SP/EP/AP SERIES LOUDSPEAKER CONNECTORS

SP Series

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.

Features

- High current contacts for distortion free signal.
- Cost effective durable thermoplastic shell
- Available in 2 and 4 contact arrangements.
- Overmolded cable support boot or PG gland with or without cable support strain relief.
- Quick release, vibration resistant latch lock.
- UL, cUL recognized components (File no. E339831)
- Precision machined contacts
- Thermoplastic shell

Options

- Solder termination / Tab or Printed Circuit Board versions, Screw Terminals
- Nickel Plated Zinc Alloy shell
- Black finished Zinc Alloy shell

EP Series

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.

Features

- High current contacts for distortion free signal.
- Tough, durable zinc diecast shell
- 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.
- Precision machined contacts

Options

- Nickel Plated Zinc Alloy shell
- Black finished Zinc Alloy shell
- Available in 3, 4, 5, 6 and 8 contact arrangements

AP Series

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.
- Cost effective durable thermoplastic shell
- Quick release, vibration resistant latch lock.
- AP & EP series are completely intermatable.
- Precision machined contacts
- Thermoplastic shell

Options

- Available in 4, 5, 6, and 8 contact arrangements.

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.

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.

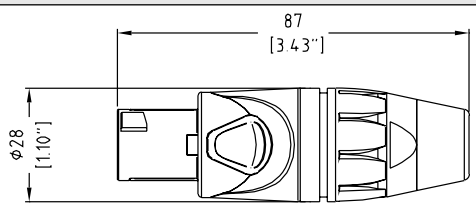
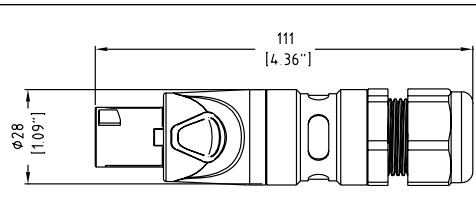
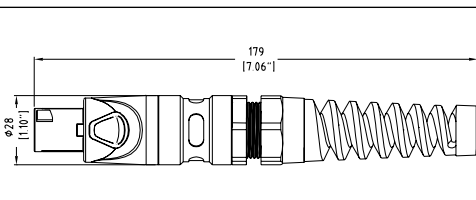
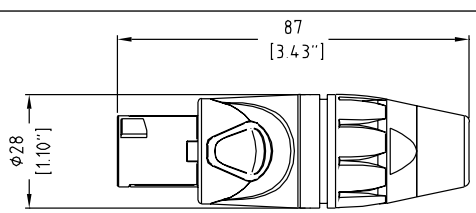
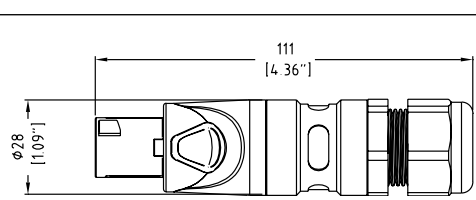
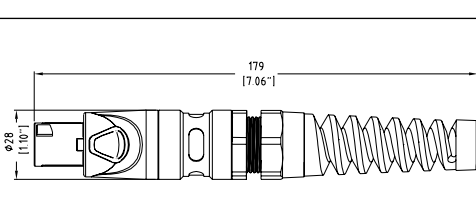
SP SERIES

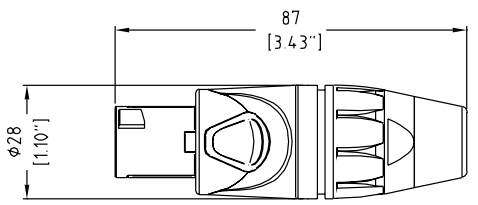
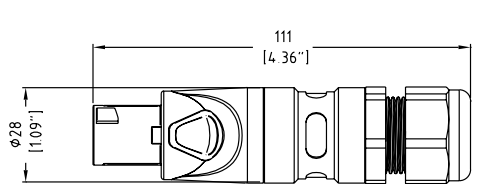
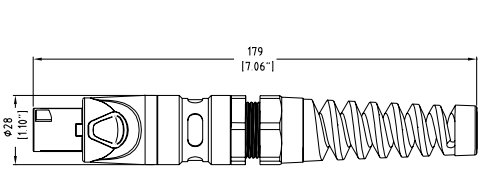
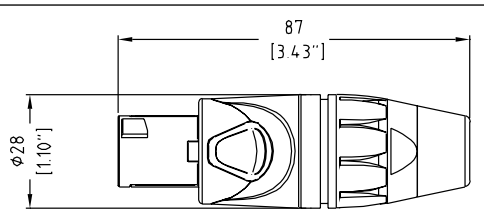
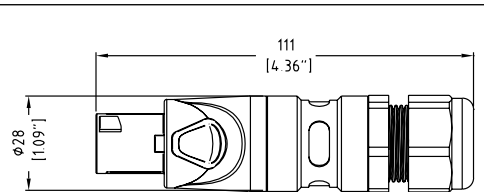
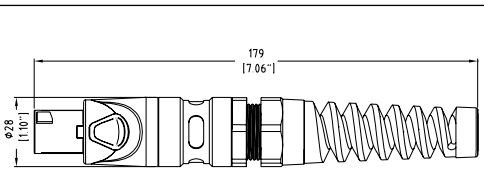
Amphenol's range of loudspeaker connectors have been further enhanced with the introduction of the SP Series. Designed to complement the popular EP/AP Series, we now offer a range of loudspeaker connectors to suit most applications. SP Series chassis connectors are available in industry standard PCB 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)
- UL, cUL recognized components (File no. E339831)
- Industry standard mating

