AC5FPZAU       28         AC3FBH3-AU-B       40       AC3FPZ-AU       27       AC3MD2B BULK       23       AC4FB-AU       11       AC5FPZB BULK       28         AC3FBH-AU-B       40       AC3FPZB       27       AC3MDZ BULK       23       AC4FB BULK       11       AC5FPZ BULK       28         AC3FBHB1-AU-B       40       AC3FPZB       27       AC3MDZ BULK       23       AC4FB JULK       11       AC5FPZ V       28         AC3FBHB2-AU-B       40       AC3FPZ BULK       27       AC3MDZVB       23       AC4FB JULK       11       AC5FPZ V       28         AC3FBHB3-AU-B       40       AC3FPZ BULK       27       AC3MID2VB       23       AC4F DULK       11       AC5FPZ V       28         AC3FBHB3-AU-B       40       AC3FPZ BULK       27       AC3MID       16       AC4FDZ-AU       24       AC5MSMW       137         AC3FBHB1-AU-B       41       AC3FR       15       AC3MIB       16       AC4FDZ BULK       24       AC5MAH-AU-B       43         AC3FBHB1-AU-B       41       AC3M       10       AC3MIB       10			AC3FPPIL BULK							
AC3FBH3-AU-B       40       AC3FPZB       27       AC3MDZ BULK       23       AC4FB BULK       11       AC5FPZ BULK       28         AC3FBH-AU-B       40       AC3FPZB-AU       27       AC3MDZV       23       AC4FB BULK       11       AC5FPZV       28         AC3FBHB1-AU-B       40       AC3FPZB BULK       27       AC3MDZVB       23       AC4FB ULK       11       AC5FPZV       28         AC3FBHB3-AU-B       40       AC3FPZ BULK       27       AC3MI       16       AC4FDZ       24       AC5FR       15         AC3FBHB3-AU-B       40       AC3FPZ BULK       27       AC3MI       16       AC4FDZ       24       AC5FR       15         AC3FBHB3-AU-B       40       AC3FPZ V       27       AC3MIB       16       AC4FDZ       24       AC5MMV       137         AC3FBHB1-AU-B       41       AC3FR       15       AC3MIB BULK       16       AC4FDZ BULK       24       AC5MAH-AU-B       43         AC3FBHB1-AU-B       41       AC3M       10       AC3MI BULK       16       AC4FDZ BULK       24       AC5MA-AU-B       43         AC3FBHL2-AU-B       41       AC3M       10       AC3MI BULK       16       AC4FDZ BUL										
AC3FBHA-AU-B       40       AC3FPZB-AU       27       AC3MDZV       23       AC4FBJ       11       AC5FPZV       28         AC3FBHB1-AU-B       40       AC3FPZ BULK       27       AC3MDZVB       23       AC4F BULK       11       AC5FPZVB       28         AC3FBHB2-AU-B       40       AC3FPZ BULK       27       AC3MI       16       AC4FDZ       24       AC5FR       15         AC3FBHB3-AU-B       40       AC3FPZ V       27       AC3MI-AU       16       AC4FDZ       24       AC5MM       11         AC3FBHB1-AU-B       41       AC3FPZVB       27       AC3MIB       16       AC4FDZB       24       AC5MM       137         AC3FBHB1-AU-B       41       AC3FPZVB       27       AC3MIB-AU       16       AC4FDZB       24       AC5MM       137         AC3FBHB1-AU-B       41       AC3FR       15       AC3MIB-AU       16       AC4FDZB-AU       24       AC5MAH-AU-B       43         AC3FBHB1-AU-B       41       AC3MSMW       137       AC3MI BULK       16       AC4FDZ BULK       24       AC5MAH-AU-B       43         AC3FBHB1-AU-B       40       AC3MSMW       137       AC3MJ       10       AC4FDZ BULK	AC3FBH3-AU-B	40								
AC3FBHB1-AU-B       40       AC3FPZB BULK       27       AC3MDZVB       23       AC4F BULK       11       AC5FPZVB       28         AC3FBHB2-AU-B       40       AC3FPZ BULK       27       AC3MI       16       AC4FDZ       24       AC5FR       15         AC3FBHB3-AU-B       40       AC3FPZV       27       AC3MI-AU       16       AC4FDZ       24       AC5M       11         AC3FBHB1-AU-B       40       AC3FPZVB       27       AC3MIB       16       AC4FDZ-AU       24       AC5M       11         AC3FBHB1-AU-B       41       AC3FPZVB       27       AC3MIB       16       AC4FDZB       24       AC5MAW       137         AC3FBHB1-AU-B       41       AC3FR       15       AC3MIB       16       AC4FDZB       24       AC5MAH-AU-B       43         AC3FBHB1-AU-B       41       AC3M       10       AC3MIB       16       AC4FDZB       24       AC5MAH-AU-B       43         AC3FBHB1-AU-B       40       AC3M3MW       137       AC3MJ       10       AC4FDZB       24       AC5MAH-AU-B       43         AC3FBHL1-AU-B       40       AC3MASFW       137       AC3MJ       10       AC4FDZV       24       <										
AC3FBHB2-AU-B       40       AC3FPZ BULK       27       AC3MI       16       AC4FDZ       24       AC5FR       15         AC3FBHB3-AU-B       40       AC3FPZV       27       AC3MI-AU       16       AC4FDZ       24       AC5M       11         AC3FBHB3-AU-B       40       AC3FPZV       27       AC3MI-AU       16       AC4FDZ-AU       24       AC5M       11         AC3FBHBL1-AU-B       41       AC3FPZVB       27       AC3MIB       16       AC4FDZB-AU       24       AC5M5MW       137         AC3FBHBL2-AU-B       41       AC3FR       15       AC3MIB-AU       16       AC4FDZB-AU       24       AC5MAH-AU-B       43         AC3FBHBL3-AU-B       41       AC3M       10       AC3MIB BULK       16       AC4FDZ BULK       24       AC5MAH-AU-B       43         AC3FBHBL3-AU-B       41       AC3M       10       AC3MIB BULK       16       AC4FDZ BULK       24       AC5MAH-AU-B       43         AC3FBHL3-AU-B       41       AC3M       10       AC3MIB BULK       16       AC4FDZ BULK       24       AC5MAH-AU-B       43         AC3FBHL2-AU-B       40       AC3M3MW       137       AC3MJ       10       AC4FDZ BU										
AC3FBHB3-AU-B       40       AC3FPZV       27       AC3MI-AU       16       AC4FDZ-AU       24       AC5M       11         AC3FBHB-AU-B       40       AC3FPZVB       27       AC3MIB       16       AC4FDZB       24       AC5MSMW       137         AC3FBHBL1-AU-B       41       AC3FR       15       AC3MIB-AU       16       AC4FDZB       24       AC5MAH-AU-B       43         AC3FBHBL2-AU-B       41       AC3M       10       AC3MIB BULK       16       AC4FDZB BULK       24       AC5MAH-AU-B       43         AC3FBHBL3-AU-B       41       AC3M       10       AC3MIB BULK       16       AC4FDZB BULK       24       AC5MAV-AU-B       43         AC3FBHBL3-AU-B       41       AC3M       10       AC3MIB BULK       16       AC4FDZ BULK       24       AC5MAV-AU-B       43         AC3FBHL-AU-B       40       AC3MSMW       137       AC3MI       10       AC4FDZ BULK       24       AC5MB       11         AC3FBHL2-AU-B       41       AC3MSMW       137       AC3MI       10       AC4FDZ W       24       AC5MB       11         AC3FBHL3-AU-B       41       AC3MSMW       137       AC3MMI       10       AC4FDZ W <td></td>										
AC3FBHBL1-AU-B       41       AC3FP2VB       27       AC3MIB       16       AC4FD2B       24       AC5MM5MW       137         AC3FBHBL2-AU-B       41       AC3FR       15       AC3MIB-AU       16       AC4FD2B-AU       24       AC5MAH-AU-B       43         AC3FBHBL3-AU-B       41       AC3M       10       AC3MIB BULK       16       AC4FD2B BULK       24       AC5MAH-AU-B       43         AC3FBHBL3-AU-B       41       AC3M       10       AC3MIB BULK       16       AC4FD2B BULK       24       AC5MAH-AU-B       43         AC3FBHBL3-AU-B       41       AC3M3MBW       137       AC3MI BULK       16       AC4FD2 BULK       24       AC5MAV-AU-B       43         AC3FBHL2-AU-B       40       AC3M3MW       137       AC3MI BULK       16       AC4FD2 BULK       24       AC5MAV-AU-B       43         AC3FBHL2-AU-B       41       AC3M5FW       137       AC3MJ       10       AC4FD2 BULK       24       AC5MB       11         AC3FBHL2-AU-B       41       AC3MA-AU-B       36       AC3MM-AU       10       AC4FD2 BULK       11       AC5MB BULK       11         AC3FBHL2-AU-B       40       AC3MAH2-AU-B       35       AC3MMB-AU </td <td></td>										
AC3FBHBL2-AU-B       41       AC3FR       15       AC3MIB-AU       16       AC4FD2B-AU       24       AC5MAH-AU-B       43         AC3FBHBL3-AU-B       41       AC3M       10       AC3MIB BULK       16       AC4FD2B BULK       24       AC5MAH-AU-B       43         AC3FBHBL-AU-B       40       AC3M3MBW       137       AC3MI BULK       16       AC4FD2B BULK       24       AC5MAV-AU-B       43         AC3FBHBL-AU-B       40       AC3M3MBW       137       AC3MI BULK       16       AC4FD2 BULK       24       AC5MAV-AU-B       43         AC3FBHL2-AU-B       41       AC3M3MW       137       AC3MI       10       AC4FD2V       24       AC5MB       11         AC3FBHL2-AU-B       41       AC3M5FW       137       AC3MM       10       AC4FD2VB       24       AC5MB-AU       11         AC3FBHL2-AU-B       41       AC3MA-AU-B       36       AC3MM-AU       10       AC4FD2       28       AC5MB-AU       11         AC3FBHL3-AU-B       41       AC3MA+AU-B       35       AC3MMB       10       AC4FPZ       28       AC5MBJ       11         AC3FBHL-AU-B       40       AC3MAH2-AU-B       35       AC3MMB-AU       10			AC3FPZVB	27	AC3MIB	16		24	AC5M5MW	137
