



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

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.

### **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.

# Amphenol

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:

- 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 73/74 Specifications: Page 76 PCB Footprints: Page 75**

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



PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	CONTACT TYPE	SHELL COLOUR	PART NUMBER
		87 [3.43"]	4 pole, Cable connector, Thermoplastic black shell, Blue sleeve	Screw	Black	<a href="#">SP-4-F</a>
				Solder	Black	<a href="#">SP-4-FS</a>
		111 [4.36"]	4 pole, Cable connector, Thermoplastic black shell, Blue sleeve, PG Gland	Screw	Black	<a href="#">SP-4-FG</a>
				Solder	Black	<a href="#">SP-4-FSG</a>
		179 [7.06"]	4 pole, Cable connector, Thermoplastic black shell, Blue sleeve, PG Gland strain relief	Screw	Black	<a href="#">SP-4-FL</a>
				Solder	Black	<a href="#">SP-4-FSL</a>
		87 [3.43"]	4 pole, Cable connector, Metal shell, Blue sleeve	Screw	Nickel	<a href="#">SP-4-FN</a>
				Solder	Nickel	<a href="#">SP-4-FNS</a>
				Screw	Black	<a href="#">SP-4-FB</a>
				Solder	Black	<a href="#">SP-4-FBS</a>
		111 [4.36"]	4 pole, Cable connector, Metal shell, Blue sleeve, PG Gland	Screw	Nickel	<a href="#">SP-4-FNG</a>
				Solder	Nickel	<a href="#">SP-4-FNSG</a>
				Screw	Black	<a href="#">SP-4-FBG</a>
				Solder	Black	<a href="#">SP-4-FBSG</a>
		179 [7.06"]	4 pole, Cable connector, Metal shell, Blue sleeve, PG Gland strain relief	Screw	Nickel	<a href="#">SP-4-FNL</a>
				Solder	Nickel	<a href="#">SP-4-FNSL</a>
				Screw	Black	<a href="#">SP-4-FBL</a>
				Solder	Black	<a href="#">SP-4-FBSL</a>



# Amphenol

EP / AP / SP SERIES

## SP LOUDSPEAKER CONNECTORS

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
		26.0 [1.024"] 31.0 [1.220"] 24.0 [0.945"] 19.0 [0.748"] 28.2 [1.110"] 4.3 [0.169"] ø23.5 [0.925"] 2.5 [0.098"] 4.5 [0.177"]	2 pole, D flange, Thru holes, Solder tabs 3/16"	Black	<b>SP-2-MD</b>
		26.0 [1.024"] 31.0 [1.220"] 24.0 [0.945"] 19.0 [0.748"] 26.0 [1.024"] 5.7 [0.224"] ø23.5 [0.925"] 2.5 [0.098"] 4.5 [0.177"]	2 pole, D flange, Thru holes, Horizontal PCB	Black	<b>SP-2-MDH</b>
		26.0 [1.024"] 31.0 [1.220"] 24.0 [0.945"] 19.0 [0.748"] 26.5 [1.043"] 3.5 [0.138"] ø23.5 [0.925"] 2.5 [0.098"] 4.5 [0.177"]	2 pole, D flange, Thru holes, Vertical PCB	Black	<b>SP-2-MDV</b>
		26.0 [1.024"] 31.0 [1.220"] 24.0 [0.945"] 19.0 [0.748"] 28.2 [1.110"] 4.3 [0.169"] ø23.5 [0.925"] 2.5 [0.098"] 4.5 [0.177"]	4 pole, D flange, Thru holes, Solder tabs 3/16"	Black	<b>SP-4-MD</b>
		26.0 [1.024"] 31.0 [1.220"] 24.0 [0.945"] 19.0 [0.748"] 28.2 [1.110"] 4.3 [0.169"] ø23.5 [0.925"] 2.5 [0.098"] 4.5 [0.177"]	4 pole, D flange, Thru holes, Solder tabs 3/16"	Grey	<b>SP-4-MD-8</b>
		26.0 [1.024"] 31.0 [1.220"] 24.0 [0.945"] 19.0 [0.748"] 28.2 [1.110"] 4.3 [0.169"] ø23.5 [0.925"] 2.5 [0.098"] 4.5 [0.177"]	4 pole, D flange, Self Tapping holes, Solder tabs 3/16"	Black	<b>SP-4-MDT</b>
		26.0 [1.024"] 31.0 [1.220"] 24.0 [0.945"] 19.0 [0.748"] 26.0 [1.024"] 5.7 [0.224"] ø23.5 [0.925"] 2.5 [0.098"] 4.5 [0.177"]	4 pole, D flange, Thru holes, Horizontal PCB	Black	<b>SP-4-MDH</b>
		26.0 [1.024"] 31.0 [1.220"] 24.0 [0.945"] 19.0 [0.748"] 26.0 [1.024"] 5.7 [0.224"] ø23.5 [0.925"] 2.5 [0.098"] 4.5 [0.177"]	4 pole, D flange, Self Tapping holes, Horizontal PCB	Grey	<b>SP-4-MDHT-8</b>