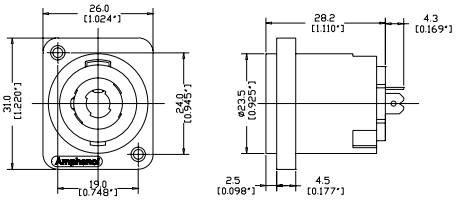
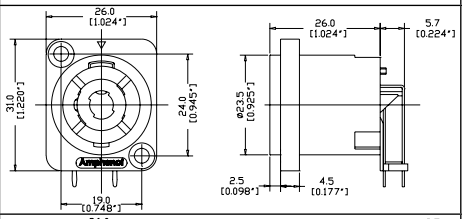
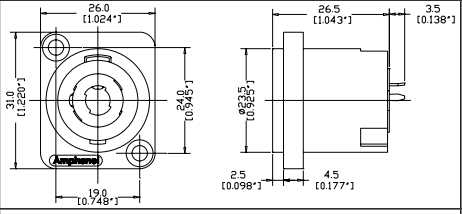
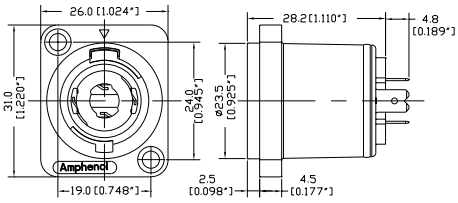
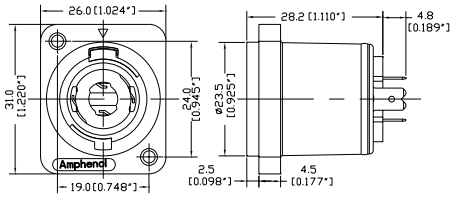
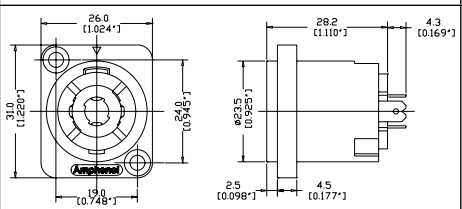
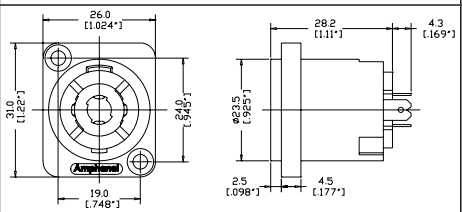
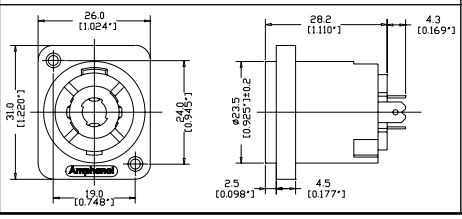
Part Number Breakdown: Page 60
PCB Footprints: Page 62
Specifications: Page 64
Assembly Instructions: 63

