

# Amphenol



AC SERIES XLR CABLE CONNECTORS

METAL SHELL TYPE - IDC



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 14**

**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.

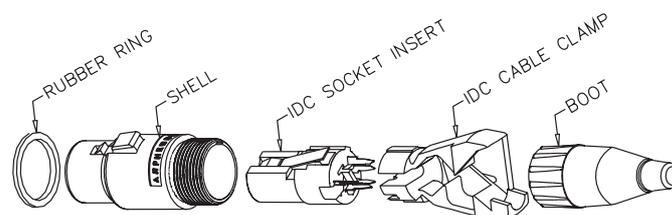
**Options:** Gold plated contacts, Black Finish Shell, Bulk Pack, Coloured Boots / Backshells.

**Part Number Breakdown: Page 10 Specifications: Page 13-14 Assembly Instructions: Page 12**

PRODUCT - FIGURE	DRAWING	Dimensions in mm (inches)	DESCRIPTION	VARIATIONS	PART NUMBER
		82.0 [3.228"] ø19.0 [0.748"]	XLR 3 pole male, IDC contacts, Nickel Finish, IDC Jaws cable clamp	Standard	AC3MI
				Gold Plated Contacts	AC3MI-AU
				Bulk Pack	AC3MI BULK
		82.0 [3.228"] ø19.0 [0.748"]	XLR 3 pole male, IDC contacts, Black Finish, IDC Jaws cable clamp	Standard	AC3MIB
				Gold Plated Contacts	AC3MIB-AU
				Bulk Pack	AC3MIB BULK
		82.0 [3.228"] ø19.0 [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
		82.0 [3.228"] ø19.0 [0.748"]	XLR 3 pole female, IDC contacts, Black Finish, IDC Jaws cable clamp	Standard	AC3FIB
				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 14 are followed.

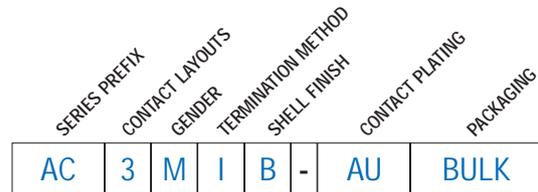
**ISO VIEW OF AC3FI**



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## PART NUMBER BREAKDOWN

### METAL SHELL TYPE - IDC



E. G. **AC3MI-B-AU BULK**  
**AC** (Series Prefix), **3** contacts, **Male**, IDC Contacts, **Black Polyester Finish**,  
**- AU** (Gold Plated Contacts), **Bulk** Packaged.

<b>SERIES PREFIX</b>	AC	=	Series Prefix
<b>CONTACT LAYOUT</b>	3	=	3 Contact only
<b>GENDER</b>	F	=	Female Socket Contacts
	M	=	Male Pin Contacts
<b>TERMINATION METHOD</b>	I	=	IDC Contacts
<b>SHELL FINISH</b>	Blank	=	Nickel Plated Finish
	B	=	Black Polyester Finish
<b>CONTACT PLATING</b>	Blank	=	Standard Plating ( Silver or Tin - Refer to Standard Data.)
	AU	=	Gold Plated
<b>PACKAGING</b>	Blank	=	Individual Bags
	BULK	=	Bulk Packed

**Note:** All AC Series Connectors are available with optional colour coded boot / backshell. Refer to page 60 and simply add colour to end of part number. Example: AC3MI - RED



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 14**

**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

**Part Number Breakdown: Page 11 Specifications: Page 13-14**

**Assembly Instructions: Page 12**



PRODUCT - FIGURE	DRAWING	DESCRIPTION	VARIATIONS	PART NUMBER
		XLR 3 pole male, IDC contacts, Thermoplastic shell, IDC Jaws cable clamp	Standard	AC3MCPI
			Gold Plated Contacts	AC3MCPI-AU
			Bulk Pack	AC3MCPI-BULK
		XLR 3 pole female, IDC contacts, Thermoplastic shell, IDC Jaws cable clamp	Standard	AC3FCPI
			Gold Plated Contacts	AC3FCPI-AU
			Bulk Pack	AC3FCPI-BULK

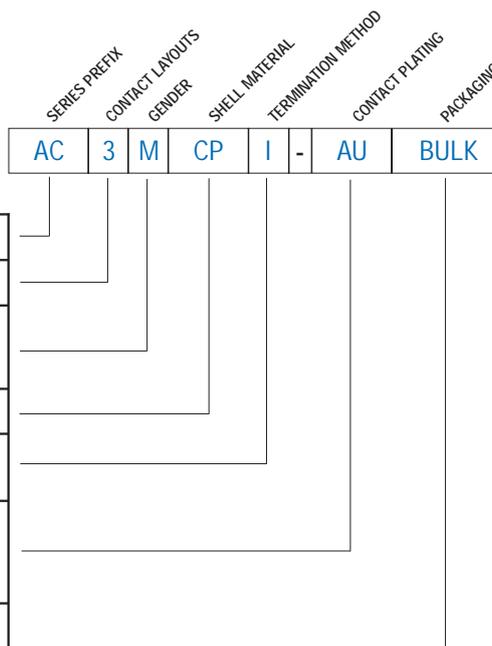
**Note:** Amphenol can not guarantee the termination performance unless the recommended cable dimensions listed on page 14 are followed.