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## SP LOUDSPEAKER CONNECTORS

PRODUCT - FIGURE		DESCRIPTION	VARIATIONS	PART NUMBER
		4 pole, D flange, Self Tapping holes, Horizontal PCB	Black	<a href="#">SP-4-MDHT</a>
		4 pole, D flange, Thru holes, Vertical PCB	Black	<a href="#">SP-4-MDV</a>
		4 pole, D flange, Thru holes, Vertical PCB	Red	<a href="#">SP-4-MDV-2</a>
		4 pole, D flange, Self Tapping holes, Vertical PCB	Grey	<a href="#">SP-4-MDVT-8</a>



## PART NUMBER BREAKDOWN

### SP SERIES - CABLE CONNECTORS

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

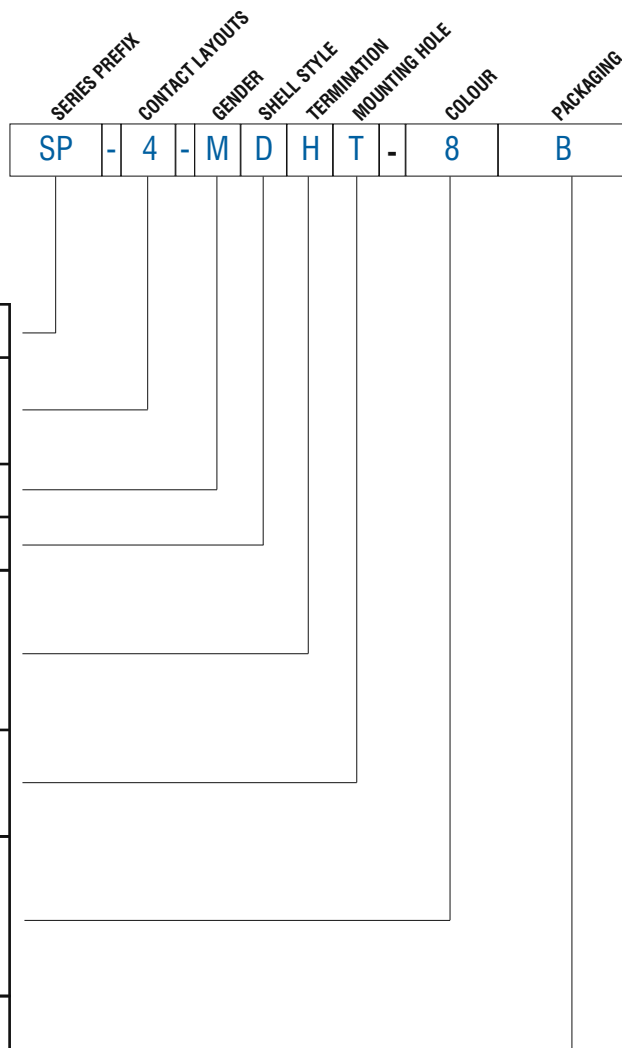
<b>SERIES PREFIX</b>	SP	=	Series Prefix
<b>CONTACT LAYOUT</b>	2	=	2 Contacts
	4	=	4 Contacts
<b>GENDER</b>	F	=	Cable Connector
<b>SHELL FINISH</b>	Blank	=	Thermoplastic - Black
	N	=	Metal - Nickel Finish
	B	=	Metal - Black Finish
<b>TERMINATION</b>	Blank	=	Screw Terminals
	S	=	Solder Terminals
<b>BACKSHELL TYPE</b>	Blank	=	Standard
	G	=	PG Gland
	L	=	PG Gland Strain Relief
<b>PACKAGING BACK-SHELL COLOUR</b>	1	=	Brown
	2	=	Red
	3	=	Orange
	4	=	Yellow
	5	=	Green
	6	=	Blue
	7	=	Violet
	8	=	Grey
	9	=	White
<b>PACKAGING</b>	Blank	=	Individual Bags
	B	=	Bulk Packed