AC3FBHBL3-AU-B       41       AC3M       10       AC3MB BULK       16       AC4FDZ BULK       24       AC5M-AU       11         AC3FBHBL-AU-B       40       AC3M3MBW       137       AC3MI BULK       16       AC4FDZ BULK       24       AC5MAV-AU-B       43         AC3FBHBL-AU-B       40       AC3M3MBW       137       AC3MJ       10       AC4FDZ BULK       24       AC5MB       11         AC3FBHL2-AU-B       41       AC3M5FW       137       AC3MJ       10       AC4FDZV       24       AC5MB       11         AC3FBHL2-AU-B       41       AC3MA-AU-B       36       AC3MM       10       AC4FDZVB       24       AC5MB-AU       11         AC3FBHL3-AU-B       41       AC3MA-AU-B       36       AC3MM-AU       10       AC4FDZ       28       AC5MB BULK       11         AC3FBHL-AU-B       40       AC3MAH1-AU-B       35       AC3MMB       10       AC4FPZ       28       AC5MBJ       11         AC3FBJ       10       AC3MAH2-AU-B       35       AC3MMB-AU       10       AC4FPZ       28       AC5MDZ       24         AC3FBULK       10       AC3MAH3-AU-B       35       AC3MMB BULK       10       AC4FPZ										
AC3FBHL-AU-B       40       AC3M3MW       137       AC3MJ       10       AC4FDZV       24       AC5MB       11         AC3FBHL1-AU-B       41       AC3M5FW       137       AC3MM       10       AC4FDZV       24       AC5MB       11         AC3FBHL2-AU-B       41       AC3M5FW       137       AC3MM       10       AC4FDZVB       24       AC5MB-AU       11         AC3FBHL2-AU-B       41       AC3MA-AU-B       36       AC3MM-AU       10       AC4FDZ       28       AC5MB BULK       11         AC3FBHL-AU-B       40       AC3MAH1-AU-B       35       AC3MMB       10       AC4FPZ       28       AC5MBJ       11         AC3FBJ       10       AC3MAH2-AU-B       35       AC3MMB-AU       10       AC4FPZ       28       AC5MDJ       11         AC3FBJ       10       AC3MAH2-AU-B       35       AC3MMB-AU       10       AC4FPZB       28       AC5MDJ       24         AC3FBULK       10       AC3MAH3-AU-B       35       AC3MMB-AU       10       AC4FPZB-AU       28       AC5MDZ       24         AC3FBV1-AU-B       41       AC3MAH4-AU-B       35       AC3MMBJ       10       AC4FPZB-AU       28										
AC3FBHL2-AU-B       41       AC3M5FW       137       AC3MM       10       AC4FDZVB       24       AC5MB-AU       11         AC3FBHL2-AU-B       41       AC3M5FW       137       AC3MM       10       AC4FDZVB       24       AC5MB-AU       11         AC3FBHL3-AU-B       41       AC3MA-AU-B       36       AC3MM-AU       10       AC4FJ       11       AC5MB BULK       11         AC3FBHL3-AU-B       40       AC3MAH1-AU-B       35       AC3MMB       10       AC4FPZ       28       AC5MBJ       11         AC3FBJ       10       AC3MAH2-AU-B       35       AC3MMB-AU       10       AC4FPZB       28       AC5MBJ       11         AC3FBJ       10       AC3MAH3-AU-B       35       AC3MMB BULK       10       AC4FPZB-AU       28       AC5MDZ       24         AC3FBV1-AU-B       41       AC3MAH4-AU-B       35       AC3MMB BULK       10       AC4FPZB-AU       28       AC5MDZ-AU       24         AC3FBV2-AU-B       41       AC3MAH4-AU-B       35       AC3MMBJ       10       AC4FPZB BULK       28       AC5MDZB       24         AC3FBV2-AU-B       41       AC3MAH4-SW-B       35       AC3MM BULK       10       AC4FP	AC3FBHBL-AU-B	40								
AC3FBHL2-AU-B       41       AC3MA-AU-B       36       AC3MM-AU       10       AC4FJ       11       AC5MB BULK       11         AC3FBHL3-AU-B       41       AC3MA+AU-B       35       AC3MMB       10       AC4FJ       11       AC5MB BULK       11         AC3FBHL-AU-B       40       AC3MAH1-AU-B       35       AC3MMB       10       AC4FPZ       28       AC5MBJ       11         AC3FBJ       10       AC3MAH2-AU-B       35       AC3MMB-AU       10       AC4FPZB       28       AC5M BULK       11         AC3FBJ       10       AC3MAH3-AU-B       35       AC3MMB BULK       10       AC4FPZB-AU       28       AC5MDZ       24         AC3FBV1-AU-B       41       AC3MAH4-AU-B       35       AC3MMBJ       10       AC4FPZB BULK       28       AC5MDZ-AU       24         AC3FBV2-AU-B       41       AC3MAH4-SW-B       35       AC3MM BULK       10       AC4FPZ BULK       28       AC5MDZB       24         AC3FBV2-AU-B       41       AC3MAH4-AU-B       35       AC3MMCP       14       AC4FPZ W       28       AC5MDZB-AU       24         AC3FBV3-AU-B       41       AC3MAH-AU-B       35       AC3MMCP       14 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
AC3FBHJ-AU-B       41       AC3MAH1-AU-B       35       AC3MMB       10       AC4FPZ       28       AC5MBJ       11         AC3FBHL-AU-B       40       AC3MAH1-AU-B       35       AC3MMB       10       AC4FPZ       28       AC5MBJ       11         AC3FBJ       10       AC3MAH2-AU-B       35       AC3MMB-AU       10       AC4FPZB       28       AC5M BULK       11         AC3F BULK       10       AC3MAH3-AU-B       35       AC3MMB BULK       10       AC4FPZB-AU       28       AC5MDZ       24         AC3F BV1-AU-B       41       AC3MAH4-AU-B       35       AC3MMBJ       10       AC4FPZB BULK       28       AC5MDZ       24         AC3F BV2-AU-B       41       AC3MAH4-SW-B       35       AC3MM BULK       10       AC4FPZ BULK       28       AC5MDZB       24         AC3F BV2-AU-B       41       AC3MAH4-AU-B       35       AC3MMCP       14       AC4FPZ W       28       AC5MDZB-AU       24         AC3F BV3-AU-B       41       AC3MAH-AU-B       35       AC3MMCP       14       AC4FPZ W       28       AC5MDZB-AU       24         AC3F BV3-AU-B       41       AC3MAH-AU-B       35       AC3MMCP       14										
AC3FBUL-AU-B         40         AC3MAH2-AU-B         35         AC3MMB-AU         10         AC4FPZB         28         AC5M BULK         11           AC3FBJ         10         AC3MAH3-AU-B         35         AC3MMB BULK         10         AC4FPZB         28         AC5M BULK         11           AC3F BULK         10         AC3MAH3-AU-B         35         AC3MMB BULK         10         AC4FPZB-AU         28         AC5MDZ         24           AC3F BU1-AU-B         41         AC3MAH4-AU-B         35         AC3MMBJ         10         AC4FPZB BULK         28         AC5MDZ-AU         24           AC3FBV2-AU-B         41         AC3MAH4-SW-B         35         AC3MM BULK         10         AC4FPZ BULK         28         AC5MDZB         24           AC3FBV2-AU-B         41         AC3MAH4-SW-B         35         AC3MM BULK         10         AC4FPZ BULK         28         AC5MDZB         24           AC3FBV3-AU-B         41         AC3MAH4-BU-B         35         AC3MMCP         14         AC4FPZ V         28         AC5MDZB-AU         24           AC3FBV3-AU-B         41         AC3MAH4         10         AC3MMCP         14         AC4FPZV         28         AC5MDZB-AU <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>										
AC3FBULK         10         AC3MAH3-AU-B         35         AC3MMB BULK         10         AC4FPZB-AU         28         AC5MDZ         24           AC3F BULK         10         AC3MAH4-AU-B         35         AC3MMB BULK         10         AC4FPZB-AU         28         AC5MDZ         24           AC3F BULK         10         AC4FPZB BULK         28         AC5MDZ         24           AC3FBV1-AU-B         41         AC3MAH4-AU-B         35         AC3MMBJ         10         AC4FPZB BULK         28         AC5MDZ-AU         24           AC3FBV2-AU-B         41         AC3MAH4-SW-B         35         AC3MM BULK         10         AC4FPZ BULK         28         AC5MDZB         24           AC3FBV3-AU-B         41         AC3MAH-AU-B         35         AC3MMCP         14         AC4FPZ V         28         AC5MDZB-AU         24           AC3FBV3-AU-B         41         AC3MAHAU-B         35         AC3MMCP         14         AC4FPZ V         28         AC5MDZB-AU         24										
AC3FBV1-AU-B         41         AC3MAH4-AU-B         35         AC3MMBJ         10         AC4HP2B BULK         28         AC5MDZ-AU         24           AC3FBV2-AU-B         41         AC3MAH4-SW-B         35         AC3MM BULK         10         AC4FPZ BULK         28         AC5MDZB         24           AC3FBV2-AU-B         41         AC3MAH4-SW-B         35         AC3MMCP         14         AC4FPZ BULK         28         AC5MDZB-AU         24           AC3FBV3-AU-B         41         AC3MAH-AU-B         35         AC3MMCP         14         AC4FPZV         28         AC5MDZB-AU         24					AC3MMB BULK	10	AC4FPZB-AU	28	AC5MDZ	