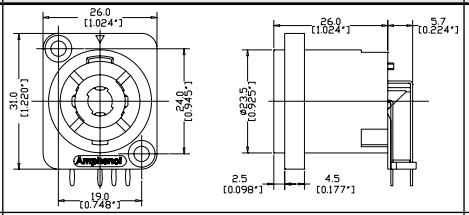
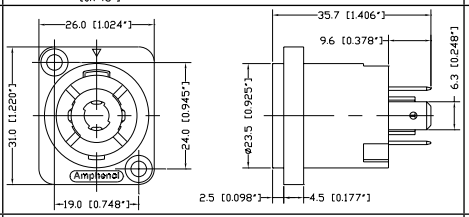
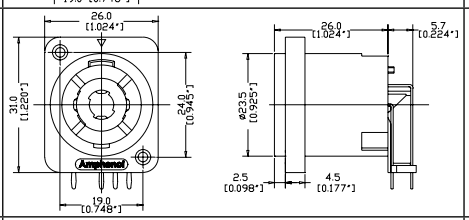
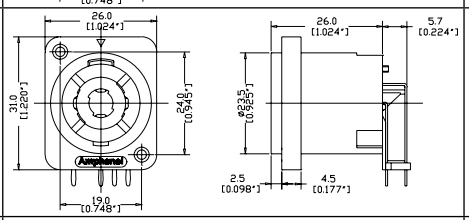
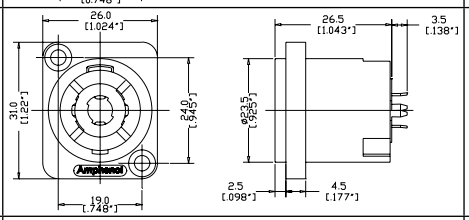
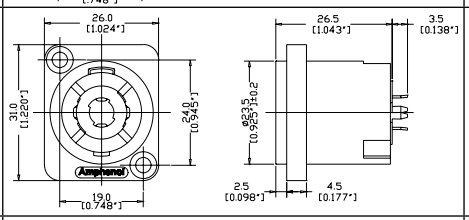
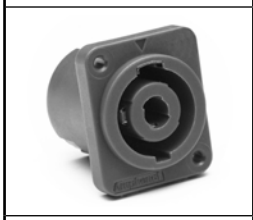
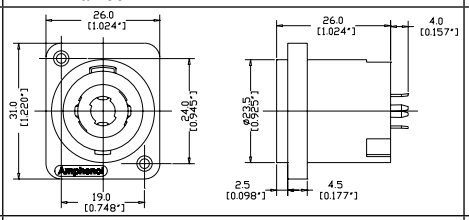
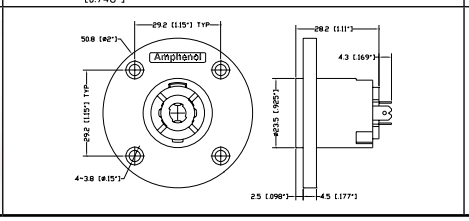
PRODUCT - FIGURE	DRAWING (Dimensions in mm (inches))	DESCRIPTION	CONTACT TYPE	SHELL COLOUR	PART NUMBER
		2 pole, Cable connector, Thermoplastic shell, Blue sleeve	Screw	Black	SP-2-F
			Solder	Black	SP-2-FS
		2 pole, Cable connector, Thermoplastic shell, Blue sleeve, PG Gland	Screw	Black	SP-2-FG
			Solder	Black	SP-2-FSG
		2 pole, Cable connector, Thermoplastic shell, Blue sleeve, PG Gland strain relief	Screw	Black	SP-2-FL
			Solder	Black	SP-2-FSL
		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
		2 pole, Cable connector, Metal shell, Blue sleeve, PG Gland	Screw	Nickel	SP-2-FNG
			Solder	Nickel	SP-2-FNSG
			Screw	Black	SP-2-FBG
			Solder	Black	SP-2-FBSG
		2 pole, Cable connector, Metal shell, Blue sleeve, PG Gland strain relief	Screw	Nickel	SP-2-FNL
			Solder	Nickel	SP-2-FNSL
			Screw	Black	SP-2-FBL
			Solder	Black	SP-2-FBSL

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	CONTACT TYPE	SHELL COLOUR	PART NUMBER
		4 pole, Cable connector, Thermoplastic black shell, Blue sleeve	Screw	Black	SP-4-F
			Solder	Black	SP-4-FS
		4 pole, Cable connector, Thermoplastic black shell, Blue sleeve, PG Gland	Screw	Black	SP-4-FG
			Solder	Black	SP-4-FSG
		4 pole, Cable connector, Thermoplastic black shell, Blue sleeve, PG Gland strain relief	Screw	Black	SP-4-FL
			Solder	Black	SP-4-FSL
		4 pole, Cable connector, Metal shell, Blue sleeve	Screw	Nickel	SP-4-FN
			Solder	Nickel	SP-4-FNS
			Screw	Black	SP-4-FB
			Solder	Black	SP-4-FBS
		4 pole, Cable connector, Metal shell, Blue sleeve, PG Gland	Screw	Nickel	SP-4-FNG
			Solder	Nickel	SP-4-FNSG
			Screw	Black	SP-4-FBG
			Solder	Black	SP-4-FBSG
		4 pole, Cable connector, Metal shell, Blue sleeve, PG Gland strain relief	Screw	Nickel	SP-4-FNL
			Solder	Nickel	SP-4-FNSL
			Screw	Black	SP-4-FBL
			Solder	Black	SP-4-FBSL