## PART NUMBER BREAKDOWN

### SP SERIES - CHASSIS CONNECTORS

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



<b>SERIES PREFIX</b>	SP	=	Series Prefix
<b>CONTACT LAYOUT</b>	2	=	2 Contacts
	4	=	4 Contacts
<b>GENDER</b>	M	=	Chassis Connector
<b>SHELL STYLE</b>	D	=	Standard 'D' Type flange
<b>TERMINATION</b>	Blank	=	Solder tabs - 3/16" terminals
	V	=	Vertical Printed Circuit Board
	H	=	Horizontal Printed Circuit Board
<b>MOUNTING HOLE</b>	Blank	=	Thru Hole
	T	=	Self Tapping
<b>CONTACT PLATING</b>	Blank	=	Black
	2	=	Red
	8	=	Grey
<b>PACKAGING</b>	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





## STANDARD DATA SP SERIES CHASSIS CONNECTORS

		VALUE	
<b>GENERAL CHARACTERISTICS</b>	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	
<b>ELECTRICAL CHARACTERISTICS</b>	Service Voltage RMS	133V <sup>1)</sup>	
	Test Voltage AC RMS	1500V	
	Current carrying capacity	30A	
	Typical Contact Resistance	≤3mΩ	
	Insulation Resistance (initial)	≥2GΩ	
	Insulation Resistance (after damp heat test)	≥1GΩ	
<b>CLIMATIC CHARACTERISTICS</b>	Protection Class	IP54	
	Operating Temperature	-25 °C to +75 °C (-13°F to +167°F)	
<b>MECHANICAL CHARACTERISTICS</b>	Weight** - Chassis Connectors	12g (0.026lb)	
	Weight** - Cable Plug	- Thermoplastic	44g (0.097lb)
		- Metal	65g (0.143lb)
	Weight** - Cable Plug PG	- Thermoplastic	44g (0.097lb)
		- Metal	65g (0.143lb)
	Weight** - Cable Plug PG S/Relief	- Thermoplastic	68g (0.150lb)
		- Metal	89g (0.196lb)
	Typical Cable retention force	200N (Subject to cable material and O.D.)	
	Cable O.D range	- Chuck Clamp	9-14mm (0.35" - 0.55")
		- PG16 Gland	8-14mm (0.31" - 0.55")
- PG16 Gland S/Relief		10-14mm (0.39" - 0.55")	
Mechanical Operations	5000		
Fastening (Chassis Self Tapping)	M3 screw		
<b>MATERIALS</b>	Connector Shell / Finish		
	- Chassis	PA66 GF20 / Black	
	- Cable Plug Thermoplastic	PA66 GF30 / Black	
	- Cable Plug Metal	Diecast Zinc Alloy / Nickel or Black	
	Insulators		
	- Chassis	PA66 GF20	
	- Cable Plugs	PA66 GF30	
	Cable Boot / Backshell	Santoprene / PA6 GF 15	
Cable Clamp (Chuck)	P.O.M		
Cable Clamp (PG)	Polyamide / EPDM		
Sleeve	PA6 15GF		
Contact Chassis			
- Material / Plating	Phosphor Bronze / Silver		
Contact Cable Plug			
- Material / Plating	Brass / Silver		

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

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

Rev 3-11/2011