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COSIMP         28         CC/FE         12         C-GROMMET-RED         138         CALM-MVG5-25         110         CACLS+HDD-11         111           COSIMP-AU         28         AC7FB         12         AC-GROMMET-RED         138         CALM-MVG5-25         110         ACLS+HDS         112           COSIMPB         28         AC7FB JL         12         AC-GROMMET-VTD         138         ACLM-MVG5-25         110         ACLS+HDS         113           ACSIMP BULK         28         AC7FB JL         AC-GROMMET-VTL         138         ACLM-MVG5-25         114         ACLS+VDS-36         113           ACSIMP BULK         28         AC7FD2B         25         ACLGSH BULK         53         ACLM-MVS-25         110         AC-AUT-BIN         138           ACSIMPAZ         28         AC7FD2B         25         ACLGSH BULK         53         ACLM-MVS-25         110         AC-AUT-BIN         138           ACSIMPAZ         28         AC7FD2B         21         ACLGSH BULK         53         ACLM-MVS-25         110         AC-AUT-BIN         138           ACSIMPAZ         28         AC7FD2B         ALLK         25         ACLGSH BULK         53         ACLM-MVS-52         110         AC-AU			AC6AMPVB		AC-GROMMET-GRN	138				
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CÓSIMPE         28         ACTRB ULK         12         AC-GROMMET-VIND         138         ACJM-MV0985-25         110         ACJS-PNB-S1         113           AGSMPB BULK         28         ACTR BULK         12         AC-GROMMET-VIL         138         ACJM-MV0985-25         110         ACJS-PNB-S1         113           AGSMP BULK         28         ACTR BULK         25         ACJGSN BULK         53         ACJM-MV5-25         114         ACJS-PNB-S1         113           AGSMP BULK         28         ACTR DULK         25         ACJGSN BULK         53         ACJM-MV5-25         110         ACJS-PNB-S1         113         ACJSM-MV5-24         110         AC-AUT-BRN         138           AGSMPK2,M         28         ACTR DULK         25         ACJSN BULK         53         ACJM-MV5-25         110         AC-AUT-BRN         138           AGSMPK2,M         28         ACTR DULK         25         ACJSN BULK         53         ACJM-HV5-11         111         AC-AUT-BRN         138           AGSMPR2,M         28         ACTR DULK         30         ACJGSN BULK         51         ACJM-HV5-11         111         AC-MUT-BL         138           AGSMPR DULK         28         ACTR DULK         30										
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ACSMP BULK         28         AC7FBULK         12         AC-GROMMETYEL         138         ACMM-WS-25         114         ACIS-PVB-35         113           ACSMP BULK         28         AC7FD2B         25         ACJCSH BULK         53         ACMM-WS-25         114         ACIS-PVB-5         113           ACSMPWIZ         28         AC7FD2B         25         ACJCSS BULK         53         ACMM-W35-2         110         AC-MUT-BIN         138           ACSMPWIZB         28         AC7FD2 BULK         25         ALGCSN BULK         53         ACIM-POC         112         AC-MUT-BIN         138           ACSMPWIZB         28         AC7FD2         25         ALGCSN BULK         53         ACIM-POC         111         AC-MUT-BIN         138           ACSMPWIZB         28         AC7FP2         30         ACLGARH BULK         51         ACIM-POR         111         AC-MUT-BIN         138           ACSMPWIZ         28         AC7FP2         30         ALGGARM BULK         51         ACIM-PHR         112         AC-MUT-BIN         138           ACSMPWIZ         28         AC7FP2 BULK         30         ALGGARM BULK         51         ACIM-PHR         112         AC-MUT-BIN         <										
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Incommer:         Pail         ACTPUE BULK         25         ACLESS BULK         53         ACUM-WSS-22         110         AC-MUT-BRN         138           ACSMMRUZE AU         28         ACTPUE BULK         25         ACLESS BULK         53         ACUM-WSS-22         110         AC-MUT-BRN         138           ACSMMRUZE BULK         28         ACTPUE V         25         ACLESS BULK         53         ACUM-VSS-22         111         AC-MUT-BRN         138           ACSMMRUZE BULK         28         ACTPLZ         30         ACLEGAN BULK         51         ACUM-PHOP         111         AC-MUT-BRN         138           ACSMMRUX         28         ACTPEZ         30         ACLEGAN BULK         51         ACUM-PHOP         111         AC-MUT-WIT-BRN         138           ACSMMRVB         28         ACTPEZ BULK         30         ACLEGAN BULK         51         ACUM-PHS-2         113         AC-MUT-WIT         138           ACSMRVB         28         ACTPEZ BULK         30         ACLEGAN BULK         54         ACUM-PHS-2         113         AC-MUT-WIT         138           ACSMRVB         28         ACTPEZ BULK         30         ACLEGAN BULK         54         ACUM-PHS-2         113	AC5MP BULK		AC7FDZ	25						
ACSMPNIZB         28         ACTPD2 BULK         25         ACLGSUB RULK         53         ACLMMPC         110         ACMUTGRY         138           ACSMPNIZB AULK         28         ACTPD2V         25         ACLGSV BULK         53         ACLMMPC         111         ACMUTGRY         138           ACSMPNIZB BULK         28         ACTPLZ         30         ACLGSV BULK         51         ACLMMPTHP         111         ACMUT-RETAL         139           ACSMPNIZD WLK         28         ACTPLZ         30         ACLGGAHL BULK         51         ACLMMPTHP         111         ACMUT-RETO         138           ACSMPNIZ         28         ACTPLZ BULK         30         ACLGGAN, BULK         51         ACLMMPTS         112         ACMUT-RETO         138           ACSMPNIZ         28         ACTPLZ BULK         30         ACLGGAN, BULK         51         ACLMMPS-25         113         ACMUT-NET         138           ACSMPNIZ         28         ACTPLZ WILK         30         ACLGGAN BULK         54         ACLMP-RE         138         ACMUT-NET         138           ACSMPNIZ         28         ACTPLZ WILK         34         ACLGAN BULK         54         ACLMP-RE         138         ACMUT-NET<										
ACSMMYR2B-AU         28         ACTPEZV         25         ACLGSV BULK         53         ACLMY-C         112         AC-MUT-BEV         138           ACSMMYR2 BULK         28         ACTFEZ         30         ACLGSV, BULK         53         ACLMY-PHP         111         AC-MUT-BELK         139           ACSMMYR2         28         ACTFEZ         30         ACLGSAV BULK         51         ACLMY-PHP         111         AC-MUT-BELK         138           ACSMMYR2         28         ACTFEZ         30         ACLGGAV BULK         51         ACLMY-PHP         111         AC-MUT-RED         138           ACSMMYR2         28         ACTFEZ         30         ACLGGAV BULK         51         ACLMY-PHS         112         AC-MUT-WIT         138           ACSMMYR9         28         ACTFEZ         30         ACLGGAV BULK         54         ACLMY-PHS-2         113         AC-MUT-WIT         138           ACSMMYR9         28         ACTFEZ         30         ACLGGAV BULK         54         ACLMY-PHS-2         112         ACPU-CBL         121         ACPU-CBL         121         ACPU-CBL         121         ACPU-CBL         121         ACPU-CBL         121         ACPU-CBL         121         ACPU										
ACSMPTU2         BULK         28         ACTFL         12         ACJGRAPH         111         AC-NUT-HEILK         139           ACSMPTU2         28         ACTFL         12         ACJGRAPH         111         AC-NUT-HEILK         139           ACSMPTU2         28         ACTFL2         30         ACJGRAPH         51         ACJMP-PHOP-1         111         AC-NUT-NETAL         139           ACSMPTU2         28         ACTFL2         30         ACJGRAPH         51         ACJMP-PHOP-1         111         AC-NUT-RED         138           ACSMPTV2         28         ACTFL28         BULK         30         ACJGRAPL         51         ACJMP-PHS         112         AC-NUT-WIT         138           ACSMPTV2         28         ACTFL2         30         ACJGRAPL         51         ACJMP-PHS-2         113         AC-NUT-WIT         138           ACSAMR         15         ACTFL2         30         ACJGRAPL         51         ACJMP-PHS-2         113         AC-NUT-WIT         138           ACSAMR         12         ACTFR         11         ACJGRAPL         124         ACPC-CBR         121         ACPM-CBR         121         ACPM-CBR         121         ACPM-CBR										