## PART NUMBER BREAKDOWN

### IDC THERMOPLASTIC SHELL TYPE

E. G. **AC3MCPI-AU BULK**  
 AC (Series Prefix), 3 contacts, Male, CP (Thermoplastic Shell), IDC Contacts,  
 - AU (Gold Plated Contacts), Bulk Packaged.

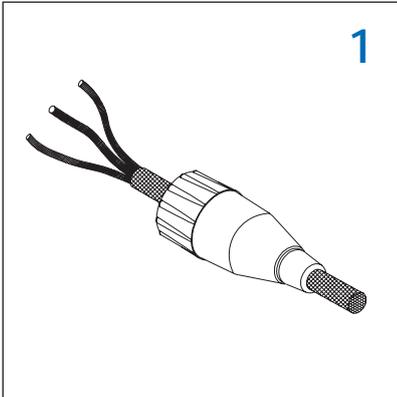
SERIES PREFIX	AC	=	Series Prefix
CONTACT LAYOUT	3	=	3 Contacts only
GENDER	F	=	Female Socket Contacts
	M	=	Male Pin Contacts
SHELL MATERIAL	CP	=	Thermoplastic Shell
TERMINATION METHOD	I	=	IDC Contacts
CONTACT PLATING	Blank	=	Standard Plating ( Silver or Tin - Refer to Standard Data.)
	AU	=	Gold Plated
PACKAGING	Blank	=	Individual Bags
	BULK	=	Bulk Packed



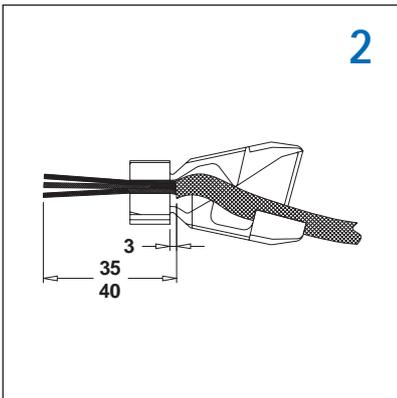
**Note:** All AC Series Connectors are available with optional colour coded boot / backshell. Refer to page 60 and simply add colour to end of part number. Example: AC3MCPI - RED

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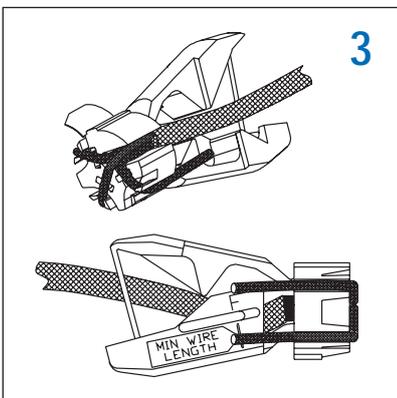
## AC IDC SERIES CABLE ASSEMBLY INSTRUCTIONS



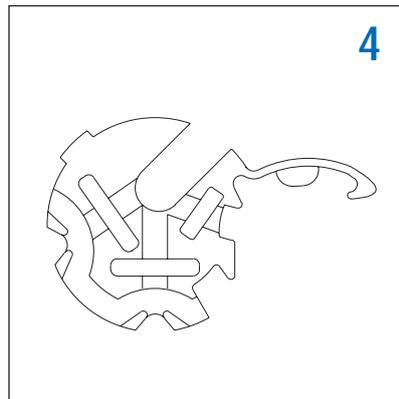
1  
Push the cable through the boot assembly and strip the cable back 35 to 40 mm. Twist the shield wire.



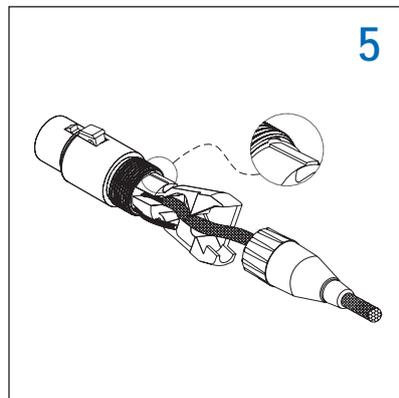
2  
Fit the cable into the 'Jaws' cable clamp ensuring that the cable is pushed up to the neck of the clamp within 3mm.



