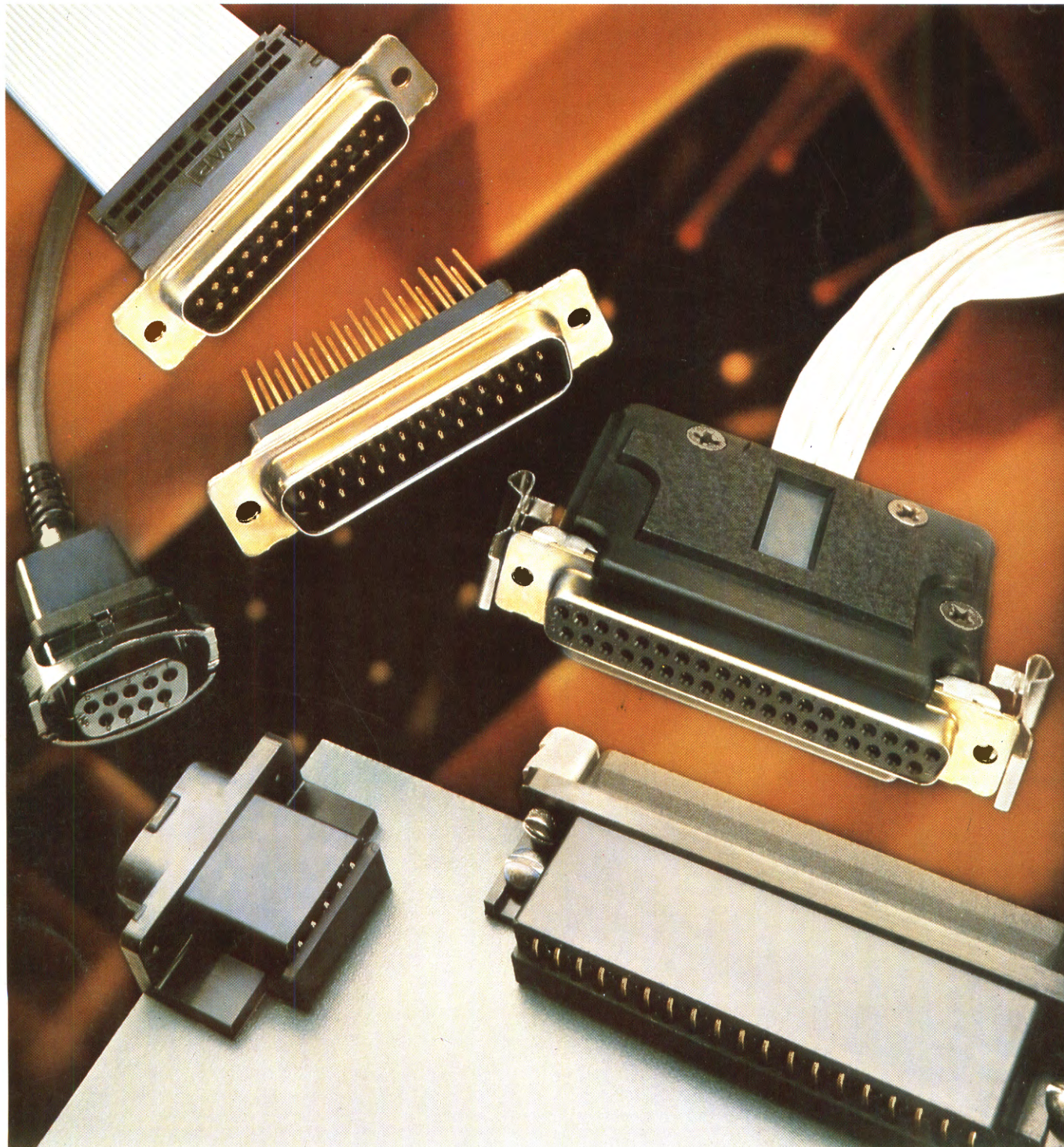


AMP

**AMPLIMITE Subminiature
HD-20 (High Density)
Pin and Socket Connectors**

Catalogue
81-4025
Issued 11-81

European Edition



AMP means productivity / Worldwide

AMPLIMITE Subminiature HD-20 Connectors

Table of Contents

AMPLIMITE Subminiature HD-20 Connectors:	
Features	1
Part Number Matrix for HD-20 Connectors	2
Accessories, Hardware	3
HD-20 Connectors:	
Insert Arrangements	4
Performance Specifications	4
Application Tooling for Precision-Formed Contacts	5
HD-20 Connector Contacts, Precision-Formed:	
Crimp Type	6
Solder Cup	6
Hand Tool and Insertion/Extraction Tool Specification	7
HD-20 Metal-Shell Connectors for Snap-In Contacts	8, 9
HDF-20 Flat Ribbon Cable Connectors for Round Conductor Flat Ribbon Cable (with Spare-Edge Conductor) and Application Tooling	10, 11
HD-20 Metal-Shell Connectors:	
Preloaded with .025 [0.64] Sq. Straight Posted Contacts	12, 13
Preloaded with Right Angle Posted Contacts for .028 [0.7] Dia Holes	14, 15
HDP-20 All-Plastic Connectors:	
Preloaded with Right Angle Posted Contacts for .028 [0.7] Dia Holes	16, 17
Preloaded with .026 [0.66] Dia Straight Posted Contacts	18, 19
Preloaded with Straight Posted ACTION PIN Contacts	20, 21
HDJ-20 All-Plastic Jacketed Cable Connectors	22, 23
Accessories:	
Straight/90° Exit Cable Clamp Assemblies (Two-Piece)	24
Straight/90° Exit Cable Clamp Assemblies (One-Piece)	25
Straight/45° Exit Cable Clamp Assemblies (One-Piece)	26
Male Screw Retainers	27
Female Screwlocks	27
Spring Latches	28
Latching Blocks	28
Locking Post Assemblies	29
Slide Latch Clip Assemblies	29
Standoff Bushings	30
Commoning Strip	30
Keying Plug	30
Plug/Receptacle Mating and Mounting Specifications	
Special Assemblies (Condensed Information)	31
Numerical Index	32
	33

Dimensioning:

All dimensions in inches and millimetres.
Values in brackets are metric equivalents.
Metric symbols used are:
mm² (square millimetre)
N (newton)
um (micronmetre)

**Specifications subject to change.
Consult AMP for latest design
specifications.**

©Copyright 1981 by AMP-Holland B.V.
All International Rights Reserved. AMP
Incorporated products covered by U.S.
and foreign patents and/or patents pending.

AMP, AMPLIMITE, AMPAMATOR, AMP-TY,
ACTION PIN, CERTI-CRIMP — Trademarks
of AMP Incorporated



Recognized Under the
Component Program of
Underwriters Laboratories Inc.
File No. E28476



CSA Certified.
File No. LR16455

AMPLIMITE Subminiature HD-20 Connectors

AMPLIMITE HD-20 (High Density) Connectors are compact pin and socket connectors especially designed for state-of-the-art high density packaging. They are ideally suited for such applications as computer peripheral equipment, modems and industrial control instrumentation and military and ground support equipment.

Numerous styles of connectors are available standard HD-20 connectors with metal shell and plastic insert for snap-in contacts, and preloaded with right-angle and straight posted contacts for pc board mounting and wrap-type terminations, HD-20 all-plastic connectors preloaded with straight and right-angle posted contacts for pc board mounting; HDJ-20 all-plastic connectors for jacketed cable; and HDF-20 connectors with metal-shell plastic insert and back-shell for round conductor flat ribbon cable. Wire Crimp metal-shell connectors feature a Rear Release System which permits use of military-type service tools for quick and easy contact replacement, and assures the electrical and mechanical integrity of the circuit connections.

Snap-in contacts for the AMPLIMITE connectors are either precision-formed size 20 DF, or screw-machined size 20 DM pins and sockets. A choice of contact styles offered permit crimp termination of a wide range of discrete wire sizes 30-20 AWG [0.05-0.6 mm²], as well as soldered connections to pc boards with posted versions or snap-in version with solder cup. AMP furnishes contacts in loose piece form for hand tool crimping and on continuous strip (precision-formed) or tape mounted (screw-machined) for high-speed machine termination. AMP's application machines will allow you to produce the largest number of reliable terminations at the lowest installed cost.

Accessories for diverse application of the AMPLIMITE connector family include various cable clamp assemblies for straight, 45 and 90° exit of wiring cable, plus a variety of plug/receptacle mating hardware.

Features

- Available in various styles: HD-20 connectors for snap-in contacts, HDF-20 connectors for round conductor flat cable, HD-20 connector assemblies preloaded with straight posted contacts for pc board mounting or wrap-type terminations, HD-20 connector assemblies preloaded with right-angle posted contacts for pc board mounting, all-plastic HDP-20 connectors for pc board mounting, HDJ-20 connectors for jacketed cable and HDE-20 mass termination connector assemblies.
- Shell sizes 1 to 5 offer wide choice of contact positions: 9. 15. 25. 37 and 50.
- HD-20 metal-shell connectors accept size 20 DF precision-formed and size 20 DM screw-machined contacts.
- HD-20 metal-shell connectors employ captivated plastic retention tines to eliminate need for spring clips.
- HDP-20 all-plastic connectors employ 94V-0 rated thermoplastic housings with straight and right-angle posted contacts.
- Broad selection of accessories for strain relief/cable clamping connector-to-connector mating, connector-to-pc board mounting circuit commoning and keying.
- Machine-applied terminations of size 20 DF and size 20 DM and insulation displacement contact assure highest production rates at lowest applied cost.
- Also available Quiet-Line "20" Series Filtered AMPLIMITE Pc Board Right Angle Assemblies and Solder Cup Assemblies.

Catalog Reference

- HDM-20 Military Connectors - cat. 79-547
- HD-20 Metal-Shell Connectors with Floating Bushings - cat. 79-546 and 79-547
- 20 DM screw-machined contacts (loose piece and tape mounted) cat. 79-546 and 79-547
- 20 DF contacts with .000050 (1.3 μm) gold over copper plating - cat. 79-546
- 20 DF contacts without insulation support - cat. 79-546
- HDF-20 Flat Ribbon Cable Connectors (Spare Middle Conductor) - cat. 79-546
- HDF-20 Flat Ribbon Cable Low Profile All-Plastic Receptacle Assemblies - data sheet 80-591
- HDE-20 Connectors (Mass Terminated) - data sheet 80-581
- AMPLIMITE Interface Adapter 25/37 and 37/25 Position - data sheet 80-580
- Filtered AMPLIMITE Connectors - cat. 78-487
- HDD-22 Military Connectors, Non-Magnetic Connectors, Size 22 DM and DF contacts - cat. 79-547

AMPLIMITE Subminiature HD-20 Connectors

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.

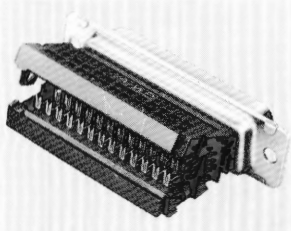
Part Numbers of
European Manufacture
printed in **bold type**

Part Number Matrix

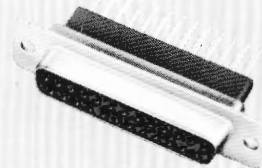
Connector Type



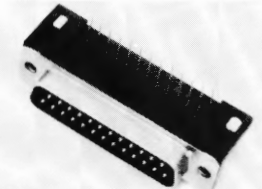
HD-20 Metal-Shell Connectors for Crimp Snap-in Contacts. (Page 8, 9)



HDF-20 Metal-Shell Connectors for Flat Ribbon Cable (Edge clinched shell). (Page 10, 11)



HD-20 Metal-Shell Connectors with Straight Posts for Pcb Mount or Wrap-Type Termination (Central clinched shell). (Page 12, 13)



HD-20 Metal-Shell Connectors with Right Angle Posts, Pcb Mount, Hole Size .028 [0.7] Dia. (Central clinched shell). (Pg 14, 15)



HDP-20 All-Plastic Connectors with Right Angle Posts, Pcb Mount for Hole Size .028 [0.7] Dia. (Page 16, 17)



HDP-20 All-Plastic Connectors with Straight Posts, Pcb Mount for Hole Size .031 [0.8] Dia. (Page 18, 19)

9 Positions		15 Positions		25 Positions		37 Positions		50 Positions	
Plug	Receptacle	Plug	Receptacle	Plug	Receptacle	Plug	Receptacle	Plug	Receptacle
164526-1	164531-1	164527-1	164532-1	164528-1	164533-1	164529-1	164534-1	164530-1	164535-1
Connectors with central clinched shell									
205204-1	205203-1	205206-1	205205-1	205208-1	205207-1	205210-1	205209-1	205212-1	205211-1
Connectors with edge clinched shell									
745276-1	745277-1	745278-1	745279-1	745280-1	745281-1	745282-1	745283-1	—	—
		For 10-conductor cable, one edge conductor serves as a spare				For 26-conductor cable, one edge conductor serves as a spare			
827189-1	827066-1	826744-1	827190-1	827191-1	827017-1	827192-1	826734-1	826816-1	827053-1
827189-2	827066-2	826744-2	827190-2	827191-2	827017-2	827192-2	826734-2	826816-2	827053-2
827189-3	827066-3	826744-3	827190-3	827191-3	827017-3	827192-3	826734-3	826816-3	827053-3
Partnumber Suffix indicates Post Length: -1 (.125[3.2] for pc board mounting) -2 (.394[10.0] for wrap type termination) -3 (.669[17.0] for wrap type termination)									
164492-1	164800-1	164493-1	164801-1	164494-1	164802-1	164495-1	164803-1	164496-1	164804-1
Post row distance .112 [2.84]; post length .125 [3.2]									
166746-1	166751-1	166747-1	166752-1	166748-1	166753-1	166749-1	166754-1	166750-1	166755-1
Post row distance .100 [2.54]; post length .125 [3.2]									
166255-1	—	—	—	166257-1	166262-1	166258-1	166263-1	166259-1	—
						166573-1 (Low Profile Version)			
Post row distance .112 [2.84]; post length .125 [3.2] Post length for 166573-1 .110 [2.8]									
208006-2	207826-4	208007-2	207827-4	208008-2	207828-4	208009-2	207829-4	208010-2	207830-4
Post row distance .112 [2.84]; post length .125 [3.2]									

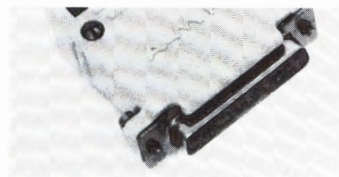
Accessories

Connectors shown for reference only

Part Numbers of European Manufacture printed in **bold type**

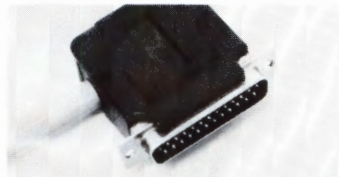
Cable Clamps and Hardware

Part Number Matrix

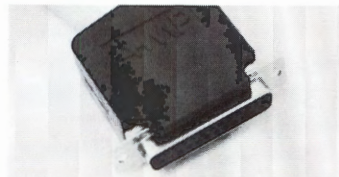


(see page 24)

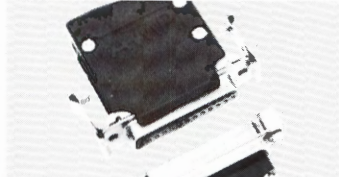
For Connector (Shell Size)	9 Positions (1)	15 Positions (2)	25 Positions (3)	37 Positions (4)	50 Positions (5)
Two-Piece Cable Clamp Straight/90° Exit (two 4-40 male screws included)	—	206471-1	206472-1	745081-1	745082-1
One-Piece Cable Clamp Straight/90° Exit	207467-1	207470-1	207345-1	207473-1	207476-1
One-Piece Cable Clamp Straight/45° Exit (set screw integrated for adjustment of cable support gate)	205729-1	205730-1	205718-1	205731-1	205732-1
Spring Latch Latching Block (two pieces per package) (Spring Latches may only be used in combination with one-piece cable clamps)	745011-1 745007-1	745012-1 745007-1	745013-1 745007-1	745014-1 745007-1	745015-1 745007-2
One-Piece Slide Latch Clip Assembly Locking Post Assembly (two pieces per package)	164892-1 164900-2	164892-2 164900-2	164892-3 164900-2	164892-4 164900-2	164892-5 164900-2



(see page 25)



(see page 26)



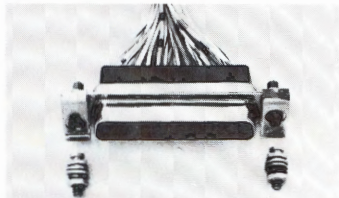
(see page 28)



(see page 29)

One-Piece Slide Latch Clip may not be used in combination with Cable Clamps.