ACSMMN22 BULK         28         AC7FPJ         12         ACJGAH BULK         51         ACJM-HUPC         111         AC-NUT-ORE         138           ACSMMN2VB         28         AC7FPZB         30         ACJGAAN BULK         51         ACJM-HUPC         111         AC-NUT-ORE         138           ACSMMV2W         28         AC7FPZB         30         ACJGGAN BULK         51         ACJM-HHR         112         AC-NUT-WHT         138           ACSMMV9         28         AC7FPZ BULK         30         ACJGGAN BULK         54         ACJM-HVP-2         113         AC-NUT-WHT         138           ACSMR         12         AC7FPZ VB         30         ACJGGAN BULK         54         ACJM-FVP-2         113         AC-NUT-WHT         138           ACAGAF         12         AC7FPZ VB         30         ACJGGAN BULK         54         ACJM-RELK         121         ACPL-CBK         121           ACAGAFB         12         AC7FPZ NB         12         ACJGAN BULK         54         ACJR-REN         121         ACPL-CBK         121         ACPL-CBK         121         ACPL-CBK         121         ACPL-CBK         121         ACPL-CBK         121         ACPL-CBK         121         ACPL-C										
ACSMPV2         28         AC7PE2B         30         ACJCGAV BULK         51         ACJM-PHR         112         AC-NUT-NED         138           ACSMPV0         28         AC7PF2P BULK         30         ACJCGAV BULK         54         ACJM-PHR         112         AC-NUT-NHT         138           ACSMR         15         AC7PF2P BULK         30         ACJCGAV BULK         54         ACJM-PVB-22         113         AC-NUT-NHT         138           ACSMR         15         AC7PF2P SULK         30         ACJCGAV BULK         54         ACJM-PVB-22         113         AC-NUT-NHT         138           ACSAF         12         AC7PF2P SULK         30         ACJCGAV BULK         54         ACJM-PUB-22         113         AC-NUT-NHT         138           ACSAF         12         ACTMB         12         ACJCGAV BULK         54         ACJM-PSELU         121         ACPL-CGR         121           ACCBAF         12         ACTMB         12         ACJCGAV BULK         54         ACJM-SBL         121         ACPL-CGR         121         ACPL-CGR         121         ACPL-CVL         121         ACPL-CVL         121         ACPL-CVL         121         ACPL-CVL         121         ACPL-CVL						51	ACJM-PHOP	111		
ACSMPU2         28         ACTP278         BULK         30         ACICEAU BULK         51         AC/MP-PHS         112         AC-MUT-VU0         138           ACSMPU2         28         ACTPE2 BULK         30         ACICBH BULK         54         AC/M-PVB-22         113         AC-MUT-VHL         138           ACSMF         15         ACTPE2 WULK         30         ACICBS BULK         54         AC/M-PVB-22         113         AC-MUT-VHL         138           ACSMF         12         ACTPE2 WULK         30         ACICBS BULK         54         ACAR-BULU         121         ACPL-CBL         121           ACSAF-AU         12         ACTPR BULK         54         ACAR-BULU         121         ACPL-CBL         121           ACBAFB BULK         12         ACICBAV BULK         54         ACAR-BUL         121         ACPL-CBL         121           ACBAFB         12         ACICMAV BULK         54         ACAR-BUL         121         ACPL-CBL         121           ACBAFD         12         ACICMAV LULK         54         ACIR-SGR         121         ACPL-CBL         121           ACBAFD2         25         ACICMAV LULK         12         ACICBAV BULK         55										
ACSMR/PB         28         AC7PP2 DULK         30         ACIGH BULK         54         ACM-PVB-2         113         AC-UIT/WHT         138           ACSMR         15         AC7PF27         BULK         54         ACAM-PVB-25         113         AC-UIT/WHT         138           ACSMF         12         AC7PF2VB         30         ALIC6H LBULK         54         ACAM-PVB-25         113         AC-UIT/WEL         138           ACGAF         12         AC7FR         15         ACIC6SU BULK         54         ACIR-BU         121         ACPL-CBK         121           ACGAFB         12         AC7M         12         ACICVB VBULK         54         ACIR-BU         121         ACPL-CBR         121           ACGAFB         12         AC7MB BULK         12         ACICVB VBULK         54         ACIR-SBR         121         ACPL-CBR         121           ACGAFD2         25         AC7MD2B         25         ACICVB VBULK         52         ACIR-SBN         121         ACPM-GB BULK         106           ACGAFD2A         25         AC7MD2B BULK         25         ACICVB BULK         54         ACIR-SVL         121         ACPM-GN AUIK         106           ACGAFD2A<										
ACSMR         15         AC7PEV         30         ACJCHL BULK         54         ACM-PRE-2S         113         AC-NUT-YEL         133           ACSAF         12         AC7PEV/B         30         ACJCRS BULK         54         ACM-PRE-2S         113         ACP-UT-YEL         121           ACGAF-AU         12         ACTM         12         ACJCRV BULK         54         ACJR-BLU         121         ACPL-CBR         121           ACGAFB         12         ACTM         12         ACJCRV BULK         54         ACJR-BRU         121         ACPL-CBR         121           ACGAFB         12         ACJCRV BULK         54         ACJR-BRU         121         ACPL-CAD         121           ACGAFB         12         ACJMALBULK         51         ACJR-SBR         121         ACPL-CVL         121           ACGAFDZ         25         ACJMDZ         25         ACJCRAN BULK         52         ACJR-SBR         121         ACPM-GB         106           ACGAFDZ         25         ACJCRAN BULK         54         ACJR-SWH         121         ACPM-GB         104           ACGAFDZ         25         ACJCRAN BULK         55         ACJR-SWH         121         ACPM-G										
ACGAF         12         ACTPEVB         30         ACJCRS BULK         54         ACAP-LEK         121         ACPL-CBK         121           ACGAF-AU         12         ACTTR         15         ACJCSBLBULK         54         ACJR-BLU         121         ACPL-CBK         121           ACGAFB         12         ACTM         12         ACJCSV BULK         54         ACJR-RED         121         ACPL-CBL         121           ACGAFB         12         ACTMB         12         ACJCSV BULK         54         ACJR-RED         121         ACPL-CBL         121           ACGAFB         12         ACTMB BULK         12         ACJCSVB HULK         54         ACJR-SBL         121         ACPL-CVL         121           ACGAFDZ         25         ACJCBV BULK         52         ACJR-SGR         121         ACPM-GB         106           ACGAFDZ         25         ACJCBVDZ         25         ACJCBVB BULK         52         ACJR-SWH         121         ACPM-GN-AU         106           ACGAFDZ         25         ACJCBVDZ         25         ACJCBVB BULK         56         ACJR-SVL         121         ACPM-GN BULK         106           ACGAFDZB         25         ACTM										
ACGARP         I2         AC/TM         I2         AC/CV         EV         54         ACJR-GRN         I21         ACPL-CBR         I21           ACGARP AU         I2         ACTMB BULK         I2         ACCMB         I21         ACPL-CBR         I21           ACGARP BULK         I2         ACTMB BULK         I2         ACUSAHL BULK         51         ACJR-SBK         I21         ACPL-CNL         I21           ACGAR BULK         I2         ACUSAHL BULK         51         ACJR-SBK         I21         ACPL-CNL         I21           ACGAR DZ         I2         ACTMOZ         I2         ACUSAHL BULK         52         ACJR-SGR         I21         ACPM-GB         I06           ACGARDZ         I2         ACTMDZB         I25         ACJCOH BULK         54         ACJR-SWH         I21         ACPM-GB         I06           ACGARDZ BULK         I25         ACJONZB         I01         ACGARDZ         I01         ACPM-GB         I01         ACPM-GB         I01         ACGARDX         I06           ACGARDZ BULK         I25         ACJOSB BULK         I12         ACIM-GN         I01         ACGARDX         I04           ACGARDZ BULK         I12         ACPM-GB										