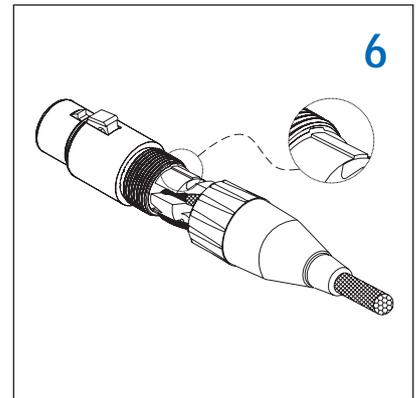
3  
Pull back the conductors into their individual wire guidetracks. Note: Two spring fingers in the clamp will hold the conductors in position during subsequent operations. The ends of the two insulated wires must be on or past the minimum wire length mark.



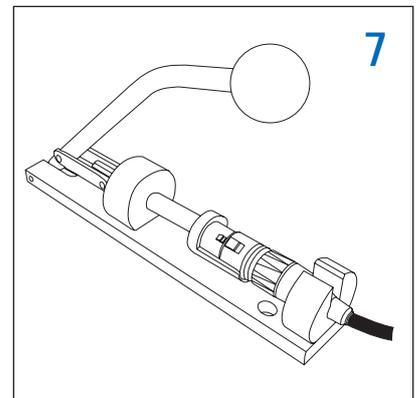
4  
For ground protection the twisted shield wire is clipped in place with the ground protect flap.



5  
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.



6  
Close the cable clamp slightly and push the boot over the clamp ensuring the wires fit inside the boot.

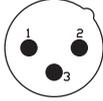
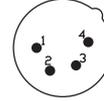
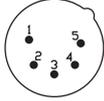
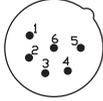
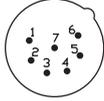


7  
Final assembly can be achieved either by manually screwing the boot on, or by using an Amphenol Australia T2860 termination tool.

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## STANDARD DATA AC CABLE CONNECTORS



		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				
Environmental	Complies with RoHS Directive 2002/95/EC					
ELECTRICAL CHARACTERISTICS	Service Voltage RMS	133V <sup>1)</sup>				
	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 CHARACTERISTICS	Protection Class	IP40				
	Operating Temperature	-25°C to +75°C (-13°F to +167°F)				
MECHANICAL CHARACTERISTICS	Insertion and Withdrawal force	≥ 10N - ≤ 30N				
	Weight - Metal <sup>2)</sup>	36g (0.080lb)	37g (0.081lb)	38g (0.083lb)	38g (0.083lb)	38g (0.083lb)
	Weight - Thermoplastic <sup>2)</sup>	18g (0.039lb)	19g (0.041lb)	20g (0.044lb)	20g (0.044lb)	20g (0.044lb)
	Typical Cable retention force	22Kg to 44Kg (50lb to 100lb) - Dependent on cable material and diameter.				
	Cable O.D. range - JAWS clamp					
	IDC	Max. Cable O.D. 5.85mm (0.23")				
	Standard solder	3mm to 6.5mm (0.118" to 0.255")				
	Large Solder	6.5mm to 8mm (0.255" to 0.314")				
Mechanical Operations	1000 mating cycles					

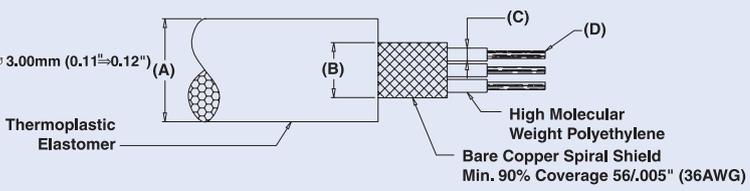
<sup>1)</sup> Not suitable for domestic applications above 50V

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

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## 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 60
	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	Thermoplastic Polyurethane
	Male Contact	
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) - 4 socket is tin plated	
IDC RECOMMENDED CABLE DIMENSIONS	 <p> <b>A</b> - Cable O.D.: Max. <math>\varnothing</math> 5.85mm (0.23").  <b>B</b> - Bare Copper Spiral Shield OD <math>\varnothing</math> 2.75 <math>\Rightarrow</math> <math>\varnothing</math> 3.00mm (0.11" <math>\Rightarrow</math> 0.12")  <b>C</b> - OD <math>\varnothing</math> 1.30 <math>\Rightarrow</math> <math>\varnothing</math> 1.50mm (0.05" <math>\Rightarrow</math> 0.06")  <b>D</b> - 16/.005" (24 AWG stranded wire)                 </p> <p>                     Thermoplastic Elastomer                      High Molecular Weight Polyethylene                      Bare Copper Spiral Shield                      Min. 90% Coverage 56/.005" (36AWG)                 </p>	