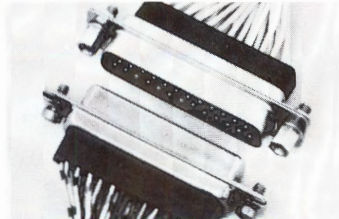
Hardware for all connector sizes



(see page 29) ↑ (see page 27) ↓

Two-Piece Slide Latch Clip Assembly (two pieces per package) 206942-1

Locking Post Assembly (two pieces per package) 206514-1



4-40 thread
Male Screw Retainer (two pieces per package) 205980-1* **166541-1**

Female Screwlock (two pieces per package) 205817-1

DIN M3 thread
Male Screw Retainer (two pieces per package) **166541-2**

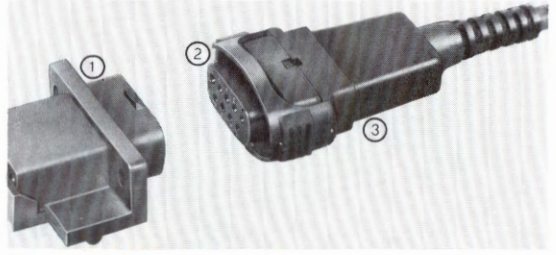
Female Screwlock (two pieces per package) **166546-1**

* Male Screw Retainer 205980-1 may not be used on central clinched metal-shell connectors.

Also available:

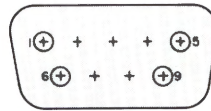
9 Pos. HDJ-20 All-Plastic Connectors for Jacketed Cable

- ① **Right-Angle Pc Board Mount Plug Assemblies**
 Part No. 745001-1 (tin plated contacts)
 Part No. 745001-3 (goldflash contact plating)
- ② **Receptacle Housing**
 Part No. 207752-1
- ③ **Squeeze-to-Release Cord Guard**
 Part No. 745002-2

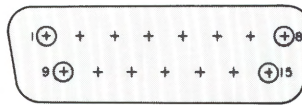


(see page 22, 23)

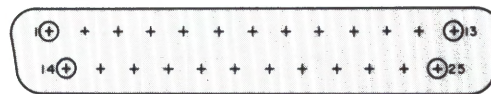
Insert Arrangements



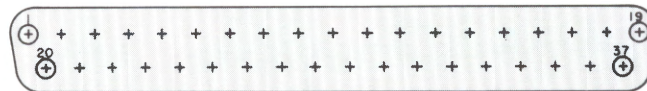
9 Position
(Shell Size 1)



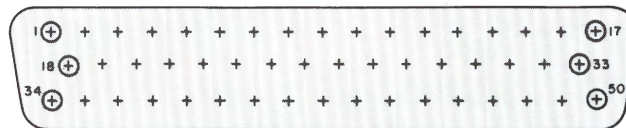
15 Position
(Shell Size 2)



25 Position
(Shell Size 3)



37 Position
(Shell Size 4)



50 Position
(Shell Size 5)

Note: Mating face of plug assembly shown; receptacle assembly is mirror image.

Performance Specifications

(Valid for gold plated contacts)

The electrical and mechanical performance characteristics of the AMPLIMITE Subminiature HD-20 connectors are listed below.

Electrical Characteristics

Contact Current Rating (with 20 AWG [0.5-0.6 mm²] wire): 7.5 Amperes
 Contact Resistance: 5 Milliohms (max.), Crimp Type; 8 Milliohms (max.), Posted
 Dielectric Withstanding Voltage: 1000 VAC (min.)
 Insulation Resistance: 5000 Megohms

Mechanical Characteristics

Contact Engagement Force: 12 Oz. [3.4 N] (max.)
 Contact Separation Force: .75 Oz. [0.2 N] (min.)

Contact Retention:

For HD-20 Metal-Shell Versions—10 Lb. [44 N] (min.)

For HDP-20 All-Plastic Versions—3 Lb. [13 N] (min.)

Tensile Strength (crimp):

With 20 AWG [0.5-0.6 mm²] Wire—20 Lb. [89 N]

With 22 AWG [0.3-0.4 mm²] Wire—12 Lb. [53 N]

With 24 AWG [0.2 mm²] Wire—8 Lb. [39 N]

With 26 AWG [0.12-0.15 mm²] Wire—4.5 Lb. [20 N]

With 28 AWG [0.08-0.09 mm²] Wire—2.7 Lb. [12 N]

Connector Mating Force (per contact): 8 Oz. [2.3 N] (max.)

Product Specifications

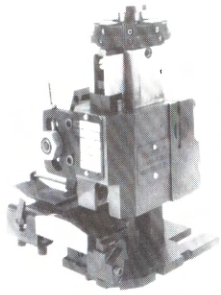
108-40005 for HD-20 & HDP-20 Connectors

108-40006 for HDF-20 Connectors

Application Specification

114-10000 for Application of Size 20 DF Wire Crimp Contacts

Application Tooling for Precision Formed Contacts



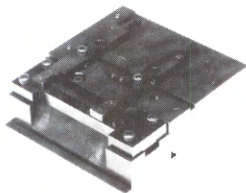
Quick-Change Miniature Applicators

provide flexible operation for the regular semi-automatic Terminating Machine, the "Stripper-Crimper" Machine and the AMPOMATOR Machine. These applicators can be changed in minutes, with the crimping height on both terminal barrel and insulation support for a given wire size simply "dialed in". All adjustments are made rapidly, with no major interruptions in production. Unique control circuits protect every machine part and visual indicators aid in adjustment and operation.

Application Tooling for Flat Ribbon Cable Connectors

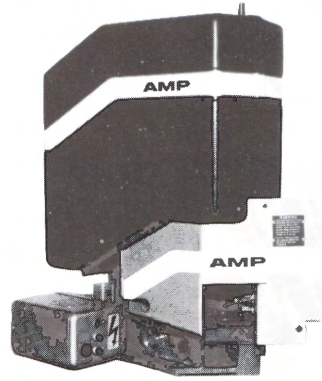


Manual Tool 91085-2



Die Set Part No. 731380-1

AMP manual tool part no. 91085-2 and die set part no. 731380-1 are designed for terminating round-conductor flat cable in HDF-20 connectors.



The "Stripper-Crimper" Terminating Machine

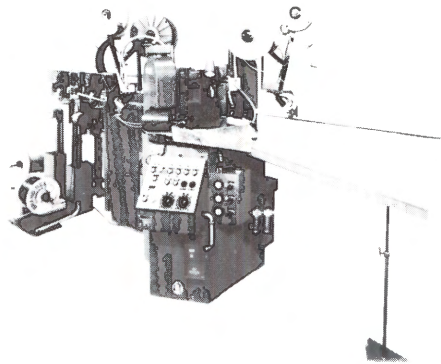
is a semi-automatic machine equipped with a "stripper-crimper" applicator for end feed or side feed terminations. The operator merely places the end of an unstripped wire against the wire stop and depresses a foot switch. The machine cycle consists of removing a length of wire insulation, transferring the stripped wire to the wire barrel of the termination, crimping the connection and shearing the terminal from its carrier strip. Production speeds of up to 2000 terminations an hour can be achieved.

The semi-automatic Terminating Machine

is capable of applying contacts at rates up to 2,000 per hour and more depending on operator dexterity

This machine is electrically powered and bench mounted and can be readily moved to any location where an electric power supply is available.

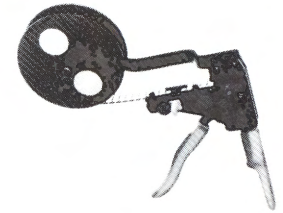
For high application rates, ease of maintenance and servicing and for highest reliability at low applied cost, this semi-automatic machine has proven itself to be an excellent addition to any circuit production operation.



The AMPOMATOR Automatic Lead Making Machine

is considered the epitome of all AMP automatic tooling. This machine not only crimps contacts to wire, but handles the wire every step of the way – from reel to finished lead.

With the AMPOMATOR Machine, you can produce up to 5,700 doubly terminated leads per hour – 11,400 terminations in all – depending on lead length and wire size. Lead and strip length are completely adjustable, as is operating speed. Quick-change, miniature applicators with dial type settings facilitate wire and contact changeover with no significant production downtime. In addition, the machine is fully protected against malfunctioning damage by fail-safe control circuitry.



Hand Tools for Size 20 DF Contacts

AMP Hand Tools are ideal for small production, service, prototype and experimental applications.

They are used for terminating precision formed pins and sockets to wire with insulation support and feature a ratchet device to assure perfectly formed crimps by straight action of the crimping dies, time after time.

Illustration on top shows Economy Type Hand Tool with reel-feeding device for mini-reels of 500 pcs. strip contacts Part No.: 169424-1



CERTI-CRIMP Hand Tool
Part No.: 90302-1 & 90374-1



Economy Type Hand Tool
Part No.: 655044-1

For Specification of Tool Part Numbers to Loose Piece Contacts and corresponding wire sizes, see pages 6 and 7.

HD-20 Connector Contacts Precision Formed

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.
Charts contain dimensions in inches over millimetres.

Crimp Type Contacts, Snap-In

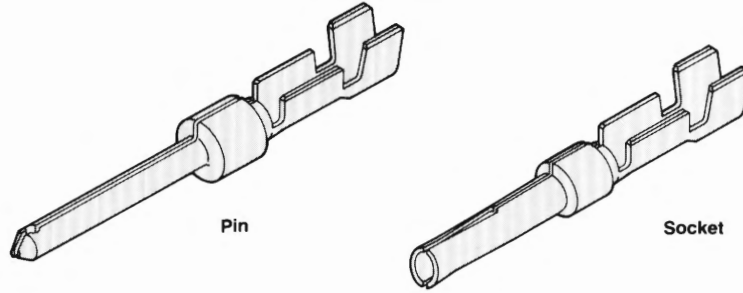
Contact Size 20 DF,
Pin Diameter .040 [1.02]

Material:
Pin—Brass
Socket—Phosphor Bronze

- Finish:**
- A**—selective .000030 [0.8 μm] gold on mating end, remainder gold flash; entire contact .000050 [1.3 μm] nickel undercoating
 - B**—selective .000030 [0.8 μm] gold on mating end, bright tin-lead on terminating end, entire contact .000030 [0.8 μm] nickel undercoating
 - C**—.000100 [2.5 μm] min. tin on entire contact (See Note 5)

Part Numbers for mini-reels with 500 pcs. strip contacts to be used on hand tool 169424-1 with reel-feeding device are listed on page 7

With Insulation Support



Wire Size Range AWG	Ins. Dia. (max.) Inches	Plating Code	Contact Finish	Automachine Strip Contact No.		Loose Piece Contact No.		Color Code (Loose Piece)	Hand Tool Part. No.
				Pin	Socket	Pin	Socket		
28-24 0.08-0.22	.040 1.0	A	Select. Gold/ Gold flash/ Nickel	66507-3	66505-3	66507-9	66505-9	Blue Dot	655044-1 or 90302-1 or 90374-1
		B	Select. Gold/ Nickel/Tin	166054-1	166052-1	166294-1	166292-1		
		C	Tin	1-66507-4	1-66505-4	1-66507-6	1-66505-6		
24-20 0.20-0.56	.060 1.5	A	Select. Gold/ Gold flash/ Nickel	66682-2	66683-2	66682-4	66683-4	Black Dot	90374-1
		B	Select. Gold/ Nickel/Tin	166053-1	166051-1	166293-1	166291-1		
		C	Tin	1-66506-4	1-66504-4	1-66506-6	1-66504-6		

- Notes:**
- Strip form contacts are reeled for AMP miniature applicators in terminating machines (see page 5).
 - All contacts may be used in AMPLIMITE HD-20 metal-shell connectors (pages 8 and 9) and in HDM-20 (military) connectors (AMP cat. 79-547).
 - For contacts with .000050 [1.3 μm] gold over copper plating, contact without insulation support or screw machine contacts please refer to cat. 79-546. For contacts wire size 30 AWG [0.05 mm²] consult AMP.
 - For cross reference contact wire size to applicable hand tool wire crimp station and details of Insertion/Extraction Tools see page 7.
 - Tin plated contacts (Plating Code C) are available for commercial applications (i.e. in HDJ-20 All-Plastic Connectors, see pages 22, 23). Compared to the performance of terminals with gold plated contact surfaces, less durability and increase of mating force have to be considered when tin plated contacts are applied.

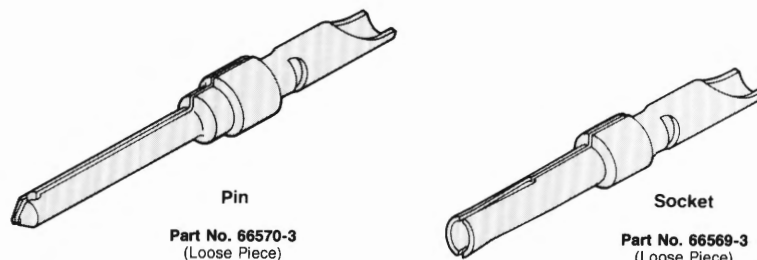
Solder Cup Contacts, Snap-In (for 18 AWG [0.9 mm²] Max. Wire)

Contact Size 20 DF,
Pin Diameter .040 [1.02]

Material:
Pin—Brass per MIL-C-50
Socket—Phosphor Bronze per QQ-B-750

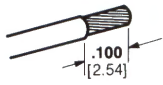
Finish:
A—Gold flash over .000050 [0.00127] nickel on entire contact, with additional .000030 [0.00076] gold on mating end.

Instruction Sheet
IS 7799



- Notes:**
- Insertion/Extraction Tool No. 91067-2 is used to install and remove all solder cup contacts.
 - All solder cup contacts may be used in AMPLIMITE HD-20 metal-shell connectors (pages 8 and 9).

Hand Tool Specification for wire-crimp contacts



Recommended wire strip length for all contacts is .100 [2.54]



Individual Insertion Tool (Red)

28-20 AWG [0.08-0.56 mm²]

No. 726363-1

Insertion Replacement Tip

No. 126195-3

Individual Extraction Tool (White)

24-20 AWG [0.20-0.56 mm²]

No. 726364-1

Extraction Replacement Tip

No. 126195-4



Combined Insertion/Extraction Tool

28-24 AWG [0.08-0.22 mm²]

Wire Size Range, Crimp Type

No. 91067-3

Insertion Replacement Tip

No. 126195-3

Extraction Replacement Tip

No. 126195-5

24-20 AWG [0.20-0.56 mm²]

Wire Size Range, Crimp Type

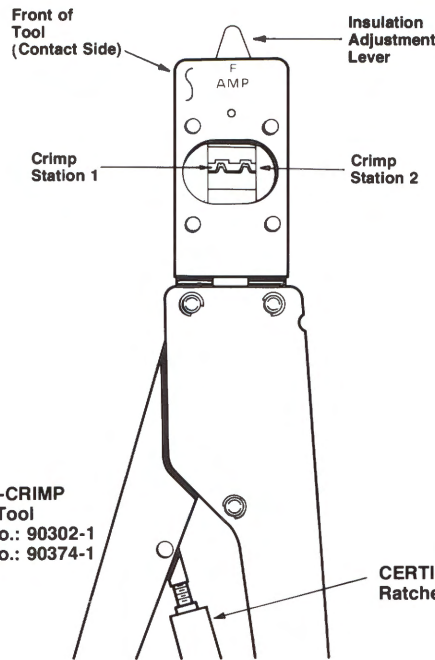
No. 91067-2

Insertion Replacement Tip

No. 126195-3

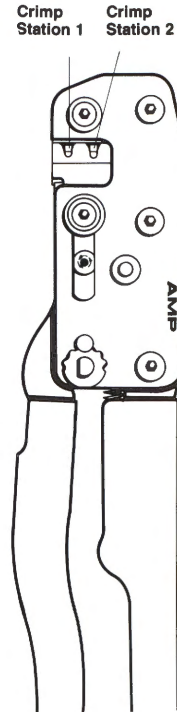
Extraction Replacement Tip

No. 126195-4



CERTI-CRIMP Hand Tool
Part No.: 90302-1
Part No.: 90374-1

CERTI-CRIMP Ratchet

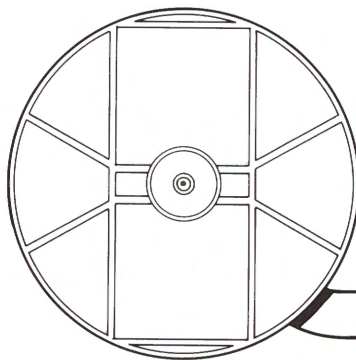


Economy Type Hand Tool
Part No.: 655044-1

Selection Chart Wire Range and Insulation Dia. to Hand Tool Part No. and Crimp Station

Wire Size Range AWG mm ²	Ins. Dia. (max.) Inches mm	Hand Tool Part Number	Crimp Station No.	Instruction Sheet
28-24 0.08-0.22	.040 1.0	90302-1	1	IS 7634
		90374-1	1	IS 7954
		655044-1	1	I-042-103
		169424-1*	1	I-042-120
28-24 0.08-0.22	.060 1.5	90374-1	2	IS 7954
		90302-1	2	IS 7634
24-20 0.20-0.56	.060 1.5	655044-1	2	I-042-103
		169424-1*	2	I-042-120

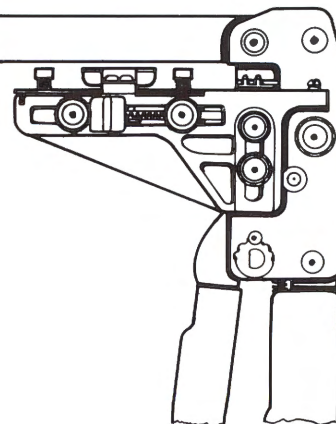
* Part No. 169424-1 similar to 655044-1 but provided with reel-feeding device.