Speaker Connectors

SP Series

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
		2 pole, D flange, Thru holes, Solder tabs 3/16”	Black	SP-2-MD
		2 pole, D flange, Thru holes, Horizontal PCB	Black	SP-2-MDH
		2 pole, D flange, Thru holes, Vertical PCB	Black	SP-2-MDV
		Airtight 4 pole, D flange Self Tapping holes, Solder Tabs 3.16”	Black	SP-4-MDAT
		Airtight 4 pole, D flange Thru holes, Solder tabs 3/16”	Black	SP-4-MDA
		4 pole, D flange, Thru holes, Solder tabs 3/16”	Black	SP-4-MD
		4 pole, D flange, Thru holes, Solder tabs 3/16”	Grey	SP-4-MD-8
		4 pole, D flange, Self Tapping holes, Solder tabs 3/16”	Black	SP-4-MDT

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
		4 pole, D flange, Thru holes, Horizontal PCB	Black	SP-4-MDH
		4 pole, D flange, Thru holes, Solder tabs ¼”	Black	SP-4-MDQ
		4 pole, D flange, Self Tapping holes, Horizontal PCB	Grey	SP-4-MDHT-8
		4 pole, D flange, Self Tapping holes, Horizontal PCB	Black	SP-4-MDHT
		4 pole, D flange, Thru holes, Vertical PCB	Black	SP-4-MDV
		4 pole, D flange, Thru holes, Vertical PCB	Red	SP-4-MDV-2
		4 pole, D flange, Self Tapping holes, Vertical PCB	Grey	SP-4-MDVT-8
		4 pole, EP flange, Thru holes, Solder tabs 3/16”	Black	SP-4-MC

PART NUMBER BREAKDOWN

SP SERIES - CABLE CONNECTORS

SERIES PREFIX	CONTACT LAYOUTS		GENDER	SHELL FINISH	TERMINATION	BACKSHELL TYPE		PACKAGING
SP	- 4	-	F	N	S	G	-	B

E. G . **SP-4-FNSG**
SP (Series Prefix), **4** contacts, **F** (Cable Connector), **N** (Metal Shell Nickel Finish), **S** (Solder Terminals), **G** (PG Gland)

SERIES PREFIX	SP	=	Series Prefix
CONTACT LAYOUT	2	=	2 Contacts
	4	=	4 Contacts
GENDER	F	=	Cable Connector
SHELL FINISH	Blank	=	Thermoplastic - Black
	N	=	Metal - Nickel Finish
	B	=	Metal - Black Finish
TERMINATION	Blank	=	Screw Terminals
	S	=	Solder Terminals
BACKSHELL TYPE	Blank	=	Standard
	G	=	PG Gland
	L	=	PG Gland Strain Relief
PACKAGING	Blank	=	Individual Bags
	B	=	Bulk Packed
	B1	=	Supplied with small and large cable clamps

PART NUMBER BREAKDOWN

SP SERIES - CHASSIS CONNECTORS

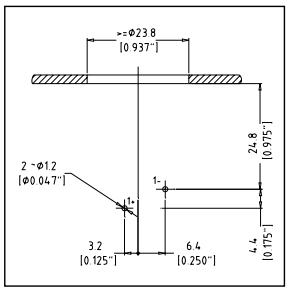
SERIES PREFIX	CONTACT LAYOUTS		GENDER	SHELL STYLE	TERMINATION	MOUNTING HOLE		COLOUR	PACKAGING
SP	-	4	- M	D	H	T	-	8	B

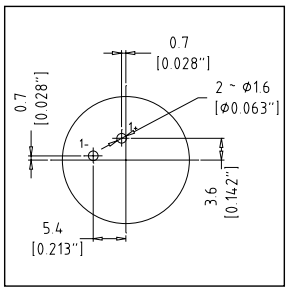
E. G . **SP-4-MDHT-8B**
SP (Series Prefix),**4** contacts, **M**(Chassis Connector), **D** (D Shell), **H**orizontal Printed Circuit Board, Self Tapping mounting holes - **8** (Grey), **B**ulk Packaged.