ACGARPS AU         12         ACC/VIB         12         ACLCEVL BULK         54         ACJR-RED         121         ACPL-CRD         121           ACGARB BULK         12         ACIONA BULK         12         ACIONA BULK         51         ACJR-SBL         121         ACPL-CWH         121           ACGARB         12         ACTMB BULK         12         ACIOSAH BULK         51         ACJR-SBL         121         ACPL-CWH         121           ACGARD2         25         ACIOSAV BULK         52         ACIASAVE         52         ACIASAVE         ACJR-SGR         121         ACPM-GB         106           ACGARD2 AU         25         ACIOSAV BULK         52         ACIASAVE         52         ACIASAVE         52         ACIASAVE         121         ACPM-GB         106           ACGARD2 BULK         25         ACIONB BULK         54         ACIASAVE         ACJR-SVL         121         ACPM-GN         116         ACASAVE         ACGARD2 BULK         25         ACIONB BULK         55         ACISAVE         55         ACISAVE         121         ACPM-GN         104         ACGARD2 BULK         25         ACIASAVE         121         ACPM-GN         104         ACGARD2 BULK         25 <td< td=""><td>AC6AF-AU</td><td>12</td><td>AC7FR</td><td>15</td><td>ACJC6SL BULK</td><td></td><td></td><td></td><td></td><td></td></td<>	AC6AF-AU	12	AC7FR	15	ACJC6SL BULK					
ACGAFE BÜLK         12         ACT/MB BULK         12         ACJCSAH BULK         51         ACJR-SBK         121         ACPL-CWH         121           ACGAF BULK         12         ACTMBJ         12         ACJCSAH BULK         51         ACJR-SBL         121         ACPL-CVL         121           ACGAF BULK         12         ACTMDZ         25         ACJCSAV BULK         52         ACJR-SGR         121         ACPM-GB         106           ACGAFDZ         25         ACTMDZB         25         ACJCSAV BULK         52         ACJR-SWH         121         ACPM-GB BULK         106           ACGAFDZ BULK         25         ACJCSH BULK         54         ACJR-SWH         121         ACPM-GB BULK         106           ACGAFDZ BULK         25         ACTMDZ BULK         25         ACJCSW BULK         55         ACJR-SWH         121         ACPM-GN BULK         106           ACGAFDZ BULK         25         ACTMDZ BULK         25         ACJCSW BULK         55         ACJR-SHDR         110         ACPM-SN BULK         104           ACGAFDZ BULK         25         ACJCNP BULK         30         ACJCOVB BULK         55         ACJR-SHDR         110         ACPM-SN AU         104      <										
ACGAFED         12         ACT/MBJ         12         ACJCSAHL         51         ACJR-SBL         121         ACPL-CYL         121           ACGAF         L         ACTM BULK         12         ACJGAV BULK         52         ACJR-SGR         121         ACPM-GB-AU         106           ACGAFDZ         25         ACTMDZ         25         ACJGAVL BULK         52         ACJR-SWH         121         ACPM-GB-AU         106           ACGAFDZ AD         25         ACJGAVL BULK         54         ACJR-SWH         121         ACPM-GB AU         106           ACGAFDZ BULK         25         ACJGOBH BULK         54         ACJR-SWH         121         ACPM-GB AU         106           ACGAFDZ BULK         25         ACTMDZ BULK         25         ACJGOS BULK         55         ACJR-WHT         121         ACPM-GB BULK         106           ACGAFDZ BULK         25         ACTMDZVB         25         ACJGOS BULK         55         ACJR-WHT         121         ACPM-GB BULK         104           ACGAFDZ BULK         25         ACTMP         30         ACJCOSV BULK         55         ACJS-HHDP         111         ACPM-KB BULK         104           ACGAFPZB         29         ACTMP										
ACGAF BULK         12         ACTM BULK         12         ACJCAP BULK         52         ACJR-SGR         121         ACPM-GB         106           ACGAFDZ         25         ACTMDZ         25         ACJCAPAU BULK         52         ACJR-SGR         121         ACPM-GB-AU         106           ACGAFDZ-AU         25         ACTMDZB         25         ACJCAPAU BULK         54         ACJR-SWH         121         ACPM-GB BULK         106           ACGAFDZB-AU         25         ACTMDZ BULK         25         ACJCAPAU BULK         56         ACJR-SVL         121         ACPM-GN-AU         106           ACGAFDZ BULK         25         ACJCAPAU BULK         55         ACJR-SVL         121         ACPM-GN-AU         106           ACGAFDZ BULK         25         ACJCAPAU BULK         55         ACJR-SVL         121         ACPM-GN-AU         104           ACGAFDZ BULK         25         ACJCAPAU BULK         55         ACJR-SVHDP         111         ACPM-KB-AU         104           ACGAFDZ BULK         25         ACJCAPAU BULK         52         ACJS-HHOP         111         ACPM-KB-AU         104           ACGAFPZ AU         29         ACTHAPB         30         ACIC10AV BULK										
AC6AFDZ         25         AC7MDZ         25         ACJC3AUL BULK         52         ACJR-SRD         121         ACPM-GB-AU         106           AC6AFDZ-AU         25         AC7MDZB         25         ACJC9H BULK         54         ACJR-SWH         121         ACPM-GB BULK         106           AC6AFDZB         25         AC7MDZ BULK         25         ACJC9H BULK         54         ACJR-SVL         121         ACPM-GN         106           AC6AFDZ BULK         25         ACJC9M BULK         55         ACJR-SVL         121         ACPM-GN-AU         106           AC6AFDZ BULK         25         ACJC9S BULK         55         ACJR-YEL         121         ACPM-GN BULK         106           AC6AFDZ BULK         25         ACTMP         30         ACJC9S BULK         55         ACJS-HHDP-1         111         ACPM-KB         104           AC6AFDZ BULK         25         ACTMP         30         ACJC10AH BULK         52         ACJS-HHDP-1         111         ACPM-KN-AU         104           AC6AFPZ         29         ACTMPB BULK         30         ACJC10AH BULK         52         ACJS-HHOP-1         111         ACPM-KN-BULK         104         AC6AFPZ         29         ACTMPNZ										
AC6AFDZ-AU         25         AC7MDZB         25         ACACMP BULK         54         ACAP.SWH         121         ACPM-GB BULK         106           AC6AFDZB         25         AC7MDZ BULK         25         ACJG9M BULK         54         ACJR-SYL         121         ACPM-GN         106           AC6AFDZB BULK         25         AC7MDZ BULK         25         ACJG9M BULK         55         ACJR-YEL         121         ACPM-GN AU         106           AC6AFDZ BULK         25         ACTMDZVB         25         ACJG9V BULK         55         ACJS-HHDR         110         ACPM-KB ULK         104           AC6AFDZ BULK         25         ACTMDZVB         25         ACJG9V BULK         55         ACJS-HHDR         111         ACPM-KB ULK         104           AC6AFDZ AU         29         ACTMP B         30         ACJG9VL BULK         52         ACJS-HH         112         ACPM-KN         104           AC6AFPZ         29         ACTMP BULK         30         ACJC10AV BULK         52         ACJS-HH         112         ACPM-KN ULK         104           AC6AFPZ BULK         29         ACTMPNZ         29         ACJC10AV BULK         52         ACJS-HHDP.1         111         ACPM-RB <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>106</td>										106
ACGAPEZE-AU         25         ACT/NDZ BULK         25         ACJC9M BULK         56         ACJR-WHT         121         ACPM-GN-AU         106           ACGAPZB BULK         25         ACT/MDZ/W         25         ACJC9S BULK         55         ACJR-WEL         121         ACPM-GN-AU         106           ACGAPZB BULK         25         ACT/MDZ/B         25         ACJC9S BULK         55         ACJS-HHDP         111         ACPM-KB         104           ACGAPZV         25         ACT/MP         30         ACJC9VL         55         ACJS-HHDP         111         ACPM-KB         104           ACGAFDZV         25         ACT/MP         30         ACJC10AH BULK         52         ACJS-HHDP-1         111         ACPM-KN         104           ACGAFPZ         29         ACT/MPB         30         ACJC10AH BULK         52         ACJS-MC         112         ACPM-KN-AU         104           ACGAFPZ-AU         29         ACT/MPNZB         29         ACJC10AV BULK         52         ACJS-MHD         113         ACPM-RB         107           ACGAFPZ AU         29         ACT/MPNZB         29         ACJC10H BULK         55         ACJS-MHD985         110         ACPM-RB         107<	AC6AFDZ-AU	25								