Part Numbers for Mini-Reels with 500 Pieces Strip Contacts to be used on Hand Tool 169424-1 with Reel-Feeding Device

Wire Size Range AWG mm ²	Ins. Dia. (max.) Inches mm	Plating Code ^a	Contact Reel No.	
			Pin	Socket
28-24 0.08-0.22	.040 1.0	A	5-66507-3	5-66505-3
		B	5-166054-1	5-166052-1
24-20 0.20-0.56	.060 1.5	A	5-66506-3	5-66504-3
		B	5-166053-1	5-166051-1

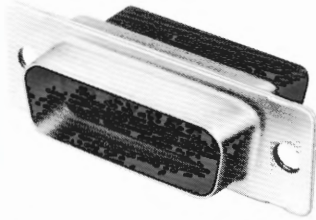
^a) Plating code: (A) Select.gold/gold flash/nickel; (B) Select.gold/nickel/tin. See also page 6.



Economy Type Hand Tool
Part No.: 169424-1
(Similar to 655044-1 but provided with reel-feeding device)

HD-20 Connectors (for Snap-In Contacts)

Plugs



Material and Finish:

Shell—Steel per QQ-S-698 Zinc plated per QQ-Z-325, Type II Class 3 (Yellow Chromate)

Insert—Black Glass-Filled Nylon
Self-Extinguishing 94V-0 Rated

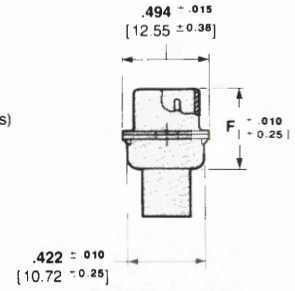
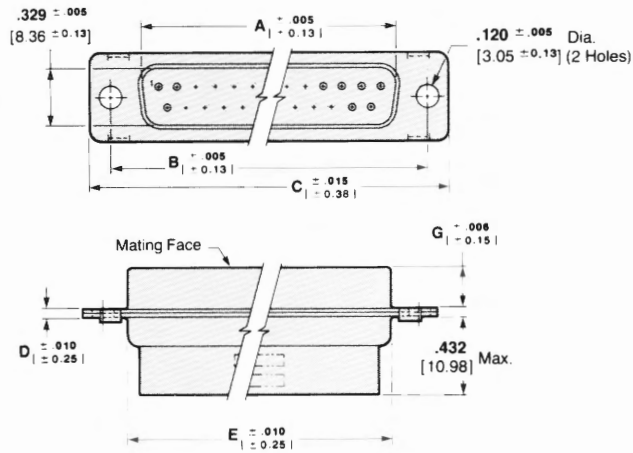
Insertion Sheet IS-7514

Picture shows connector with edge clinched shell

Also available Quiet-Line Filtered AMPLIMITE Connectors (see cat. 78-487)

For Connectors with Floating Bushing refer to cat. 79-546.
For Military Connectors refer to cat. 79-547.

9, 15, 25 and 37 Positions

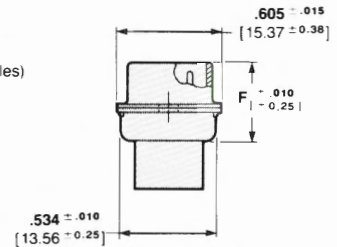
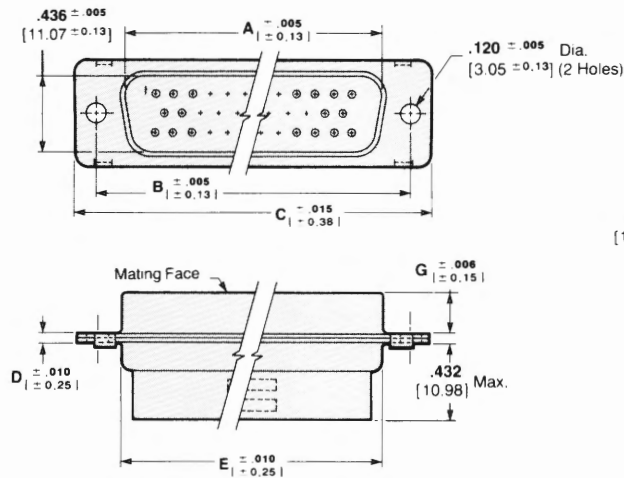


Edge Clinched Shell

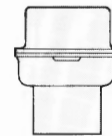


Central Clinched Shell

50 Positions



Edge Clinched Shell



Central Clinched Shell

European Manufacture

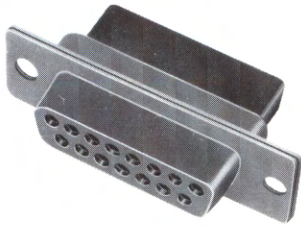
No. of Contact Pos. (Shell Size)	Dimensions							Part Numbers	
	A	B	C	D	E	F	G	With Edge Clinched Shell	With Central Clinched Shell
9 (1)	.666 16.92	.984 24.99	1.213 30.81	.030 0.76	.759 19.28	.422 10.72	.235 5.97	205204-1	164526-1
15 (2)	.994 25.25	1.312 33.32	1.541 39.14	.030 0.76	1.083 27.51	.422 10.72	.235 5.97	205206-1	164527-1
25 (3)	1.534 38.96	1.852 47.04	2.088 53.04	.039 0.99	1.625 41.3	.426 10.82	.230 5.84	205208-1	164528-1
37 (4)	2.182 55.42	2.500 63.5	2.729 69.32	.039 0.99	2.272 57.71	.426 10.82	.230 5.84	205210-1	164529-1
50 (5)	2.079 52.81	2.406 61.11	2.635 66.93	.039 0.99	2.178 55.32	.426 10.82	.230 5.84	205212-1	164530-1

Notes: 1. Plugs accept all size 20 DF pin contacts. For ordering loose piece and strip form contacts, refer to page 6.
2. For panel mounting dimensions see page 31.

HD-20 Connectors (for Snap-In Contacts)

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.
Chart contains dimensions in inches over millimetres.

Receptacles

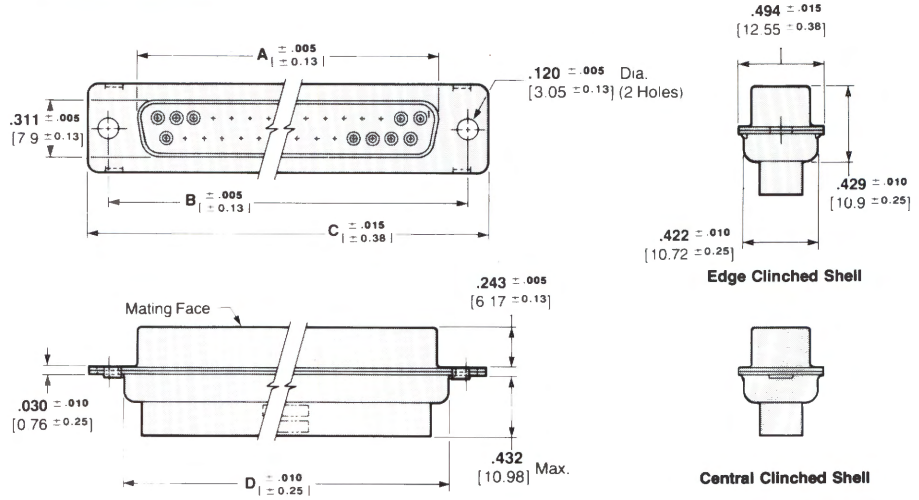


Material and Finish:
Shell—Steel per QQ-S-698 Zinc plated per QQ-Z-325, Type II Class 3 (Yellow Chromate)
Insert—Black Glass-Filled Nylon
Self-Extinguishing 94V-0 Rated

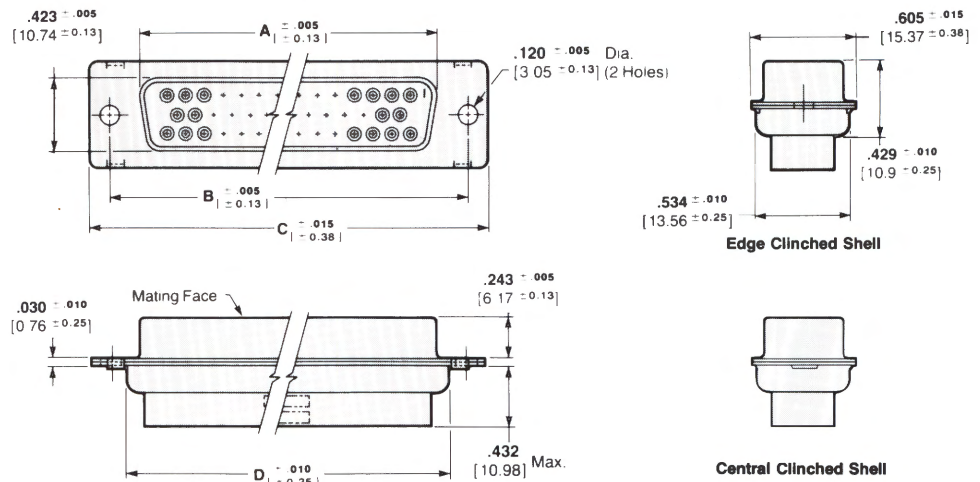
Instruction Sheet
IS-7514

Picture shows connector with central clinched shell

9, 15, 25 and 37 Positions



50 Positions



Also available Quiet-Line Filtered AMPLIMITE Connectors (see cat. 78-487)

For Connectors with Floating Bushing refer to cat. 79-546.
For Military Connectors refer to cat. 79-547.

European Manufacture

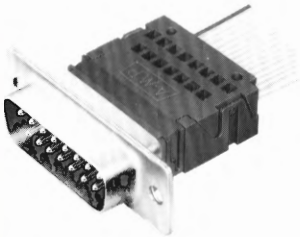
No. of Contact Pos. (Shell Size)	Dimensions				Part Numbers	
	A	B	C	D	With Edge Clinched Shell	With Central Clinched Shell
9 (1)	.643 16.33	.984 24.99	1.213 30.81	.759 19.28	205203-1	164531-1
15 (2)	.971 24.66	1.312 33.32	1.541 39.14	1.083 27.51	205205-1	164532-1
25 (3)	1.511 38.38	1.852 47.04	2.088 53.04	1.625 41.3	205207-1	164533-1
37 (4)	2.159 54.84	2.500 63.5	2.729 69.32	2.272 57.71	205209-1	164534-1
50 (5)	2.064 52.43	2.406 61.11	2.635 66.93	2.178 55.32	205211-1	164535-1

Notes: 1. Receptacles accept all size 20 DF socket contacts. For ordering loose piece and strip form contacts, refer to page 6.
2. For panel mounting dimensions see page 31.

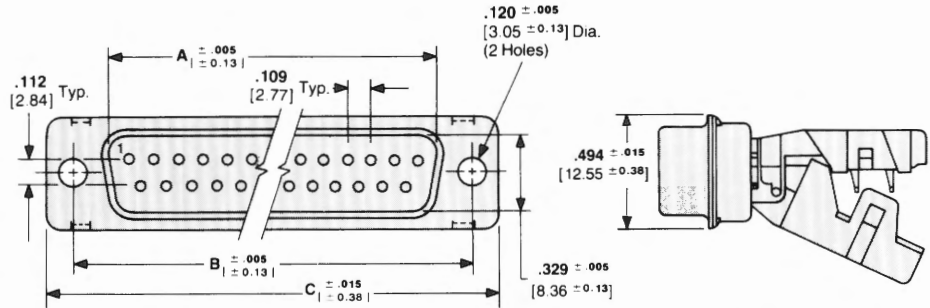
HDF-20 Flat Ribbon Cable Connectors (for Round Conductor Flat Ribbon Cable with Spare Edge Conductor)

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.
Chart contains dimensions in inches and millimetres.

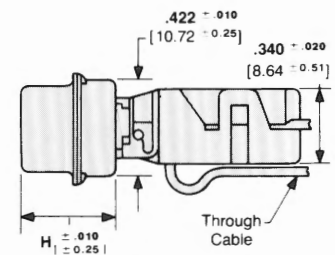
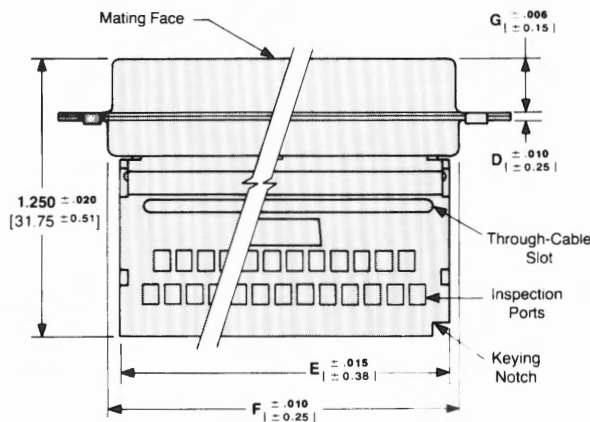
Plug Assemblies (9, 15, 25 and 37 Positions)



Material and Finish:
Shell—Steel per QQ-S-698; Zinc plated per QQ-Z-325, Type II, Class 3 (Yellow Chromate)
Housing—Black Glass-Filled Thermoplastic, 94V-0 Rated
Pin Contacts—Phosphor Bronze, plated .000030 [0.8 μm] gold on mating end, tin on terminating end, entire contact .000050 [1.3 μm] nickel undercoating.



Open Position



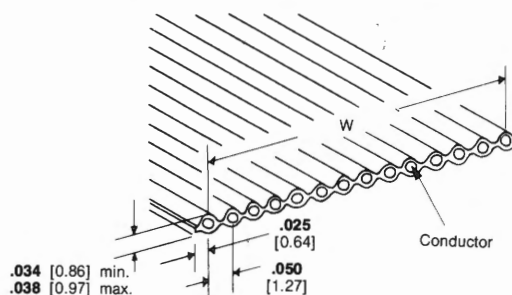
Closed Position

* Connector assembly supplied with cover not hinged

No. of Contact Pos. (Shell Size)	Dimensions								Part No.*
	A	B	C	D	E	F	G	H	
9 (1)	.666 16.92	.984 24.99	1.213 30.81	.030 0.76	.688 17.48	.759 19.28	.235 5.97	.422 10.72	745276-1
15 (2)	.944 23.98	1.312 33.32	1.541 39.14	.030 0.76	.940 23.88	1.083 27.51	.235 5.97	.422 10.72	745278-1
25 (3)	1.534 38.96	1.852 47.04	2.088 53.04	.039 0.99	1.488 37.8	1.625 41.3	.230 5.84	.426 10.82	745280-1
37 (4)	2.182 55.42	2.500 63.5	2.729 69.32	.039 0.99	2.140 54.36	2.272 57.71	.230 5.84	.426 10.82	745282-1

- Notes:**
- All plug assemblies are preloaded with size 20 DF pin contacts (insulation displacement type), they will accept round-conductor flat ribbon cable with conductors on .050 [1.27] centers. The 9-position plug assembly terminates 9 adjacent conductors of a 10-conductor cable, with one edge conductor serving as a spare. The 25-position plug assembly terminates 25 adjacent conductors of a 26-conductor cable, with one edge conductor serving as a spare. The 15- and 37-position plug assemblies do not terminate cable with a spare edge conductor; they terminate cable having the same no. of conductors as their respective sizes indicate.
 - For connector assemblies terminating flat ribbon cable with spare middle conductor, refer to cat. 79-546.

Ribbon Cable Specification for Plug and Receptacle Assemblies



No. of Contact Positions	Cable	
	No. of Cond.	Dimension W
9 (see note 1)	10	.450 [11.4]
15	15	.700 [17.8]
25 (see note 1)	26	1.250 [31.8]
37	37	1.800 [45.7]

Recommended tooling for termination of HDF-20 connectors:
Manual Tool 91085-2 with Termination Die Set 731380-1
(see also page 5)

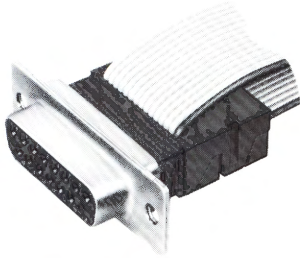
Instruction Sheet I-042-102

Attention:
For termination of HDF-20 connectors in Die Set 731380-1 covers have to be released from the connector housings. Die Set 731380-1 is not suitable for termination of connectors with center spare conductor layout.

HDF-20 Flat Ribbon Cable Connectors (for Round Conductor Flat Ribbon Cable with Spare Edge Conductor)

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.
Chart contains dimensions in inches and millimetres.