SERIES PREFIX	SP	=	Series Prefix
CONTACT LAYOUT	2	=	2 Contacts
	4	=	4 Contacts
GENDER	M	=	Chassis Connector
SHELL STYLE	D	=	Standard 'D' Type flange
	C	=	EP Series Circular flange
TERMINATION	Blank	=	Solder tabs - 3/16" terminals
	Q	=	Solder tabs - 1/4" terminals
	V	=	Vertical Printed Circuit Board
	H	=	Horizontal Printed Circuit Board
MOUNTING HOLE	Blank	=	Thru Hole
	T	=	Self Tapping
SHELL COLOUR	Blank	=	Black
	2	=	Red
	8	=	Grey
PACKAGING	Blank	=	Individual Bags
	B	=	Bulk Packed

SP SERIES

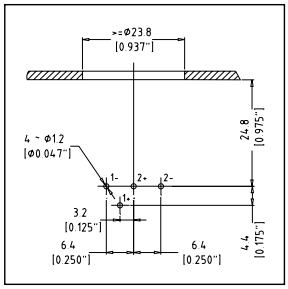
SP-2-MDH

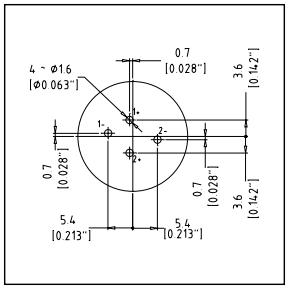




SP-2-MDV

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

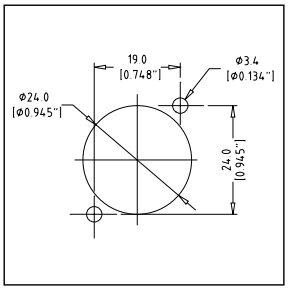


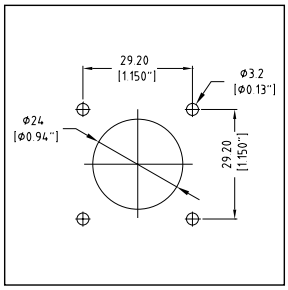


SP-4-MDV
SP-4-MDV-2
SP-4-MDVT-8

SP SERIES PANEL CUTOUT

SP-2-MD_*
SP-4-MD_*



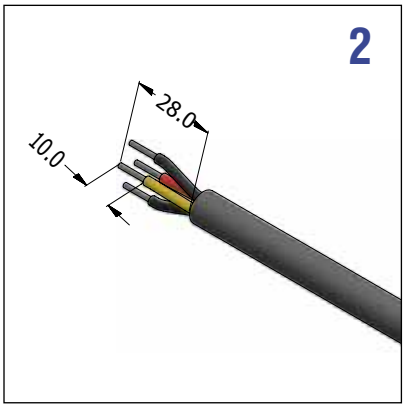


SP-4-MC

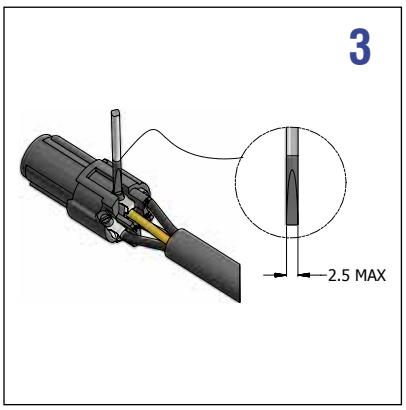
PI 1070 ASSEMBLY INSTRUCTIONS

SP SERIES CABLE CONNECTOR

Slide the nut onto the cable



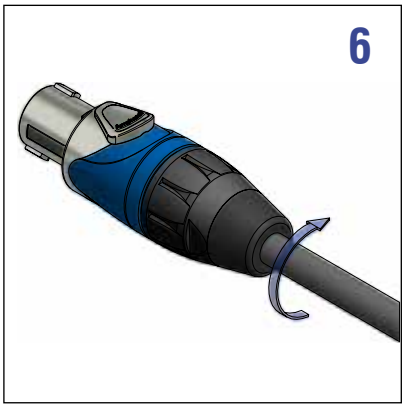
Strip the cable and twist the conductors.



Insert the conductors into the rear of contacts on the insert. Tighten the screws to 0.35Nm (3.0 lb-in) using a flat screwdriver with tip width of 2.5mm max.

Install the cable clamp, flush to the insert making sure to align the slot as shown in the picture.

Orientate the insert and cable clamp as shown then push all together into the shell.



Thread the nut onto the shell to activate the cable clamp and close the connector assembly.