AcGAF2D2 BULK         25         ACJM02V         25         ACJG9S BULK         55         ACJR-YEL         121         ACPM-GN BULK         106           ACGAFD2 BULK         25         ACTMD2V         25         ACTMD2V         25         ACTMD2V         25         ACTMD2V         25         ACTMD         104         ACGAFD2 BULK         55         ACJS-HHOP         110         ACPM-KB-AU         104           ACGAFD2 VB         25         ACTMP         30         ACJCOVL BULK         55         ACJS-HHOP-1         111         ACPM-KB-AU         104           ACGAFD2 VB         25         ACTMP B         30         ACJCOVL BULK         55         ACJS-HHOP-1         111         ACPM-KN-BULK         104           ACGAFPZ         29         ACTMP BULK         30         ACJCIOAV BULK         52         ACJS-H         112         ACPM-KN-BULK         104           ACGAFPZB         29         ACTMPNZ         29         ACJCIOAV BULK         52         ACJS-MHD         113         ACPM-RB-AU         107           ACGAFPZB BULK         29         ACJCIOAV BULK         55         ACJS-MHD2S         104         ACGAFPZ         112         ACPM-RN         107           ACGAFPZB BULK										
ACGAFDZ BULK         25         ACJUGSL BULK         55         ACJS-HHDR         110         ACPM-KB         104           ACGAFDZV         25         ACTMJ         12         ACJG9V BULK         55         ACJS-HHDP         111         ACPM-KB         104           ACGAFDZV         25         ACTMP         30         ACJC9V BULK         55         ACJS-HHDP         111         ACPM-KB         104           ACGAFDZV         25         ACTMP         30         ACJC10AH BULK         52         ACJS-HHDP         111         ACPM-KN         104           ACGAFPZ         29         ACTMPB BULK         30         ACJC10AV BULK         52         ACJS-HH         112         ACPM-KN-AU         104           ACGAFPZ         29         ACTMPNZ         29         ACJC10AV BULK         52         ACJS-MH         112         ACPM-KN-BULK         104           ACGAFPZ BULK         29         ACJC10AV BULK         55         ACJS-MHD         113         ACPM-RB BULK         107           ACGAFPZ BULK         29         ACJC10N BULK         55         ACJS-MHDC*         112         ACPM-RB BULK         107           ACGAFPZ BULK         29         ACJC10V BULK         55         AC										
AC6AFDZV         25         AC7MJ         12         ACJC9V BULK         55         ACJS-HHOP         111         ACPM-KB-AU         104           AC6AFDZVB         25         AC7MPB         30         ACJC9VL BULK         55         ACJS-HHOP-1         111         ACPM-KB BULK         104           AC6AFDZVB         12         AC7MPB BULK         30         ACJC10AH BULK         52         ACJS-HH         112         ACPM-KN         104           AC6AFPZ         29         AC7MPB BULK         30         ACJC10AH BULK         52         ACJS-HHS         112         ACPM-KN-AU         104           AC6AFPZ-AU         29         AC7MPNZ         29         ACJC10AV BULK         52         ACJS-MH         112         ACPM-KN-BULK         104           AC6AFPZB         29         ACJC10H BULK         55         ACJS-MHD         113         ACPM-RB-AU         107           AC6AFPZ BULK         29         AC7MPNZB BULK         29         ACJC10H BULK         55         ACJS-MHDO*         112         ACPM-RN         107           AC6AFPZ BULK         29         AC7MPNZB BULK         29         ACJC10V BULK         55         ACJS-MHDO*         112         ACPM-RN AU         107 <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>										
ACGAFDZVB         25         AC7MP         30         ACJGYUBULK         55         ACJS-HH0P-1         111         ACPM-KB BULK         104           ACGAFDZ         29         AC7MPB BULK         30         ACJC10AH BULK         52         ACJS-HH         112         ACPM-KN         104           ACGAFPZ         29         AC7MPB BULK         30         ACJC10AH BULK         52         ACJS-HS         112         ACPM-KN-AU         104           ACGAFPZ         29         AC7MPNBULK         30         ACJC10AH BULK         52         ACJS-MC         112         ACPM-KN-BULK         104           ACGAFPZ-AU         29         AC7MPNZB         29         ACJC10H BULK         55         ACJS-MHD         113         ACPM-RB-AU         107           ACGAFPZ BULK         29         ACTMPNZ BULK         29         ACJC10S BULK         55         ACJS-MHDCM         112         ACPM-RB         107           ACGAFPZ BULK         29         ACTMPNZ BULK         29         ACJC10S BULK         56         ACJS-MHDCM         112         ACPM-RN AU         107           ACGAFPZ BULK         29         ACTMPNZ BULK         29         ACJC10V BULK         55         ACJS-MHDCM         113         A										
ACGAFPZ         29         AC7MPB BULK         30         ACJC10AHL BULK         52         ACJS-IHS         112         ACPM-KN-AU         104           ACGAFPZ-AU         29         AC7MPD BULK         30         ACJC10AV BULK         52         ACJS-MC         112         ACPM-KN-AU         104           ACGAFPZB         29         AC7MPNZ         29         ACJC10AVL BULK         52         ACJS-MH         112         ACPM-RB-AU         107           ACGAFPZB-AU         29         AC7MPNZB         29         ACJC10H BULK         55         ACJS-MHD         113         ACPM-RB-AU         107           AC6AFPZB-BULK         29         AC7MPNZB ULK         29         ACJC10H BULK         55         ACJS-MHD0**         112         ACPM-RN-MU         107           AC6AFPZ BULK         29         AC7MPNZ BULK         29         ACJC10SULK         56         ACJS-MHDC**         112         ACPM-RN-NU         107           AC6AFPZ BULK         29         AC7MPNZ BULK         29         ACJC10V BULK         55         ACJS-MHDC**         112         ACPM-RN BULK         107           AC6AFPZ BULK         29         ACT010V BULK         55         ACJS-MHDC**         113         ACPM-RN BULK <t< td=""><td></td><td></td><td>AC7MP</td><td>30</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>			AC7MP	30						
ACGAPPZ-AU         29         AC7MP BULK         30         ACJC10AV BULK         52         ACJS-MC         112         ACPM-RN-BULK         104           ACGAPPZB         29         AC7MPNZ         29         ACJC10AV BULK         52         ACJS - MH         112         ACPM-RB         107           ACGAPZB         29         AC7MPNZB         29         ACJC10H BULK         55         ACJS - MHD         113         ACPM-RB-AU         107           ACGAPZB BULK         29         ACJC10H BULK         55         ACJS - MHD         113         ACPM-RB BULK         107           ACGAFPZ BULK         29         ACTMPNZ BULK         29         ACJC10S BULK         56         ACJS - MHDC*         112         ACPM-RB BULK         107           ACGAFPZ BULK         29         ACTMPNZ BULK         29         ACJC10S BULK         56         ACJS - MHDC*         112         ACPM-RN AU         107           ACGAFPZ BULK         29         ACJC10V BULK         55         ACJS - MHDC         113         ACPM-RN AU         107           ACGAFPZ BULK         29         ACJC10V BULK         55         ACJS - MHDC         113         ACPM-RN AU         107           ACGAMM         12         ACTMPVV<										
ACGAPPZB         29         AC7MPNZ         29         ACJC10AVL BULK         52         ACJS - MH         112         ACPM-RB         107           ACGAFPZB-AU         29         AC7MPNZB         29         ACJC10HULK         55         ACJS-MHD         113         ACPM-RB-AU         107           ACGAFPZB BULK         29         AC7MPNZB BULK         29         ACJC10HL BULK         55         ACJS-MHDC*         112         ACPM-RB BULK         107           ACGAFPZB BULK         29         ACJC10S BULK         56         ACJS-MHDC*         112         ACPM-RN         107           ACGAFPZ BULK         29         ACJC10S BULK         56         ACJS-MHDCM         112         ACPM-RN         107           ACGAFPZ BULK         29         ACJC10V BULK         56         ACJS-MHDCM         112         ACPM-RN BULK         107           ACGAFR         15         AC7MPV         30         ACJC10V BULK         55         ACJS-MHDEM         113         ACPM-RB         105           ACGAM         12         AC7MPVB         30         ACJD-BLU         122         ACJS-MHDEM         111         ACPM-TB         105           ACGAMB         12         ACSMR         15         A										
ACGAFPZE-AU         29         ACJC10H BULK         55         ACJS-MHD         113         ACPM-RB-AU         107           ACGAFPZB BULK         29         AC7MPNZB BULK         29         ACJC10HL BULK         55         ACJS-MHD085         110         ACPM-RB BULK         107           ACGAFPZ BULK         29         AC7MPNZ BULK         29         ACJC10NS BULK         56         ACJS-MHDC*         112         ACPM-RB BULK         107           ACGAFPZ BULK         29         AC7MPNZV         29         ACJC10S BULK         56         ACJS-MHDC*         112         ACPM-RN         107           ACGAFPZVB         29         AC7MPNZVB         29         ACJC10V BULK         55         ACJS-MHDCM         113         ACPM-RN-AU         107           ACGAFR         15         AC7MPV         30         ACJC10V BULK         55         ACJS-MHDE         113         ACPM-RB         105           ACGAM         12         AC7MPVB         30         ACJC10V BULK         55         ACJS-MHDE         113         ACPM-TB         105           ACGAMB         12         AC7MR         15         ACJD-BLU         122         ACJS-MHDR         111         ACPM-TN         105										