Receptacle Assemblies (9, 15, 25 and 37 Positions)



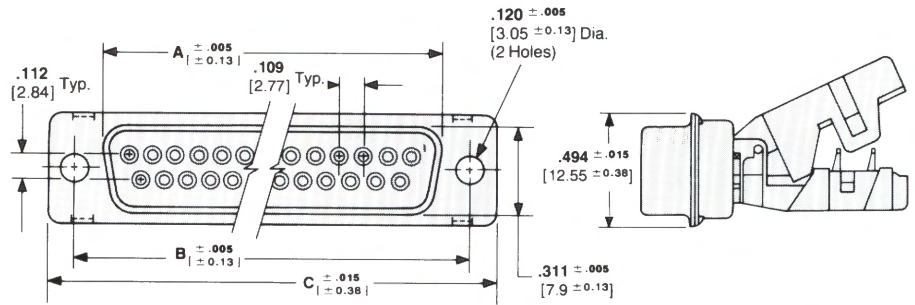
Material and Finish:

Shell—Steel per QQ-S-698; Zinc plated per QQ-Z-325, Type II, Class 3 (Yellow Chromate)

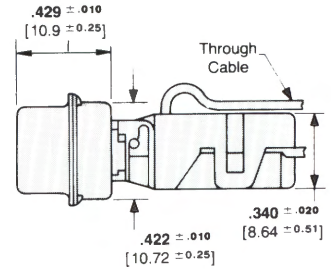
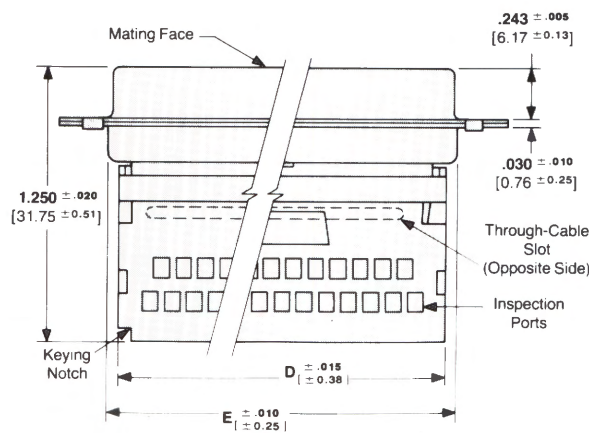
Housing—Black Glass-Filled Thermoplastic, 94V-0 Rated

Socket Contacts—Phosphor Bronze, plated .000030 [0.8 μm] gold on mating end, tin on terminating end, entire contact .000050 [1.3 μm] nickel undercoating.

Also available Low-Profile All-Plastic Receptacle Assemblies (See datasheet 80-591)



Open Position



Closed Position

* Connector assembly supplied with cover not hinged

No. of Contact Pos. (Shell Size)	Dimensions					Part No.*
	A	B	C	D	E	
9 (1)	.643 16.33	.984 24.99	1.213 30.81	.688 17.48	.759 19.28	745277-1
15 (2)	.971 24.66	1.312 33.32	1.541 39.14	.940 23.88	1.083 27.51	745279-1
25 (3)	1.511 38.38	1.852 47.04	2.088 53.04	1.488 37.8	1.625 41.3	745281-1
37 (4)	2.159 54.84	2.500 63.5	2.729 69.32	2.140 54.36	2.272 57.71	745283-1

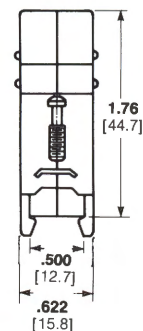
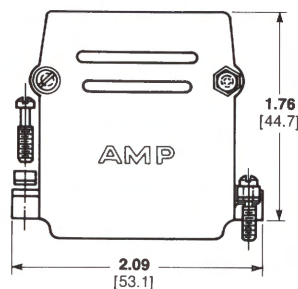
Notes: 1. All receptacle assemblies are preloaded with size 20 DF socket contacts (insulation displacement type), they will accept round-conductor flat ribbon cable with conductors on .050 [1.27] centers. The 9-position receptacle assembly terminates 9 adjacent conductors of a 10-conductor cable, with one edge conductor serving as a spare. The 25-position receptacle assembly terminates 25 adjacent conductors of a 26-conductor cable, with one edge conductor serving as a spare. The 15- and 37-position receptacle assemblies do not terminate cable with a spare edge conductor, they terminate cable having the same no. of conductors as their respective sizes indicate.

2. For connector assemblies terminating flat ribbon cable with spare middle conductor, refer to cat. 79-546.

25 Position Straight Exit Cable Clamp Assembly for HDF-20 Connectors

Securing jacketed cable of .0165 [4.2] thickness.

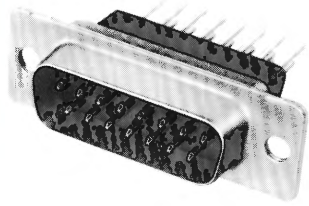
Kit Part No. 745026-1



HD-20 Connectors Preloaded with .025 [0.64] Sq. Straight Posted Contacts (for Pc Board Mounting or Wrap-Type Terminations)

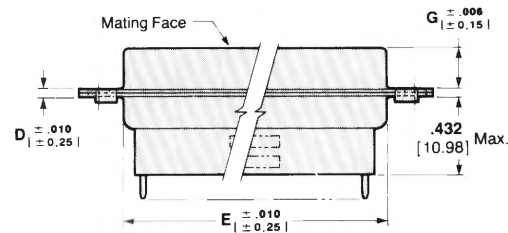
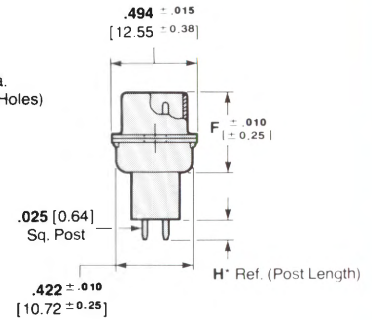
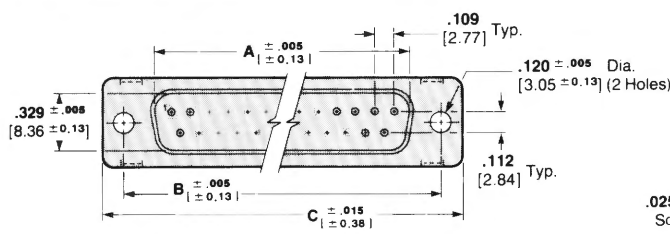
Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.

Plug Assemblies

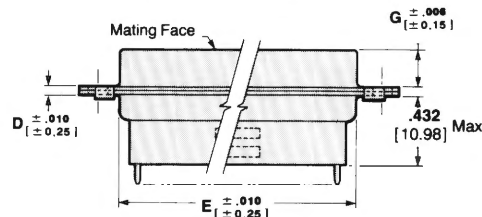
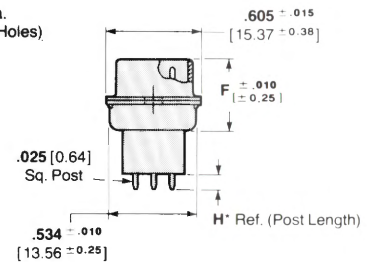
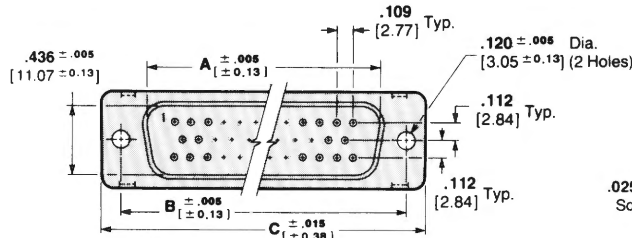


Material and Finish:
Shell—Steel Zinc plated (Yellow Chromate)
Insert—Black Glass-Filled Nylon, 94V-0 Rated
Pin Contacts—Brass, selective .000030 [0.8 μm] gold on mating end, remainder gold flash; entire contact .000050 [1.30 μm] nickel undercoating
Post—Brass .000075 [2.0 μm] tin on entire post

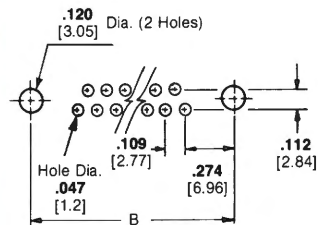
9, 15, 25 and 37 Positions



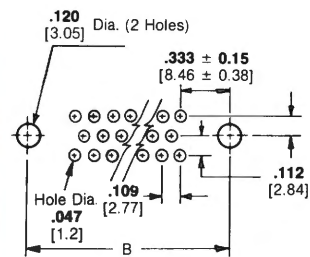
50 Positions



Pc Board Mounting Specifications



9, 15, 25 and 37 Positions



50 Positions

Recommended Pc Board Hole Size .047 [1.2] Dia.

European Manufacture

No. of Contact Pos. (Shell Size)	Dimensions							Post Length H*	Part No.
	A	B	C	D	E	F	G		
9 (1)	.666	.984	1.213	.030	.759	.422	.235	.125 [3.2]	827189-1
	16.92	24.99	30.81	0.76	19.28	10.72	5.97	.394 [10.0]	827189-2
								.669 [17.0]	827189-3
15 (2)	.994	1.312	1.541	.030	1.083	.422	.235	.125 [3.2]	826744-1
	25.25	33.32	39.14	0.76	27.51	10.72	5.97	.394 [10.0]	826744-2
								.669 [17.0]	826744-3
25 (3)	1.534	1.852	2.088	.039	1.625	.426	.230	.125 [3.2]	827191-1
	38.96	47.04	53.04	0.99	41.3	10.82	5.84	.394 [10.0]	827191-2
								.669 [17.0]	827191-3
37 (4)	2.182	2.500	2.729	.039	2.272	.426	.230	.125 [3.2]	827192-1
	55.42	63.5	69.32	0.99	57.71	10.82	5.84	.394 [10.0]	827192-2
								.669 [17.0]	827192-3
50 (5)	2.079	2.406	2.635	.039	2.178	.426	.230	.125 [3.2]	826816-1
	52.81	61.11	66.93	0.99	55.32	10.82	5.84	.394 [10.0]	826816-2
								.669 [17.0]	826816-3

Notes:
1. All plug assemblies are preloaded with size 20 DF posted pin contacts.
2. Post length H* .125 [3.2] for Pc board mounting (board thk. .063 [1.6] nom.); .394 [10.0] and .669 [17.0] for wrap-type terminations.
3. The listed European part numbers have central clinched shell.
4. Contacts are not replaceable.

HD-20 Connectors Preloaded with .025 [0.64] Sq. Straight Posted Contacts (for Pc Board Mounting or Wrap-Type Terminations)

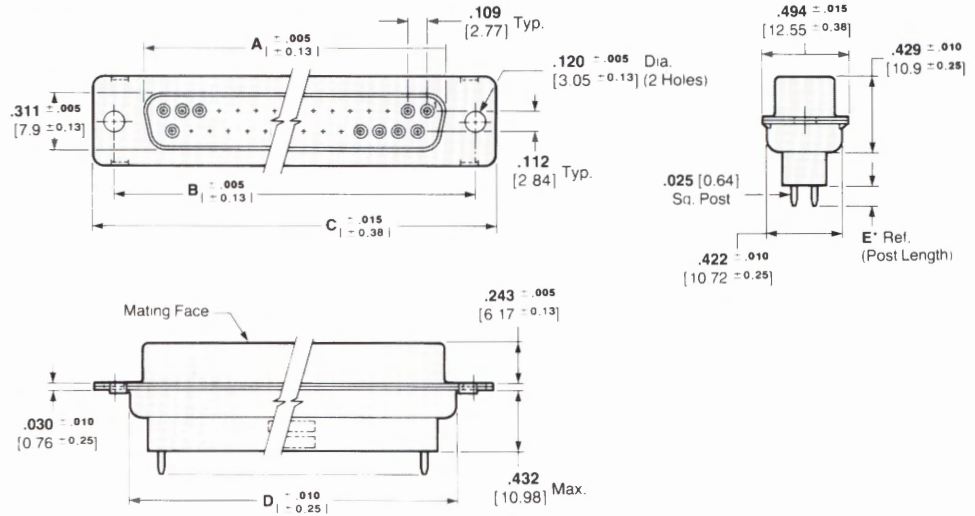
Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents

Receptacle Assemblies

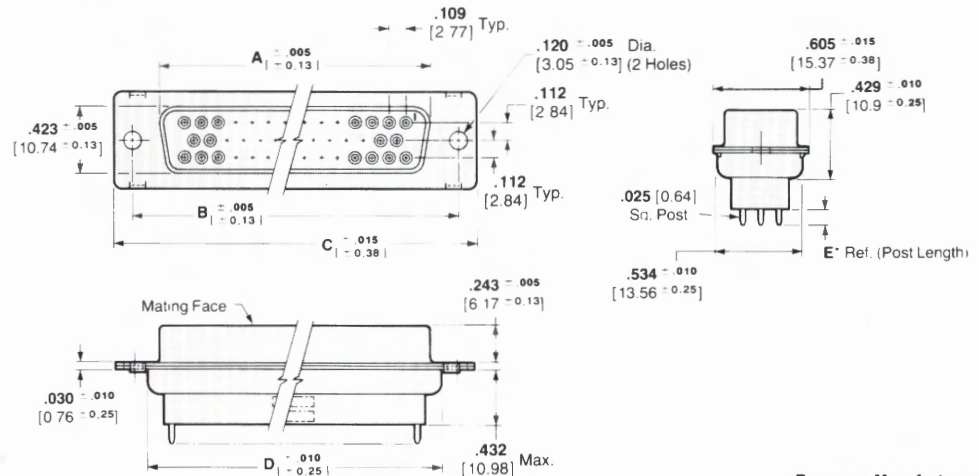


Material and Finish:
Shell—Steel Zinc plated (Yellow Chromate)
Insert—Black Glass-Filled Nylon,
94V-0 Rated
Socket Contacts—Phosphor Bronze,
.000030 [0.8 μm] gold on mating end,
remainder gold flash; entire contact
.000050 [1.30 μm] nickel undercoating
Post—Brass .000075 [2.0 μm] tin on
entire post

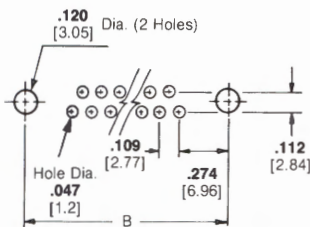
9, 15, 25 and 37 Positions



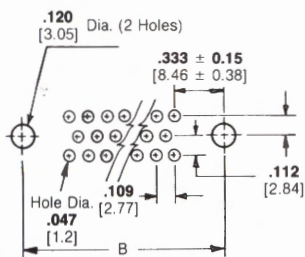
50 Positions



Pc Board Mounting Specifications



9, 15, 25 and 37 Positions



50 Positions

Recommended Pc Board Hole Size .047 [1.2] Dia.

European Manufacture

No. of Contact Pos. (Shell Size)	Dimensions				Post Length E*	Part No.
	A	B	C	D		
9 (1)	.643	.984	1.213	.759	.125 [3.2]	827066-1
	16.33	24.99	30.81	19.28	.394 [10.0]	827066-2
					.699 [17.0]	827066-3
15 (2)	.971	1.312	1.541	1.083	.125 [3.2]	827190-1
	24.66	33.32	39.14	27.51	.394 [10.0]	827190-2
					.669 [17.0]	827190-3
25 (3)	1.511	1.852	2.088	1.625	.125 [3.2]	827017-1
	38.38	47.04	53.04	41.3	.394 [10.0]	827017-2
					.669 [17.0]	827017-3
37 (4)	2.159	2.500	2.729	2.272	.125 [3.2]	826734-1
	54.84	63.5	69.32	57.71	.394 [10.0]	826734-2
					.669 [17.0]	826734-3
50 (5)	2.064	2.406	2.635	2.178	.125 [3.2]	827053-1
	52.43	61.11	66.93	55.32	.394 [10.0]	827053-2
					.669 [17.0]	827053-3

Notes:
1. All receptacle assemblies are preloaded with size 20 DF posted socket contacts.
2. Post length E* .125 [3.2] for Pc Board mounting (board thk .063 [1.6] nom.); .394 [10.0] and .669 [17.0] for wrap-type terminations.
3. The listed European partnumbers have central clinched shell.
4. Contacts are not replaceable.

HD-20 Connectors Preloaded with Right-Angle Posted Contacts (for Pc Board Mounting)

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.
Chart contains dimensions in inches over millimetres.