Rev 1 - 07/2014

STANDARD DATA SP SERIES CONNECTORS

		VALUE	
GENERAL CHARACTERISTICS	Number of contacts	2 or 4	
	Termination (Chassis)	Printed Circuit Board (PCB) or Solder Tabs 3/16”	
	Termination (Cable Plugs)	Screw or Solder Terminals	
	Flammability	UL94HB	
	Environmental	Complies with EU RoHS 2 Directive 2011/65/EU	
ELECTRICAL CHARACTERISTICS	Service Voltage RMS	133V [1)]	
	Test Voltage AC RMS	1500V	
	Current carrying capacity	20A	
	Typical Contact Resistance	≤3mΩ	
	Insulation Resistance (initial)	≥2GΩ	
	Insulation Resistance (after damp heat test)	≥1GΩ	
CLIMATIC CHARACTERISTICS	Protection Class (Mated Condition)	IP20 (IP40)	
	Operating Temperature	-25˚C to +75˚C (-13°F to +167°F)	
MECHANICAL CHARACTERISTICS	Weight** - Chassis Connectors	12g (0.026lb)	
	Weight** - Cable Plug - Thermoplastic - Metal	 44g (0.097lb) 65g (0.143lb)	
	Weight** - Cable Plug PG - Thermoplastic - Metal	 44g (0.097lb) 65g (0.143lb)	
	Weight** - Cable Plug PG S/Relief - Thermoplastic - Metal	 68g (0.150lb) 89g (0.196lb)	
	Typical Cable retention force	200N (Subject to cable material and O.D.)	
	Cable O.D range - Chuck Clamp - PG16 Gland - PG16 Gland S/Relief	2 pole 5-10mm (0.19” - 0.39”) 6-12mm (0.23” - 0.47”) 9-14mm (0.35” - 0.55”)	4 pole 9-14mm (0.35” - 0.55”) 8-14mm (0.31” - 0.55”) 9-14mm (0.35” - 0.55”)
	Conductor Size - Screw Terminals - Solder Bucket	 1.5mm² - 4mm² (AWG16 - AWG12) 1.5mm² - 6mm² (AWG16 - AWG10)	
	Mechanical Operations	5000 mating cycles	
MATERIALS	Connector Shell / Finish - Cable Plug Thermoplastic - Cable Plug Metal	 PA66 GF30 / Black Diecast Zinc Alloy / Nickel or Black	
	Insulators - Chassis - Cable Plugs	 PA66 GF20 PA66 GF30	
	Cable Boot / Backshell	Santoprene / PA6 GF 15	
	Cable Clamp (Chuck)	P.O.M	
	Cable Clamp (PG)	Polyemide / EPDM	
	Sleeve	PBT	
	Contact Chassis - Material / Plating Contact Cable Plug - Material / Plating	 Phosphor Bronze / Silver Brass / Silver	

Rev 7 - 12/2020

**Approximate weight in grams not including packaging. Please contact us for exact weight for shipping purposes.
[1] Not suitable for domestic applications above 50V

EP SERIES

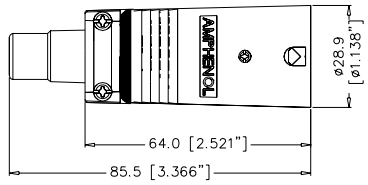
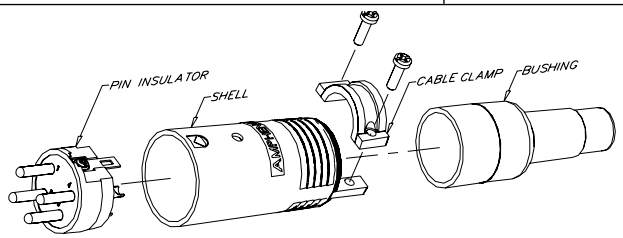
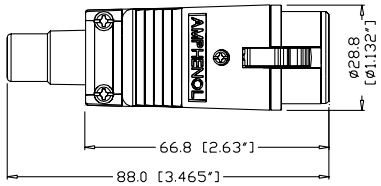
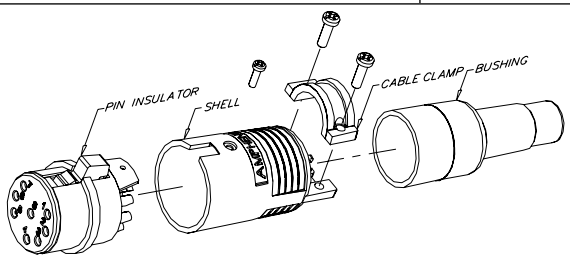
The EP Series has set the standard in high performance speaker connectors. Apart from its durability and strength, it offers consistent superior power handling capabilities.