AC6AFP2B BULK         29         ACJC10HL BULK         55         ACJS-MHD985         110         ACPM-RB BULK         107           AC6AFP2 BULK         29         ACJC10S BULK         56         ACJS-MHDC*         112         ACPM-RN         107           AC6AFP2 BULK         29         ACJC10S BULK         56         ACJS-MHDC*         112         ACPM-RN         107           AC6AFP2V         29         ACJC10S BULK         56         ACJS-MHDCM         112         ACPM-RN         107           AC6AFP2VB         29         ACJC10V BULK         55         ACJS-MHDE         113         ACPM-RN BULK         107           AC6AFR         15         AC7MPVZ         30         ACJC10V BULK         55         ACJS-MHDE         113         ACPM-TB         105           AC6AM         12         AC7MPVB         30         ACJD-BLU         122         ACJS-MHDM         113         ACPM-TB         105           AC6AMB         12         ACBNC20A         92         ACJD-GRN         122         ACJS-MHDM         111         ACPM-TN AU         105           AC6AMB-AU         12         AC-BNC20AF75         92         ACJD-RED         122         ACJS-MHOM         111         ACP										
ACGAFPZV       29       ACJC10SL BULK       56       ACJS-MHDCM       112       ACPM-RN-AU       107         ACGAFPZVB       29       ACJMPNZVB       29       ACJC10V BULK       55       ACJS-MHDE       113       ACPM-RN BULK       107         ACGAFR       15       AC7MPVZVB       29       ACJC10VL BULK       55       ACJS-MHDE       113       ACPM-RN BULK       107         ACGAM       12       AC7MPVB       30       ACJD-BLK       122       ACJS-MHDEM       113       ACPM-TB-AU       105         ACGAM-AU       12       AC7MR       15       ACJD-BLU       122       ACJS-MHDR       111       ACPM-TB-AU       105         ACGAMB       12       AC-BNC20A       92       ACJD-GRN       122       ACJS-MHDR       111       ACPM-TN-AU       105         ACGAMB-AU       12       AC-BNC20A/75       92       ACJD-RED       122       ACJS-MHDR       111       ACPM-TN-AU       105         ACGAMB BULK       12       AC-BNC20A/75       92       ACJD-WHT       122       ACJS-MHOM       111       ACPM-TN-AU       105         ACGAMB BULK       12       AC-BNC20B/75       92       ACJD-WHT       122       ACJS-MHOP		29		29				110		
AC6AFPZVB       29       AC7MPNZVB       29       ACUC10V BULK       55       ACUS-MHDE       113       ACPM-RN BULK       107         AC6AFR       15       AC7MPV       30       ACJC10VL BULK       55       ACUS-MHDE       113       ACPM-RN BULK       105         AC6AM       12       AC7MPVB       30       ACJD-BLK       122       ACUS-MHDM       113       ACPM-TB-AU       105         AC6AM-AU       12       AC7MR       15       ACUD-BLU       122       ACUS-MHDR       111       ACPM-TB-AU       105         AC6AMB       12       AC-BNC20A       92       ACJD-GRN       122       ACUS-MHDR       111       ACPM-TN       105         AC6AMB AU       12       AC-BNC20AJ75       92       ACJD-GRN       122       ACUS-MHDR       111       ACPM-TN-AU       105         AC6AMB BULK       12       AC-BNC20AJ75       92       ACJD-WHT       122       ACUS-MHOP       111       ACPM-TN-AU       105         AC6AMBJ       12       AC-BNC20BJ75       92       ACJD-WHT       122       ACUS-MHOP       111       ACPR-BLK       121         AC6AMBJ       12       AC-BNC20BJ75       92       ACJM-HDP       111										
ACGARE       15       AC7MPV       30       ACJC10VL BULK       55       ACJS-MHDEM       113       ACPM-TB       105         ACGAM       12       AC7MPVB       30       ACJD-BLK       122       ACJS-MHDM       113       ACPM-TB-AU       105         ACGAM-AU       12       AC7MR       15       ACJD-BLU       122       ACJS-MHDR       111       ACPM-TB-AU       105         ACGAMB       12       AC-BNC20A       92       ACJD-GRN       122       ACJS-MHDRM       111       ACPM-TB       105         AC6AMB-AU       12       AC-BNC20AJ75       92       ACJD-RED       122       ACJS-MHORM       111       ACPM-TN-AU       105         AC6AMB BULK       12       AC-BNC20AJ75       92       ACJD-RED       122       ACJS-MHOP       111       ACPM-TN-AU       105         AC6AMB J       12       AC-BNC20BJ75       92       ACJD-VEL       122       ACJS-MHOP       111       ACPM-TN-AU       105         AC6AMBJ       12       AC-BNC20BJ75       92       ACJD-YEL       122       ACJS-MHOP-1       111       ACPR-BLK       121         AC6AMDZ       25       AC-BNC20BJ75       92       ACJM-HHOP       111										
ACGAM       12       AC7MPVB       30       ACJD-BLK       122       ACJS-MHDM       113       ACPM-TB-AU       105         ACGAM-AU       12       AC7MR       15       ACJD-BLU       122       ACJS-MHDR       111       ACPM-TB-AU       105         ACGAMB       12       AC-BNC20A       92       ACJD-GRN       122       ACJS-MHDR       111       ACPM-TB BULK       105         ACGAMB-AU       12       AC-BNC20AJ75       92       ACJD-RED       122       ACJS-MHOM       111       ACPM-TN-U       105         ACGAMB BULK       12       AC-BNC20AJ75       92       ACJD-RED       122       ACJS-MHOP       111       ACPM-TN-AU       105         ACGAMB BULK       12       AC-BNC20AP75       92       ACJD-YEL       122       ACJS-MHOP       111       ACPM-TN BULK       105         ACGAMB BULK       12       AC-BNC20B       92       ACJD-YEL       122       ACJS-MHOP-1       111       ACPR-BLK       121         ACGAMDZ       25       AC-BNC20BJ75       92       ACJM-HHOP       111       ACJS-MHS       112       ACPR-BLU       121         ACGAMDZ       25       AC-BNC20MJ75       92       ACJM-HHOP-1       11										
ACGAM-AU         12         AC7MR         15         ACJD-BLU         122         ACJS-MHDR         111         ACPM-TB BULK         105           ACGAMB         12         AC-BNC20A         92         ACJD-GRN         122         ACJS-MHDRM         111         ACPM-TB BULK         105           ACGAMB-AU         12         AC-BNC20AJ75         92         ACJD-RED         122         ACJS-MHOM         111         ACPM-TN         105           ACGAMB BULK         12         AC-BNC20AJ75         92         ACJD-RED         122         ACJS-MHOM         111         ACPM-TN-AU         105           ACGAMB BULK         12         AC-BNC20BA75         92         ACJD-WHT         122         ACJS-MHOP         111         ACPM-TN-BULK         105           ACGAMBJ         12         AC-BNC20B         92         ACJD-YEL         122         ACJS-MHOP-1         111         ACPR-BLU         121           ACGAMBJ         12         AC-BNC20BJ75         92         ACJM-HHOP         110         ACJS-MHR         112         ACPR-BLU         121           ACGAMDZ         25         AC-BNC20M         92         ACJM-HHOP-1         111         ACJS-MIV-3         113         ACPR-SBL         1										
ACGAMB-AU         12         AC-BNC20AJ75         92         ACJD-RED         122         ACJS-MHOM         111         ACPM-TN-AU         105           ACGAMB BULK         12         AC-BNC20AP75         92         ACJD-RED         122         ACJS-MHOM         111         ACPM-TN-AU         105           ACGAMB BULK         12         AC-BNC20AP75         92         ACJD-WHT         122         ACJS-MHOP         111         ACPM-TN-BULK         105           ACGAMBJ         12         AC-BNC20B         92         ACJD-YEL         122         ACJS-MHOP-1         111         ACPR-BLK         121           ACGAM BULK         12         AC-BNC20BJ75         92         ACJM-HHDR         110         ACJS-MHR         112         ACPR-BLU         121           ACGAMDZ         25         AC-BNC20BP75         92         ACJM-HHOP         111         ACJS-MHS         112         ACPR-GRN         121           ACGAMDZAU         25         AC-BNC20M         92         ACJM-HHOP-1         111         ACJS-MIV-3         113         ACPR-SBK         121           ACGAMDZB         25         AC-BNC20MJ75         92         ACJM-IHS         112         ACJS-MIV-3S         113         ACPR-SBL			AC7MR	15			ACJS-MHDR	111		
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#### **PRODUCT SAFETY INFORMATION**