Plug Assemblies



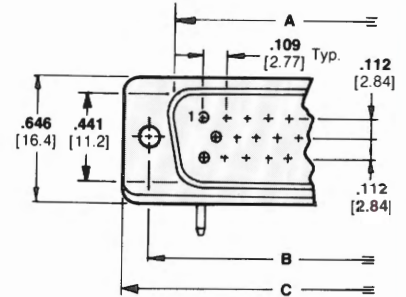
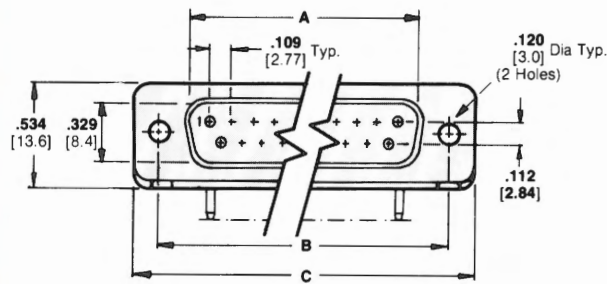
Material and Finish:
Shell (Central clinched)—Steel, zinc plated (yellow chromate)

Housing with integrated post spacer—Black glassfilled Nylon, 94V-0 rated

Pin Contacts (posted)—Brass, plated selective .000030 [0.8 μm] gold on mating end, remainder and entire contact undercoating .000030 [0.8 μm] nickel

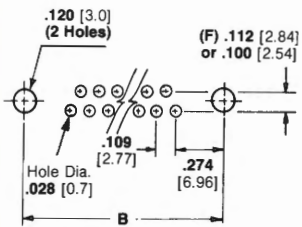
Soldertine—.000100 [2.54 μm] bright tin-lead

9, 15, 25, 37 and 50 Positions

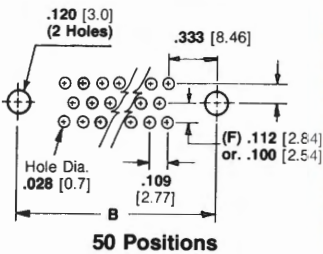


50 Positions Configuration

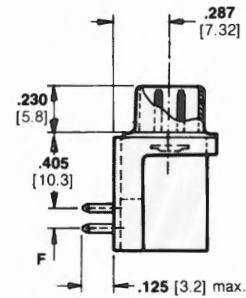
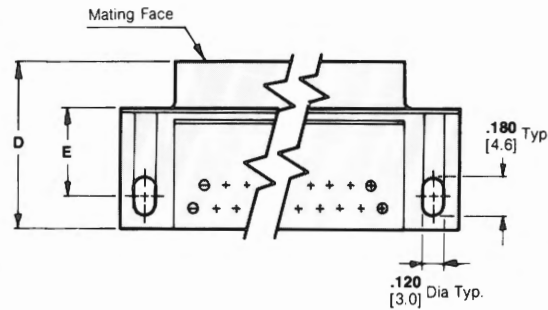
Pc Board Mounting Specifications



9, 15, 25 and 37 Positions



50 Positions



Row Distance (F) .112 [2.84] or .100 [2.54] (See Chart)

Recommended Pc Board Hole Size .028 [0.7] Dia. Board Tkn. .063 [1.6] nom.

Note: 1. All plug assemblies are preloaded with size 20 DF posted pin contacts.

European Manufacture

Connectors have tinned soldertines length .125 [3.2]

No. of Contact Pos. (Shell Size)	Dimensions					Part Number	
	A	B	C	D	E	Row Distance (F) .112 [2.84]	Row Distance (F) .100 [2.54]
9 (1)	.665 16.9	.984 25.0	1.216 30.9	.816 20.7	.461 11.7	164492-1	166746-1
15 (2)	.994 25.2	1.312 33.3	1.544 39.2	.816 20.7	.461 11.7	164493-1	166747-1
25 (3)	1.534 39.0	1.852 47.0	2.090 53.1	.816 20.7	.461 11.7	164494-1	166748-1
37 (4)	2.181 55.4	2.500 63.5	2.732 69.4	.816 20.7	.461 11.7	164495-1	166749-1
50 (5)	2.092 52.9	2.406 61.1	2.638 67.0	.928 23.6	.517 13.1	164496-1	166750-1

HD-20 Connectors Preloaded with Right-Angle Posted Contacts (for Pc Board Mounting)

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.
Chart contains dimensions in inches over millimetres

Receptacle Assemblies



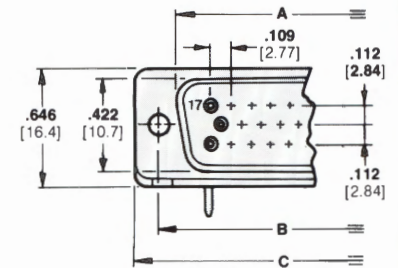
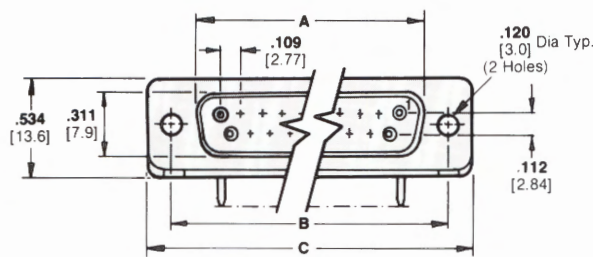
Material and Finish:
Shell (central clinched)—
Steel, zinc plated (yellow chromate)

Housing with integrated post spacer—Black glassfilled Nylon, 94V-0 rated

Socket Contacts (posted)—
Phosphor Bronze, plated selective .000030 [0.8 μm] gold on mating end, remainder and entire contact undercoating .000030 [0.8 μm] nickel

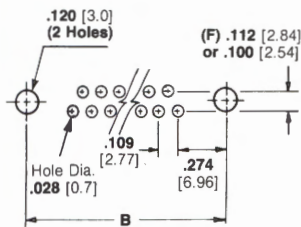
Soldertine—.000100 [2.54 μm] bright tin-lead

9, 15, 25, 37 and 50 Positions

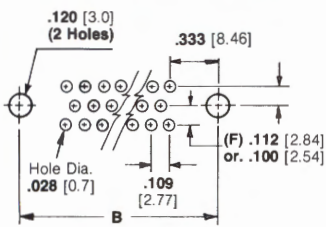


50 Positions Configuration

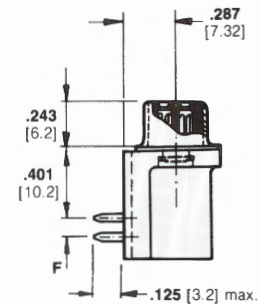
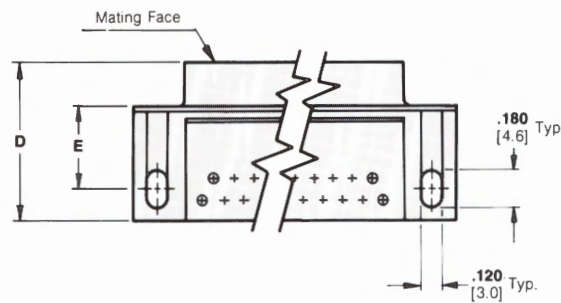
Pc Board Mounting Specifications



9, 15, 25 and 37 Positions



50 Positions



Row Distance (F) .112 [2.84] or .100 [2.54] (See Chart)

No. of Contact Pos. (Shell Size)	Dimensions					Part Number	
	A	B	C	D	E	Row Distance (F).112 [2.84]	Row Distance (F).100 [2.54]
9 (1)	.642 [16.3]	.984 [25.0]	1.216 [30.9]	.826 [21.0]	.457 [11.6]	164800-1	166751-1
15 (2)	.968 [24.6]	1.312 [33.3]	1.544 [39.2]	.816 [21.0]	.457 [11.6]	164801-1	166752-1
25 (3)	1.512 [38.4]	1.852 [47.0]	2.090 [53.1]	.826 [21.0]	.457 [11.6]	164802-1	166753-1
37 (4)	2.159 [54.8]	2.500 [63.5]	2.732 [69.4]	.826 [21.0]	.457 [11.6]	164803-1	166754-1
50 (5)	2.064 [52.4]	2.406 [61.1]	2.638 [67.0]	.938 [23.8]	.513 [13.0]	164804-1	166755-1

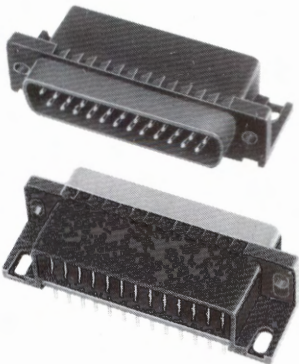
Note: 1. All receptacle assemblies are preloaded with size 20 DF posted socket contacts.

Recommended Pc Board Hole Size .028 [0.7] Dia. Board Tkn. .063 [1.6] nom.

HDP-20 All-Plastic Connectors Preloaded with Right-Angle Posted Contacts (for Pc Board Mounting)

Dimensioning:
All dimensions in inches and millimetres. Values in brackets are metric equivalents. Chart contains dimensions in inches and millimetres.

Plug Assemblies

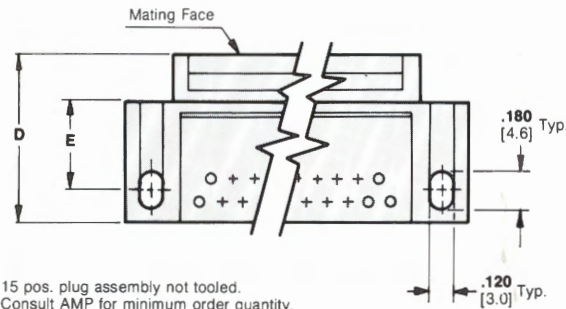
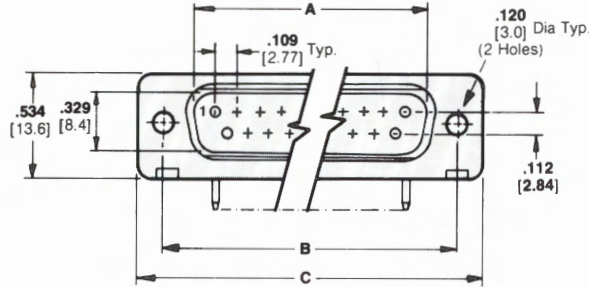


Material and Finish:
Housing with integrated post spacer—Black glassfilled Nylon, 94V-0 rated

Pin Contacts (posted)—Brass, plated selective .000030 [0.8 μm] gold on mating end, remainder and entire contact undercoating .000030 [0.8 μm] nickel

Soldertine—.000100 [2.54 μm] bright tin-lead

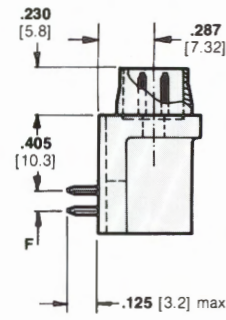
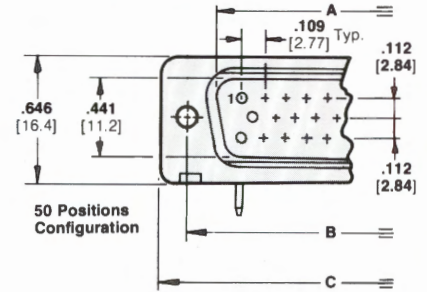
9, 25, 37 and 50 Positions



15 pos. plug assembly not toolled. Consult AMP for minimum order quantity.

European Manufacture

Connectors have tinplated soldertines length .125 [3.2]

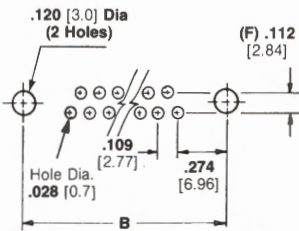


Row Distance (F).112 [2.84]

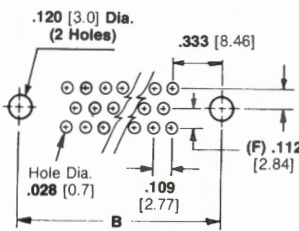
No. of Contact Pos. (Shell Size)	Dimensions					Part Number
	A	B	C	D	E	
9 (1)	.665 16.9	.984 25.0	1.216 30.9	.816 20.7	.461 11.7	166255-1
25 (3)	1.534 39.0	1.852 47.0	2.090 53.1	.816 20.7	.461 11.7	166257-1
37 (4)	2.181 55.4	2.500 63.5	2.732 69.4	.816 20.7	.461 11.7	166258-1
50 (5)	2.082 52.9	2.406 61.1	2.638 67.0	.928 23.6	.517 13.1	166259-1

Notes: 1. All plug assemblies are preloaded with size 20 DF posted pin contacts.
2. For availability of plug assemblies with solder time Row Distance F = .100 [2.54], please consult AMP.
3. Also available All-Plastic connectors with posts for .049 [1.2] dia. holes. The position of board mounting holes for these connectors is **not equal** to the layout specified on this page, for details see catalog 79-546.

Pc Board Mounting Specifications



9, 25 and 37 Positions Not for Part No. 166573-1



50 Positions

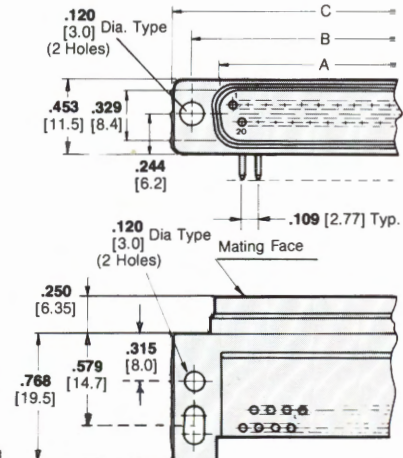
Recommended Pc Board Hole Size .028 [0.7] Dia. Board Tkn. .063 [1.6] nom.

Low Profile Plug Assembly

37 Positions

Height .453 [11.5]
Soldertine length .110 [2.8]
Pc Board Hole Size .040 [1.0] Dia.

For drawing and Pc Board Mounting Specification consult AMP

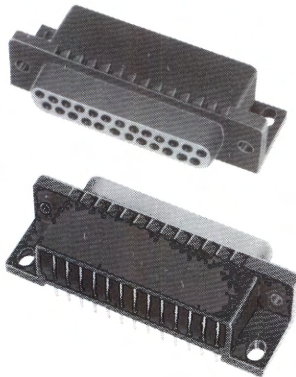


Part No. 166573-1

HDP-20 All-Plastic Connectors Preloaded with Right-Angle Posted Contacts (for Pc Board Mounting)

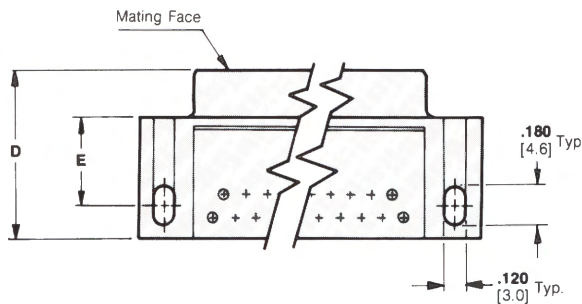
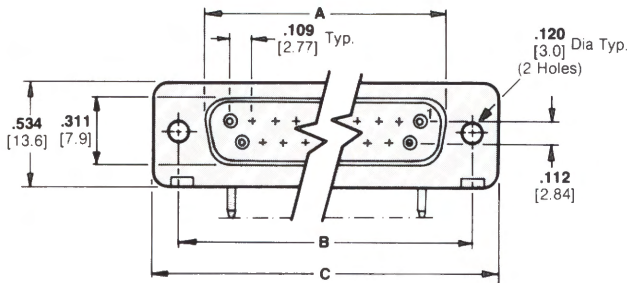
Dimensioning:
All dimensions in inches and millimetres
Values in brackets are metric equivalents
Chart contains dimensions in inches over millimetres

Receptacle Assemblies



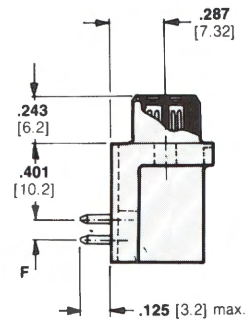
Material and Finish:
Housing with integrated post spacer—Black glassfilled Nylon, 94V-0 rated
Socket Contacts (posted)—Phosphor Bronze, plated selective .000030 [0.8 μm] gold on mating end, remainder and entire contact undercoating .000030 [0.8 μm] nickel
Solderline—.000100 [2.54 μm] bright tin-lead

25 and 37 Positions



European Manufacture

Connectors have tinplated solderlines length .125 [3.2]

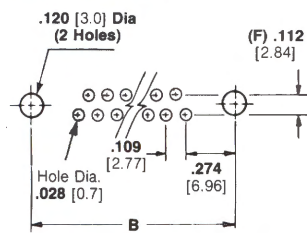


Row Distance (F).112 [2.84]

No. of Contact Pos. (Shell Size)	Dimensions					Part Number
	A	B	C	D	E	Row Distance (F).112 [2.84]
25 (3)	1.512 38.4	1.852 47.0	2.090 53.1	.826 21.0	.457 11.6	166262-1
37 (4)	2.159 54.8	2.500 63.5	2.732 69.4	.826 21.0	.457 11.6	166263-1

Notes:
1. All receptacle assemblies are preloaded with size 20 DF posted socket contacts.
2. For availability of 9, 15 and 50 positions All-Plastic receptacle assemblies with solderline Row Distance .112 [2.84] and 9-50 pos. assemblies with Row Distance .100 [2.54], please consult AMP.
3. Also available All-Plastic connectors with posts for .049 [1.2] dia. holes. The position of board mounting holes for these connectors is **not equal** to the layout specified on this page, for details see catalog 79-546.