Features:

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

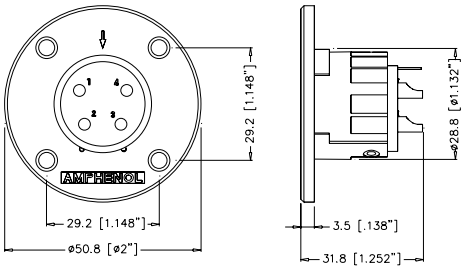
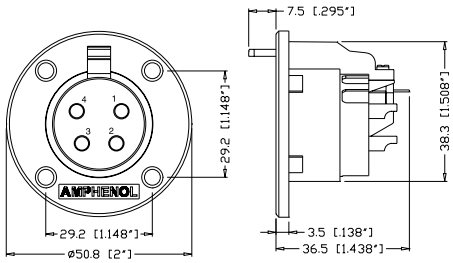
Options: Black Finish Shell **Specifications: Page 68**

Panel Cutouts: Page 69

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
ISO ASSEMBLY OF EP MALE		EP Male cable connector, Machined contacts, Metal Shell	3 pole nickel finish	EP-3-12
			3 pole black finish	EP-3-12B
			4 pole nickel finish	EP-4-12
			4 pole black finish	EP-4-12B
			5 pole nickel finish	EP-5-12
			5 pole black finish	EP-5-12B
			6 pole nickel finish	EP-6-12
			6 pole black finish	EP-6-12B
			8 pole nickel finish	EP-8-12
			8 pole black finish	EP-8-12B
ISO ASSEMBLY OF EP FEMALE		EP Female cable connector, Machined contacts, Metal Shell	3 pole nickel finish	EP-3-11P
			3 pole black finish	EP-3-11PB
			4 pole nickel finish	EP-4-11P
			4 pole black finish	EP-4-11PB
			5 pole nickel finish	EP-5-11P
			5 pole black finish	EP-5-11PB
			6 pole nickel finish	EP-6-11P
			6 pole black finish	EP-6-11PB
			8 pole nickel finish	EP-8-11P
			8 pole black finish	EP-8-11PB

Speaker Connectors

EP Series

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
			4 pole black finish	EP-4-14B
			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
		EP Female chassis mount, Round Flange, Machined contacts, Metal Shell	3 pole nickel finish	EP-3-13P
			3 pole black finish	EP-3-13PB
			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

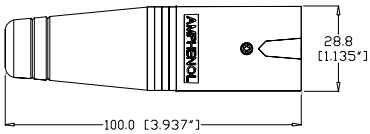
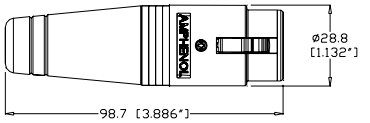
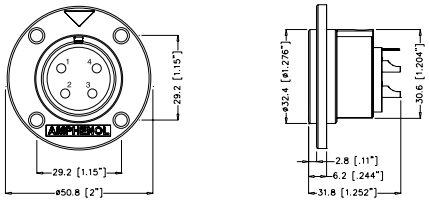
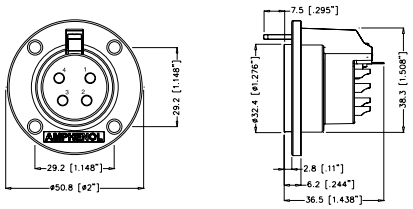
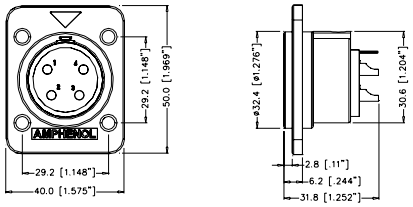
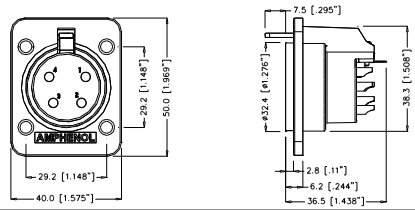
AP SERIES

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

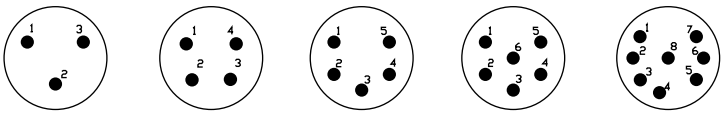
Features:

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

Specifications: Page 68 **Panel Cutouts: Page 69**

PRODUCT - FIGURE	DRAWING Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
		AP Male cable connector, Machined contacts, Thermoplastic Black shell.	4 pole	AP-4-12
			5 pole	AP-5-12
			6 pole	AP-6-12
			8 pole	AP-8-12
		AP Female cable connector, Machined contacts, Thermoplastic Black shell.	4 pole	AP-4-11
			5 pole	AP-5-11
			6 pole	AP-6-11
			8 pole	AP-8-11
		AP Male chassis mount, Round Flange, Machined contacts, Thermoplastic Black shell.	4 pole	AP-4-14
			5 pole	AP-5-14
			6 pole	AP-6-14
			8 pole	AP-8-14
		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
			8 pole	AP-8-13
		AP Male chassis mount, Rectangular Flange, Machined contacts, Thermoplastic Black shell.	4 pole	AP-4-22
			5 pole	AP-5-22
			6 pole	AP-6-22
			8 pole	AP-8-22
		AP Female chassis mount, Rectangular Flange, Machined contacts, Thermoplastic Black shell.	4 pole	AP-4-21
			5 pole	AP-5-21
			6 pole	AP-6-21
			8 pole	AP-8-21

STANDARD DATA EP/AP

		VALUE				
GENERAL CHARACTERISTICS	Number of contacts	3	4	5	6	8
	Contact Arrangements (Front view of pin insert)					
	Termination	SOLDER				
	Wire Gauge - Stranded wire:	12AWG	12AWG	12AWG	12AWG	14AWG
	Flammability	UL94V-0				
	Environmental	Complies with EU RoHS 2 Directive 2011/65/EU				
ELECTRICAL CHARACTERISTICS	Service Voltage RMS [1]	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 CHARACTERISTICS	Protection Class	IP40				
	Operating Temperature	-25˚C to +75˚C (-13°F to +167°F)				
MECHANICAL CHARACTERISTICS	Weight - EP 11 & 12 [2]	80g (0.176lb)	84g (0.185lb)	86g (0.189lb)	86g (0.189lb)	86g (0.189lb)
	Weight - EP 13 & 14 [2]	48g (0.105lb)	50g (0.110lb)	54g (0.119lb)	54g (0.119lb)	54g (0.119lb)
	Weight - AP 11 & 12 [2]	N/A	42g (0.092lb)	44g (0.097lb)	44g (0.097lb)	44g (0.097lb)
	Weight - AP 13, 14, 21 & 22 [2]	N/A	26g (0.057lb)	30g (0.066lb)	30g (0.066lb)	28g (0.061lb)
	Typical Cable retention force	22Kg to 44Kg (50lb to 100lb) - Dependant on cable material and diameter				
	Mechanical operations	1000 mating cycles				

Rev 3 - 03/2013

[1] Not suitable for domestic applications above 50V

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

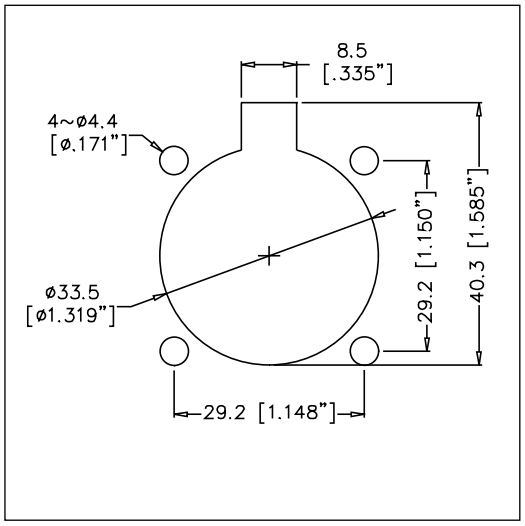
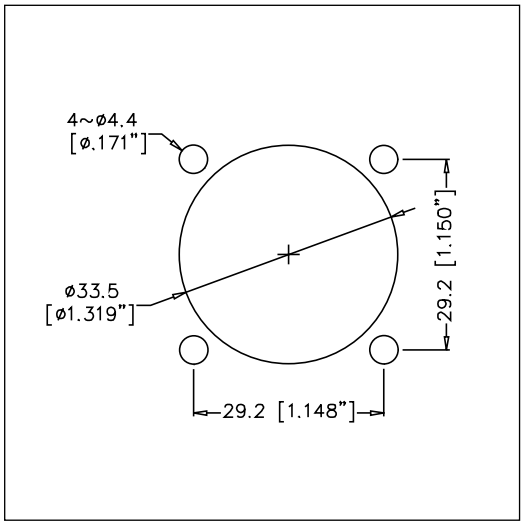
STANDARD DATA EP/AP (CONT'D)

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

Rev 3 - 03/2013

EP/AP SERIES PANEL CUTOUT DATA - FRONT VIEW

EP 13/AP 13/AP 21



EP 14/AP 14/AP 22