### **PRODUCT SAFETY INFORMATION**

This should be read in conjunction with Data Sheet information contained in individual product brochures. Failure to observe the advice in this information sheet and the operating conditions specified in the Data Sheets could result in hazardous situations.

#### 1. Material Content and Physical Form

Electrical connectors do not usually contain hazardous materials. They contain conducting and non-conducting materials. Shells are manufactured in metal and plastic. Insulators can be formed in either natural rubber, synthetic rubber, plastic or glass insulating materials. Contact materials vary with the type of connector and its application. They are usually manufactured from either copper alloys, nickel, alumel, chromel or steel. In special applications, other alloys may be specified.

#### 2. Fire Characteristics and Electric Shock Hazard

There is no fire hazard when the connector is correctly wired and used within the specified parameters. Incorrect wiring or assembly of the connector or careless use of metal tools or conductive fluids, or transit damage to any of the component parts may cause electric shock or burns. Live circuits must not be broken by separating mated connectors as this may cause arcing, ionisation and burning. Heat dissipation is greater at maximum resistance in a circuit. Hot spots may occur when resistance is raised locally by damage, e.g. cracked or deformed contacts, or broken strands of wire. Local overheating may also result from the use of the incorrect application tools or from poor quality soldering.

Overheating may occur if the ratings in the Data Sheets are exceeded and can cause breakdown of insulation and hence electric shock.

If heating is allowed to continue it intensifies by further increasing the local resistance through loss of temper or spring contact, formation of oxide film on contacts and wires, and leakage currents through carbonisation of insulation and tracking points. Fire can then result in the presence of combustible materials and this may release noxious fumes. Overheating may not be visually apparent. Burns may result from touching overheated components.

#### 3. Handling

Care must be taken to avoid damage to any component parts of electrical connectors during installation and use. Although there are normally no sharp edges, care must be taken when handling certain components to avoid injury to fingers. Electrical connectors may be damaged in transit to customers, and damage may result in creation of hazards. Products should therefore be examined prior to installation/use and rejected if found to be damaged.

#### 4. Disposal

Incineration of certain materials may release noxious or even toxic fumes.

#### 5. Application

Connectors with exposed contacts should not be selected for use on the current supply side of an electrical circuit, because an electric shock could result from touching exposed contacts of an unmated connector. Voltages in excess of 30 V.A.C. or 42.5 V.D.C. are potentially hazardous and care should be taken to ensure that such voltages cannot be transmitted in any way to exposed metal parts of the connector body. The connector and wiring should be checked, before making live, to have no damage to metal parts or insulators, no solder blobs, loose strands, conducting lubricants, swarf, or any other undesired conducting particles. Circuit resistance and continuity check should be made to make certain that there are no low resistance joints or spurious conducting paths. Always use the correct application tools as specified in the Data Sheets. Do not permit untrained personnel to wire, assemble or tamper with connectors. For operation voltage please see appropriate national regulations.

#### Important General Information

### A) Air and creepage paths / Operating voltage.

The admissible operating voltages depend on the individual applications and the valid national and other applicable safety regulations. For this reason the air and creepage path data are only reference values. Observe reduction of air and creepage paths due to PC board and/or harnessing.

#### B) Other important information

Amphenol Australia Pty Ltd continuously endeavours to improve its products. Therefore, products may deviate from the description, technical data and shape as shown in product brochures.

#### C) Assembly instructions

If applicable, special assembly instructions have been included in or on the connector packaging. See also separate instructions in product brochures.

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