Pc Board Mounting Specifications

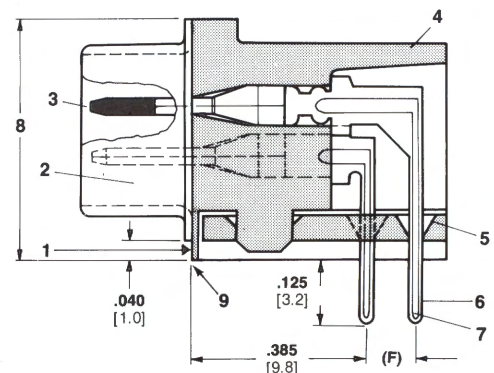


25 and 37 Positions

Recommended Pc Board Hole Size .028 [0.7] Dia. Board Tkn. .063 [1.6] nom.

Cross Section of HD-20 Metal-Shell and HDP-20 All-Plastic Connectors (European Program)

1. Integrated Standoff for proper soldering .040 [1.0]
2. Metal Shell or all-plastic
3. Selective gold plating on contact mating end
4. Integrated post protection
5. Integrated post alignment plate
6. Post size for hole dia. .028 [0.7]
7. Reinforced solderline, tin plated
8. Mounting height .534 [13.6] for 9-37 pos. connectors, .646 [16.4] for 50 pos. connectors
9. Closed Front

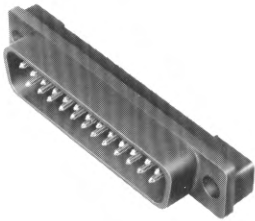


(F) Row Distance .112 [2.84] or .100 [2.54]

HDP-20 All-Plastic Connectors Preloaded with .026 [0.66] Dia. Straight Posted Contacts (for Pc Board Mounting)

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.

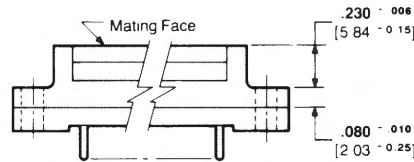
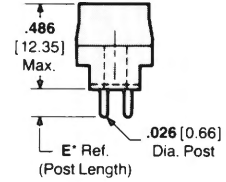
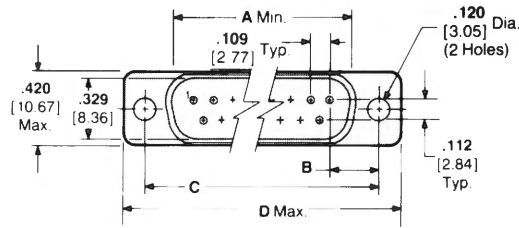
Plug Assemblies



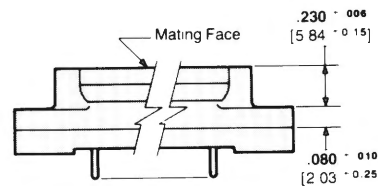
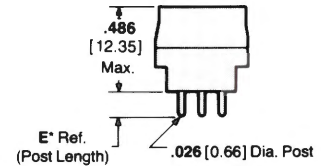
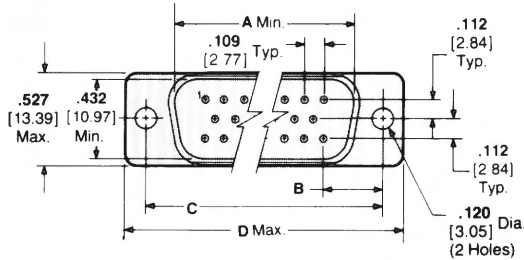
With Integral Standoff

Material and Finish:
Housing—Black Thermoplastic, 94V-0 Rated
Pin Contacts (Posted)—Brass per MIL-C-50 plated as follows:
Gold flash over .000050 [0.00127] nickel on entire contact with additional .000030 [0.00076] gold on mating end for length of .150 [3.81] min.

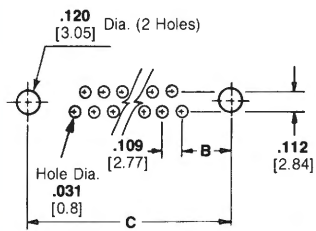
9, 15, 25 and 37 Positions



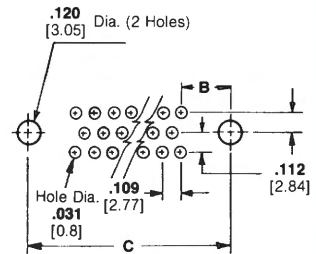
50 Positions



Pc Board Mounting Specifications



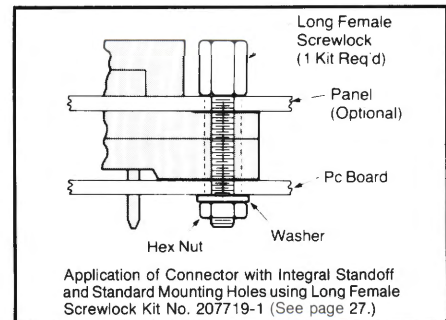
9, 15, 25 and 37 Positions



50 Positions

Recommended Pc Board Hole Size .031 [0.8] Dia. Board Tkn. .063 [1.6] nom.

No. of Contact Pos. (Shell Size)	Dimensions					Part No. Standard Mounting Holes
	A	B	C	D	E*	
9 (1)	.661 16.79	.278 7.06	.984 24.99	1.228 31.19	.125 3.2	208006-2
15 (2)	.989 25.12	.278 7.06	1.312 33.32	1.546 39.27	.125 3.2	208007-2
25 (3)	1.531 38.89	.274 6.96	1.852 47.04	2.095 53.22	.125 3.2	208008-2
37 (4)	2.179 55.35	.272 6.91	2.500 63.5	2.737 69.52	.125 3.2	208009-2
50 (5)	2.076 52.73	.333 8.46	2.406 61.11	2.643 67.13	.125 3.2	208010-2



- Notes:**
- All plug assemblies are preloaded with size 20 DF posted contacts.
 - It is recommended that these connectors be secured with appropriate hardware to a Pc board and/or panel. Long female screwlock kit No. 207719-1 may be purchased separately.
 - For connector assemblies with or without integrated standoff preloaded with contacts of other post lengths and/or post dia., resp. with entire contact gold flash plating, please refer to cat. 79-546.

HDP-20 All-Plastic Connectors Preloaded with .026 [0.66] Dia. Straight Posted Contacts (for Pc Board Mounting)

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.

Receptacle Assemblies

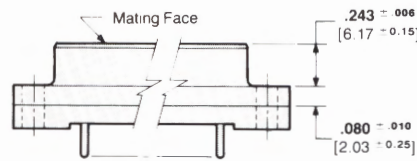
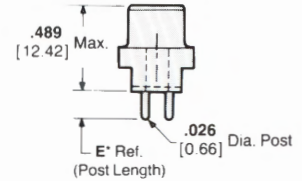
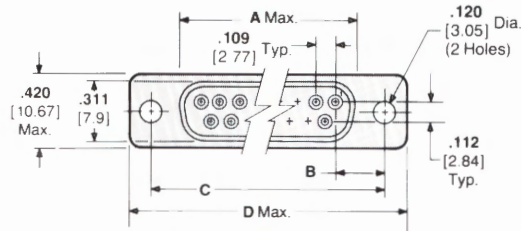


With Integral Standoff

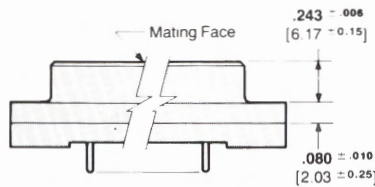
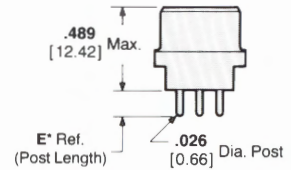
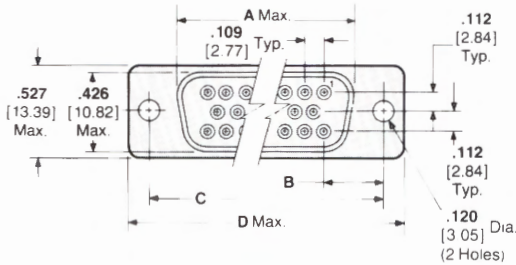
Material and Finish:

Housing—Black Thermoplastic
94V-0 Rated
Pin Contacts (Posted)—Brass per MIL-C-50 plated as follows:
Gold flash over .000050 [0.00127] nickel on entire contact with additional .000030 [0.00076] gold on mating end for length of .150 [3.81]

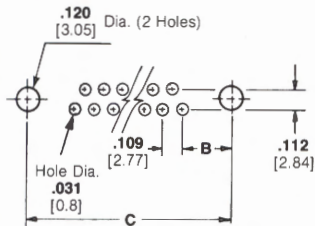
9, 15, 25 and 37 Positions



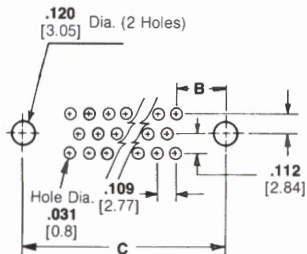
50 Positions



Pc Board Mounting Specifications



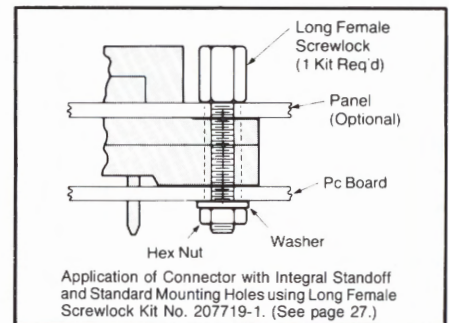
9, 15, 25 and 37 positions



50 Positions

Recommended Pc Board Hole Size .031 [0.8] Dia. Board Tkn. .063 [1.6] nom.

No. of Contact Pos. (Shell Size)	Dimensions					Part No. Standard Mounting Holes
	A	B	C	D	E*	
9 (1)	.648 16.46	.278 7.06	.984 24.99	1.221 30.01	.125 3.2	207826-4
15 (2)	.976 24.8	.278 7.06	1.312 33.32	1.546 39.27	.125 3.2	207827-4
25 (3)	1.514 38.46	.274 6.96	1.852 47.04	2.095 53.22	.125 3.2	207828-4
37 (4)	2.162 54.92	.272 6.91	2.500 63.5	2.742 69.65	.125 3.2	207829-4
50 (5)	2.067 52.5	.333 8.46	2.406 61.11	2.643 67.14	.125 3.2	207830-4



- Notes:**
- All receptacle assemblies are preloaded with size 20 DF posted contacts.
 - It is recommended that these connectors be secured with appropriate hardware to a Pc board and/or panel. Long female screwlock kit No. 207719-1 may be purchased separately.
 - For connector assemblies with or without integrated standoff preloaded with contacts of other post lengths and/or post dia., resp. with entire contact gold flash plating, please refer to cat. 79-546.

HDP-20 All-Plastic Receptacle Assemblies

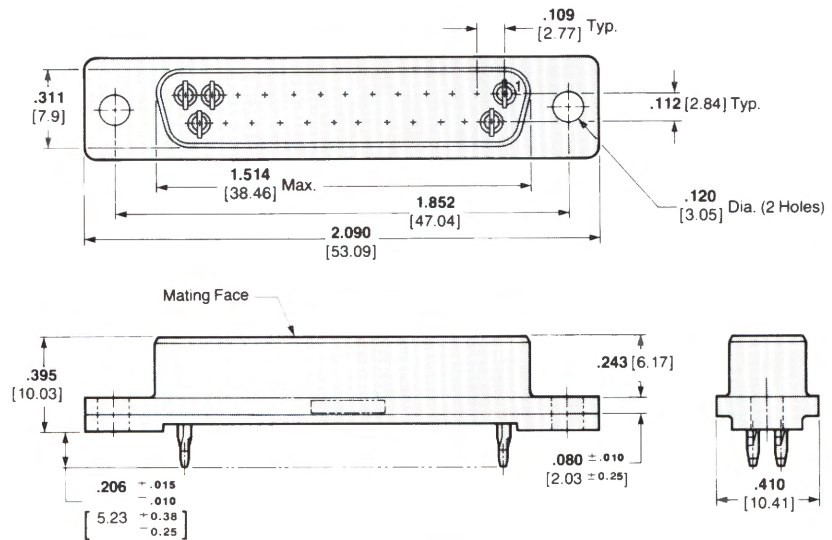
Preloaded with Straight Posted ACTION PIN Contacts

(for Pc Board Mounting)

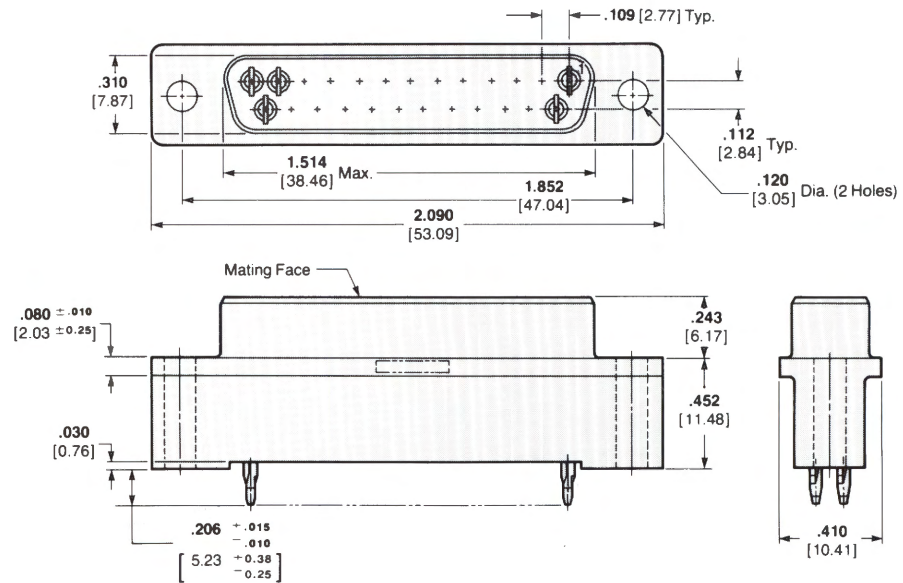
Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.

Material and Finish:

Housing—Black Thermoplastic
94V-0 Rated
ACTION PIN Contacts—Copper Alloy,
plated gold flash over
.000030 [0.00076] nickel
Gold plating per MIL-G-45204 Nickel
plating per QQ-N-290



Low Profile Receptacle Assembly, 25-Position
Part No. 208069-1



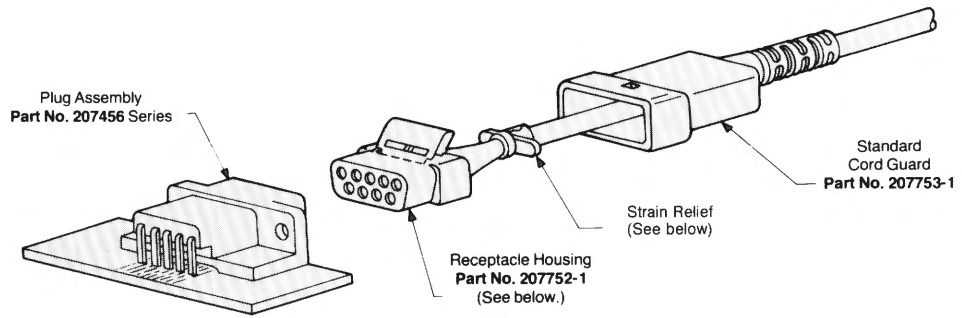
High Profile Receptacle Assembly, 25-Position
Part No. 208089-1

- Notes:**
1. These 25-position receptacle assemblies mate with any appropriately sized AMPLIMITE HD-20 metal-shell or HDP-20 all-plastic plug assembly.
 2. Other sizes of receptacle assemblies preloaded with ACTION PIN contacts can be made available, consult AMP.
 3. Also available receptacle assemblies preloaded with ACTION PIN contacts for .063 [1.6] thick boards. Consult AMP for part numbers and customer drawings.

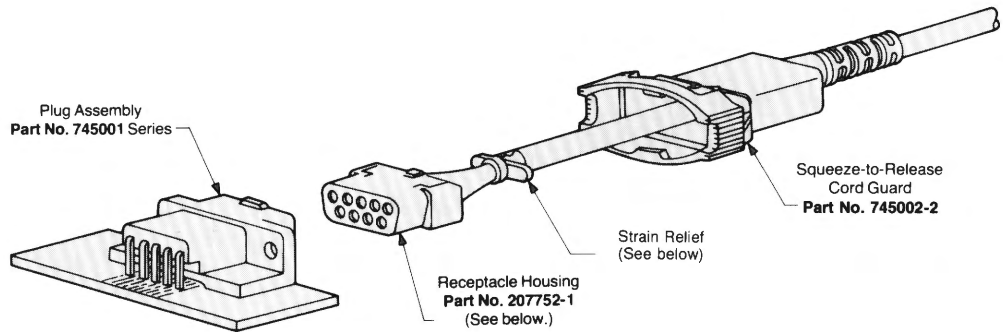
HDJ-20 All-Plastic Jacketed Cable Connectors (for Crimp Snap-In Socket Contacts)

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.

Typical Applications of HDJ-20 All-Plastic Jacketed Cable Connectors



HDJ-20 Jacketed Cable Connector using Standard Cord Guard



HDJ-20 Jacketed Cable Connector using Squeeze-to-Release Cord Guard

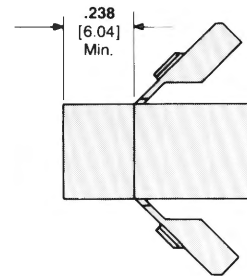
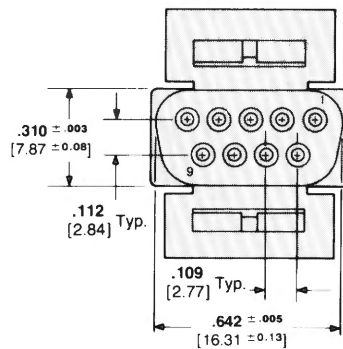
Receptacle Housing (9 Positions)

Material: Black Thermoplastic
Part No. 207752-1

Plug Housing (9 Position)

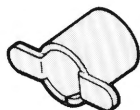
Material: Black Thermoplastic
Part No. 745032-1

(not illustrated)



Drawings and dimensions for receptacle housing Part No. 207752-1

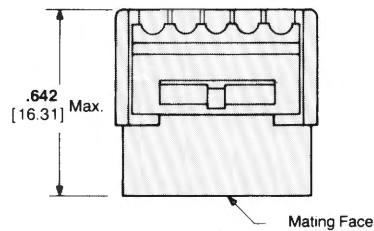
Customer drawing for plug housing Part No. 745032-1 on request



Strain Relief

Material: Steel
Part No. 61831-1 (strip)
Part No. 61884-1 (Loose piece)

Strain Relief can also be achieved by using AMP-TY cable ties.
Basic Part No. 626088
For details consult AMP



Note: This receptacle housing accepts size 20 DF socket contacts (tin plated), **Part No. 1-66505-4** for 28-24 AWG [0.08-0.2 mm²] wire sizes and **Part No. 1-66504-4** for 24-20 AWG [0.2-0.6 mm²] wire sizes. For computer applications, AMP recommends the use of gold plated socket contacts. Refer to page 6.

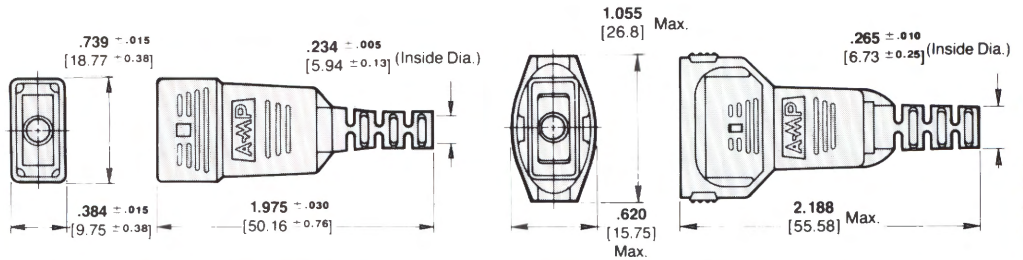
Plug Housing Part No. 745032-1 accepts size 20 DF pin contacts (tin plated), **Part No. 1-66507-4** for 28-24 AWG [0.08-0.2 mm²] wire sizes and **Part No. 1-66506-4** for 24-20 AWG [0.2-0.6 mm²] wire sizes. For recommendation of contacts refer to page 6.

HDJ-20 All-Plastic Jacketed Cable Connectors (for Crimp Snap-In Socket Contacts)

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.

Cord Guards (9 Positions)

Material: Black Thermoplastic



Standard Cord Guard, Part No. 207753-1
(used when mating Receptacle Housing with
Plug Assembly 207456-3 or 207456-4, below)

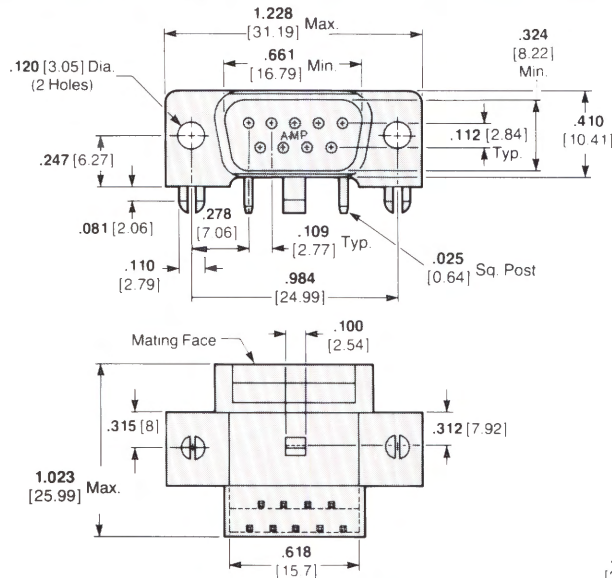
Squeeze-to-Release Cord Guard, Part No. 745002-2
(used when mating Receptacle Housing with
Plug Assembly 745001-2 or 745001-3, below)

HDP-20 All-Plastic Plug Assemblies, Right-Angle Pc Board Mount with Panel Lock (9 Positions)

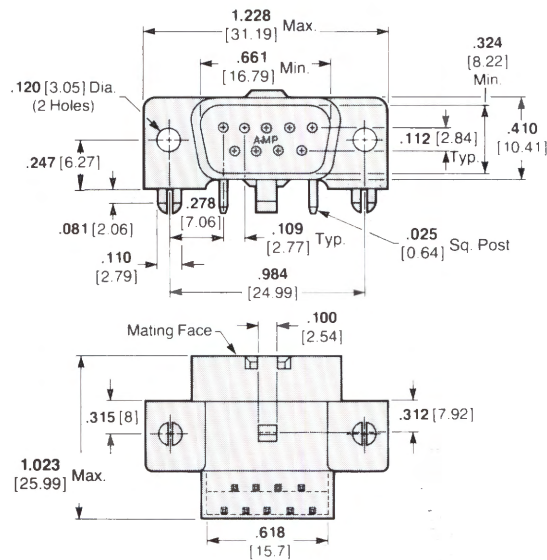
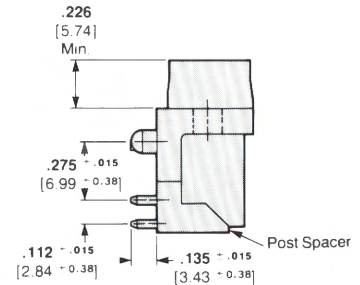
Material and Finish:

Housing—Black Thermoplastic
Post Spacer—Black Thermoplastic
Pin Contacts (Posted)—Brass per
MIL-C-50, plated as follows:
A—Gold flash over .000050 [0.00127]
nickel on entire contact with
additional .000030 [0.00076] gold on
mating end
B—Gold flash over .000030 [0.00076]
nickel
Gold plating per MIL-G-45204;
Nickel plating per QQ-N-290

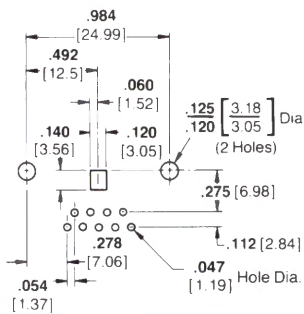
Note: Plug assemblies are preloaded with
size 20 DF posted pin contacts.



**Plug Assembly for Standard Cord Guard,
Part No. 207456-3 (Contact Plating Code A) and Part No. 207456-4 (Contact Plating Code B)**
Part No. 207456-2 (Contact Plating Tin)



**Plug Assembly for Squeeze-to-Release Cord Guard,
Part No. 745001-2 (Contact Plating Code A) and Part No. 745001-3 (Contact Plating Code B)**
Part No. 745001-1 (Contact Plating Tin)



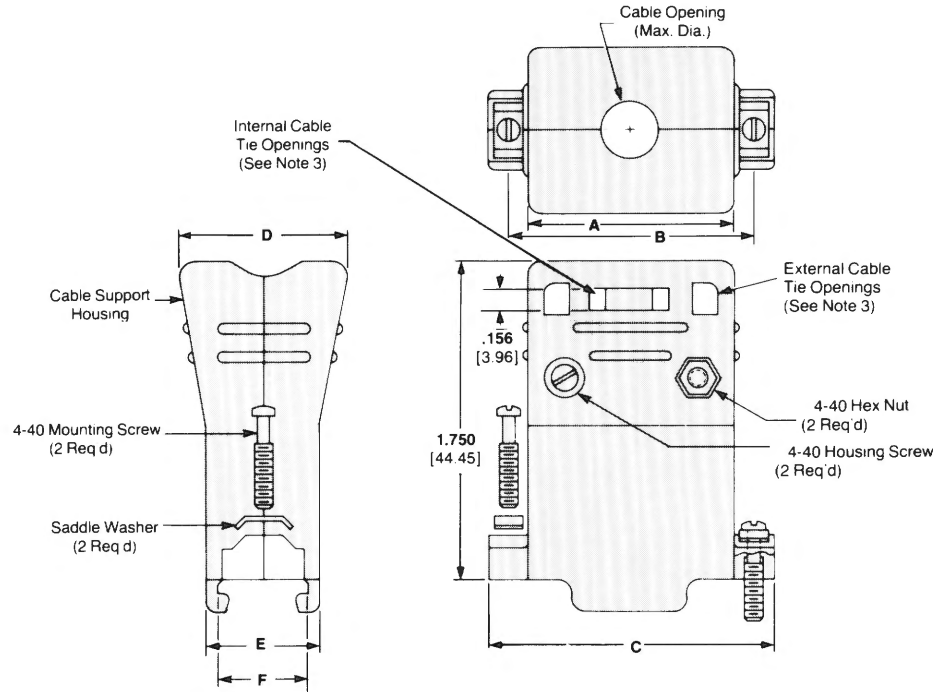
**Recommended Pc Board Hole
Pattern (Punch from Connector
Side Only)**

Accessories

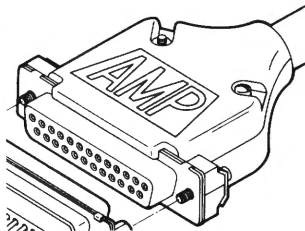
Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.
Chart contains dimensions in inches and millimetres.

Straight/90° Exit Cable Clamp Assemblies (Two Piece)

Material and Finish:
Cable Support Housing—Grey Nylon
Saddle Washers and 4-40 Mounting Screws—Zinc plated Steel
4-40 Housing Screw and Hex Nuts—Passivated Stainless Steel



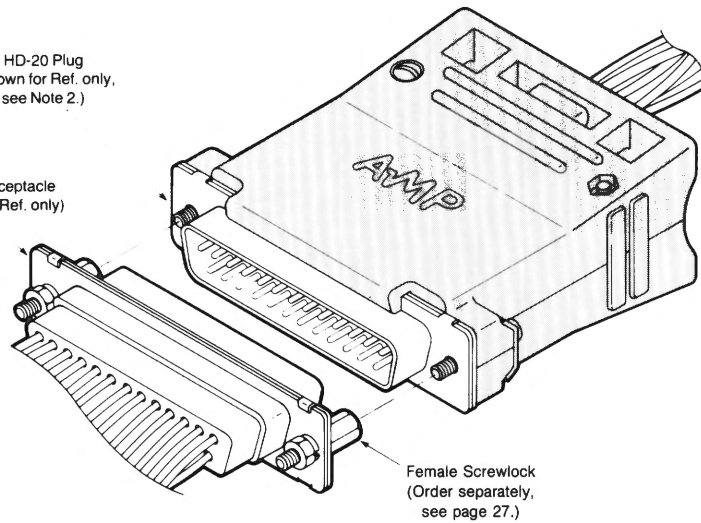
Also available
RFI/EMI Metal Shields
for Jacketed Cable
(Two Piece)



9, 15, 25 and 37 positions.
For details refer to
Cat. 79-547.

HD-20 Plug
(Shown for Ref. only,
see Note 2.)

HD-20 Receptacle
(Shown for Ref. only)



Typical Application of Two-Piece Straight/90° Exit Cable Clamp Assembly with AMPLITE HD-20 Plug and Receptacle

Shell Size (No. of Contact Pos.)	Dimensions						Cable Dia. (Max.)	Assembly Part No. Individual Kit.
	A	B	C	D	E	F		
2 (15)	1.115 28.32	1.312 33.32	1.550 39.37	.826 20.98	.500 12.7	.620 15.75	.350 8.89	206471-1
3 (25)	1.655 42.04	1.852 47.04	2.090 53.09	.826 20.98	.500 12.7	.620 15.75	.335 8.51	206472-1
4 (37)	2.302 58.47	2.500 63.5	2.738 69.55	.826 20.98	.500 12.7	.620 15.75	.675 17.15	745081-1
5 (50)	2.208 56.08	2.406 61.11	2.644 67.16	.938 23.83	.612 15.54	.732 18.59	.775 19.69	745082-1

- Notes:** 1. All parts are packaged unassembled.
2. Any AMPLITE HD-20 metal-shell plug or receptacle can be used with these cable clamp assemblies.
3. Straight or 90° cable exit is achieved by inserting AMP—TY Cable Ties through cable tie openings and clamping the cable to one housing half only.

Accessories

Straight/90° Exit Cable Clamp Assemblies (One Piece)

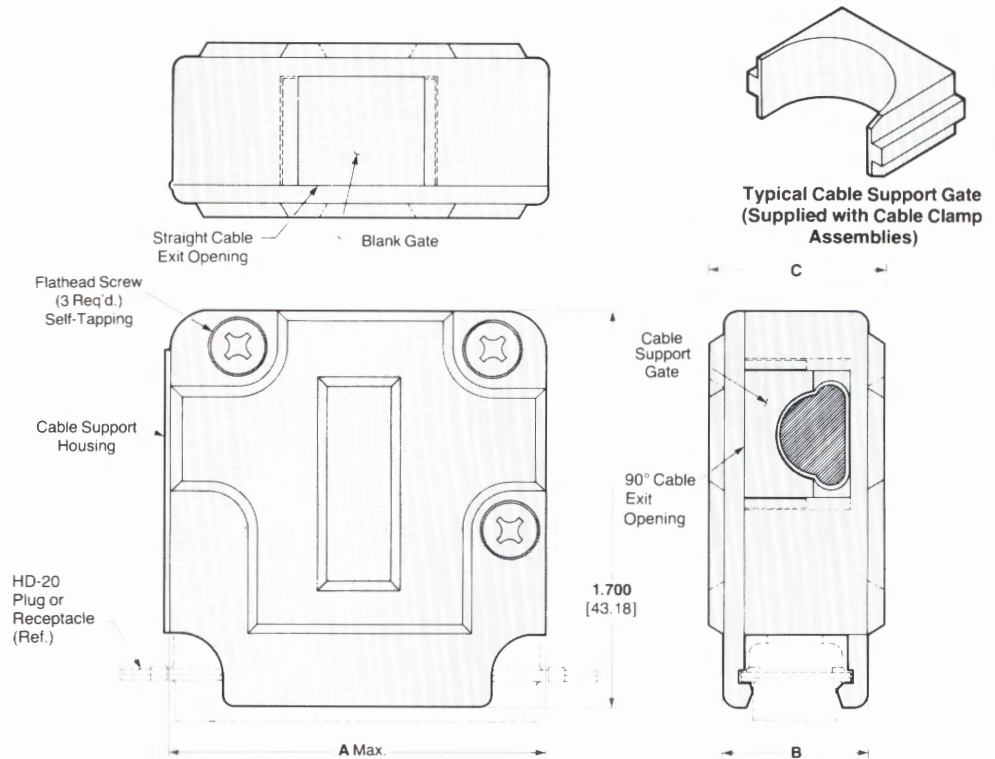
Straight/90° Exit Cable Clamp Assemblies can be used on either a plug or receptacle and will not interfere with commonly used hardware such as Male Screw Retainers, Female Screwlocks or Spring Latches and Latching Blocks. Their hinged construction allows easy assembly to a harness. Also cable openings are provided for straight and 90° cable exit. The specific angle of cable exit is achieved by removing the Blank Gate from the desired opening positioning the cable through the opening and inserting the proper Cable Support Gate for the cable diameter of the connector. Sufficient Cable Support Gates are supplied with each cable clamp assembly to achieve adjustable clamping over a wide range of cable diameters. The Cable Support Gates also are interchangeable for both the straight and 90° cable exit openings.

Material and Finish:
Cable Support Housing and Gates—
Black Polypropylene
Flat Head Screws—Black Zinc plated Steel

Typical Application of Cable Clamp Assembly in combination with Spring Latches and Latching Blocks.

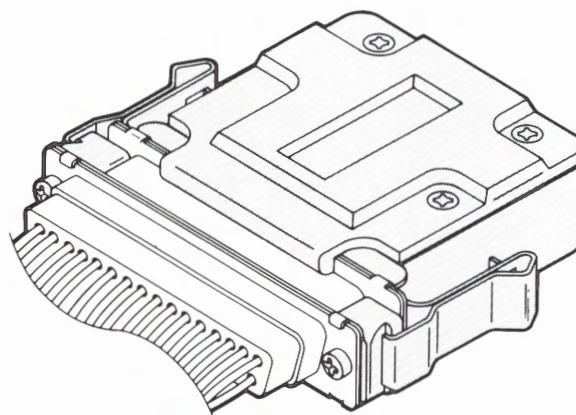
Attention:
One-piece Slide Latch Clip Assemblies, Part No. 164892-1 to 5, (page 29) may not be used in combination with Cable Clamp Assemblies.

Dimensioning:
All dimensions in inches and millimetres. Values in brackets are metric equivalents. Chart contains dimensions in inches over millimetres.



Shell Size (No. of Contact Pos.)	Dimensions			Cable Dia. (Max.)		Assembly Part No. Individual Kit
	A	B	C	Straight Cable Exit	90° Cable Exit	
1 (9)	.755 19.18	.620 15.75	.620 15.75	.250 6.35	.250 6.35	207467-1
2 (15)	1.073 27.25	.620 15.75	.620 15.75	.325 8.26	.325 8.26	207470-1
3 (25)	1.615 41.02	.620 15.75	.750 19.05	.500 12.7	.500 12.7	207345-1
4 (37)	2.263 57.48	.620 15.75	.750 19.05	.675 17.15	.500 12.7	207473-1
5 (50)	2.173 55.19	.730 18.54	.860 21.84	.500 12.7	.500 12.7	207476-1

- Notes:**
1. All parts are packaged unassembled.
 2. Cable diameter is adjustable by changing Cable Support Gates. Use the flat side of Cable Support Gates for discrete wire, and the semi-circle side for jacketed cable.
 3. Any AMPLIMITE HD-20 metal-shell plug or receptacle can be used with these cable clamp assemblies.
 4. For appropriate hardware see pages 27 to 29.



Accessories

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.
Chart contains dimensions in inches over millimetres.

Straight/45° Exit Cable Clamp Assemblies (One Piece)

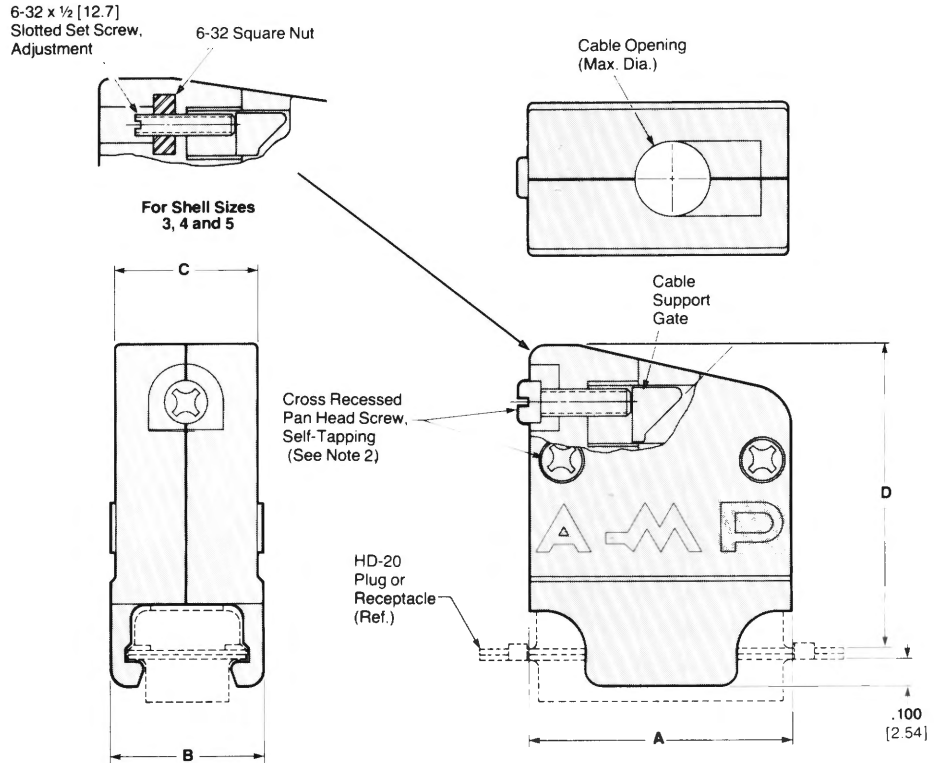
Straight/45° Exit Cable Clamp Assemblies can be used on either a plug or receptacle and will not interfere with commonly used hardware such as Male Screw Retainers, Female Screwlocks or Spring Latches and Latching Blocks. Their hinged construction allows easy assembly to a harness. Also, the straight or 45° angle of cable exit is achieved by merely positioning the Cable Support Gate for the desired angle prior to installing the assembly onto the plug or receptacle.

Material and Finish:

Cable Support Housing and Gate—Black Polypropylene
Pan Head Screws and 6-32 Set Screw—Zinc plated Steel
6-32 Square Nut—Cadmium plated Steel

Attention:

One-piece Slide Latch Clip Assemblies, Part No. 164892-1 to 5, (page 29) may not be used in combination with Cable Clamp Assemblies.



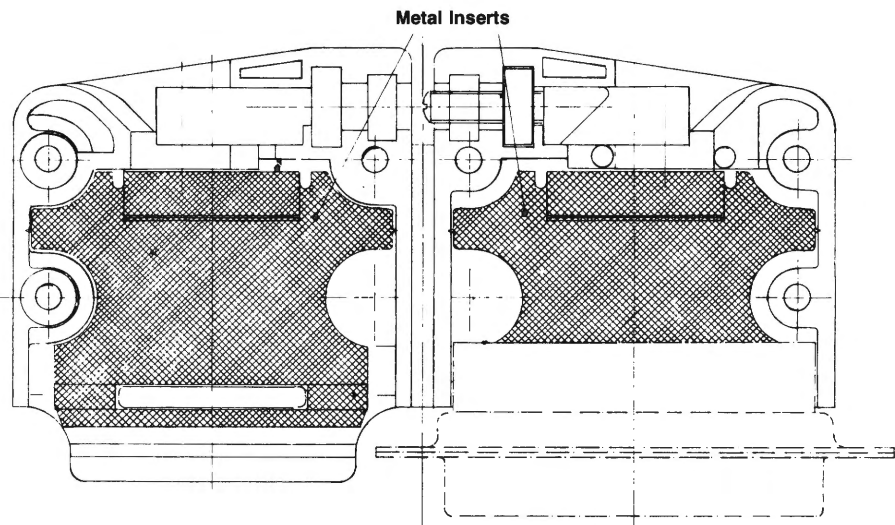
Shell Size (No. of Contact Pos.)	Dimensions				Cable Dia. (Max.)	Standard Assembly	Shielded Assembly*
	A	B	C	D		Part No. Individual Kit	Part No. Individual Kit
1 (9)	.750 19.05	.620 15.75	—	1.625 41.28	.256 6.5	205729-1	826984-1
2 (15)	1.073 27.25	.620 15.75	—	1.625 41.28	.320 8.13	205730-1	—
3 (25)	1.615 41.02	.620 15.75	—	1.625 41.28	.420 10.67	205718-1	826985-1
4 (37)	2.263 57.48	.620 15.75	—	1.625 41.28	.490 12.45	205731-1	—
5 (50)	2.168 55.07	.730 18.54	—	1.625 41.28	.600 15.24	205732-1	—

- Notes:** 1. All parts are packaged unassembled.
2. Quantity of Cross Recessed Pan Head Screws Supplied with cable clamp assembly varies with shell size.
3. Any AMPLIMITE HD-20 metal-shell plug or receptacle can be used with these cable clamp assemblies.
4. For appropriate hardware see pages 27 to 29.

* See drawing below

Shielded Cable Clamp Assemblies (with metal inserts)

The hinged plastic halves of cable clamp assemblies Part No. 826984-1 and Part No. 826985-1 have inserts of tinplated brass. Closing the assembly integral springs of the inserts will make contact on two places between the cable braid and the metal shell of the connector, whereas EMI shielding is achieved by the metal inlays.

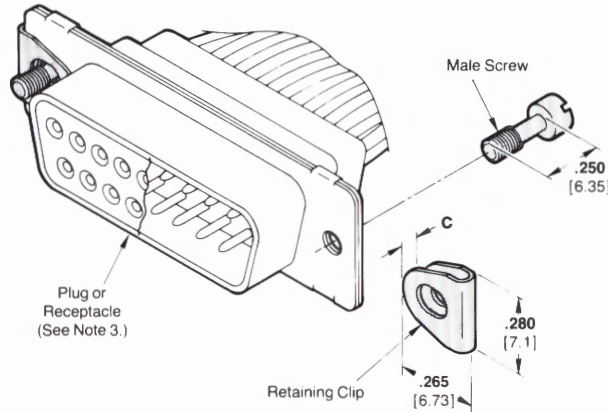


Accessories

Male Screw Retainers

Material and Finish:
Male Screw—Steel; Zinc plated
Retaining Clip—Steel, Coated

Instruction Sheet:
IS-7837

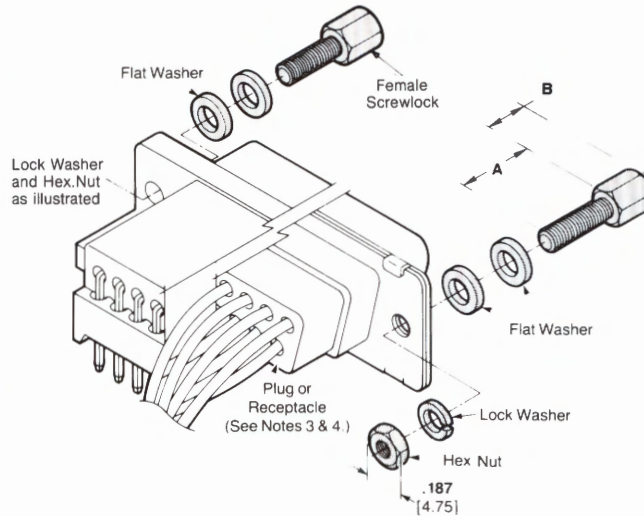


- Notes:**
1. All parts are packaged unassembled.
 2. Each kit is comprised of two Male Screws and two Retaining Clips.
 3. Male Screw Retainers can be used on AMPLIMITE HD-20 metal-shell plug or receptacle. (For details see charts.)
 4. Male Screw Retainers mate with Female Screwlocks (shown below).
 5. Retaining Clips must be assembled onto connector flanges with threaded hole toward wire side of connector.

Female Screwlocks

Material and Finish:
All Parts—Cold Rolled Steel
Zinc plated

Instruction Sheet:
IS-7837



Dimensions		Long Screwlock Kit Part No.	Standard Screwlock Kit Part No.		Thread
A	B		Individual	Bulk Packed*	
.312 7.9	.188 4.8		205817-1	205817-2	UNC 4-40
.280 7.1	.220 5.6		166546-1	166546-2	DIN M3
.560 14.2	.188 4.8	207719-1			UNC 4-40

- Notes:**
1. All parts are packaged unassembled.
 2. Each Female Screwlock kit is comprised of two complete assemblies, as illustrated above.
 3. Standard Female Screwlocks can be used on any standard AMPLIMITE HD-20 metal-shell or HDP-20 all-plastic plug or receptacle.
 4. Long Female Screwlocks can be used on All-Plastic Connectors with integrated standoff and standard mounting holes (see pages 18 and 19)
 5. Female Screwlocks mate with Male Retainers (shown above).

Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.
Chart contains dimensions in inches over millimetres.

Male Screw Retainers (Universal Type) fitting on central clinched and/or edge clinched metal shell connectors. Retaining Clip Dim. C = .030 [0.8] min.

Part Number		Thread
Indiv. Kit*	Bulk Packed**	
166541-1	166541-3	UNC 4-40
166541-2	166541-4	DIN M3

Male Screw Retainer solely fitting on edge clinched metal shell connectors. Retaining Clip Dim. C = .020 [0.5] nom.

Part Number		Thread
Indiv. Kit*	Bulk Packed**	
205980-1	205980-3	UNC 4-40

- * See Note 2.
** Each part is individually bulk packed for kit orders of 1,000 pcs minimum.

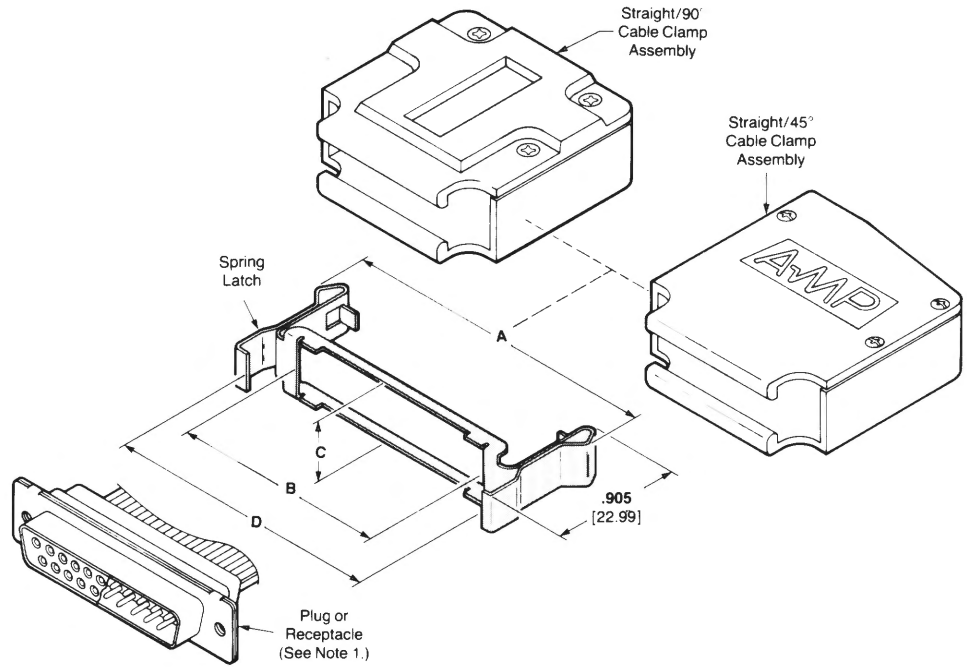
* Each part is individually Bulk packed for kit orders of 1000 pcs. minimum

Accessories

Dimensioning:
All dimensions in inches and millimetres
Values in brackets are metric equivalents
Charts contain dimensions in inches over millimetres.

Spring Latches

Material: Stainless Steel, .015 [0.38] Thick

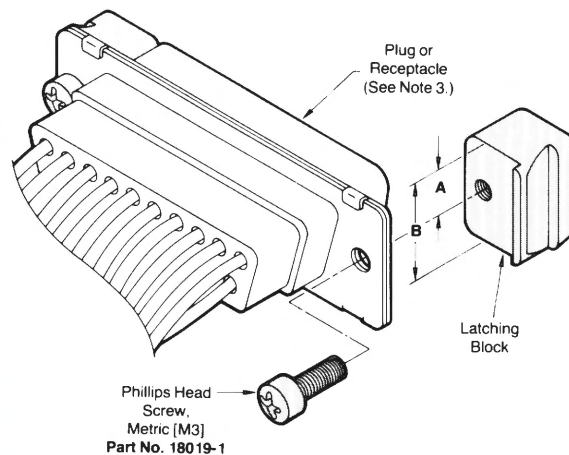


Shell Size (No. of Contact Pos.)	Dimensions				Part No.
	A	B	C	D	
1 (9)	1.475 37.47	.775 19.68	.470 11.94	1.215 30.86	745011-1
2 (15)	1.850 46.99	1.100 27.94	.470 11.94	1.540 39.1	745012-1
3 (25)	2.390 60.71	1.640 41.66	.470 11.94	2.090 53.09	745013-1
4 (37)	2.990 75.95	2.290 58.17	.470 11.94	2.730 69.34	745014-1
5 (50)	2.945 74.8	2.195 55.75	.585 14.86	2.635 66.93	745015-1

- Notes:**
1. Spring Latches can be used on any AMPLIMITE HD-20 metal-shell plug or receptacle with a Straight/45° or Straight/90° Exit Cable Clamp Assembly.
 2. Spring Latches mate with Latching Blocks (shown below).

Latching Blocks

Material and Finish:
Latching Block—Zinc
Phillips Head Screws—Steel; Zinc plated



Dimensions		Latching Block Part No.	Kit Part No.
A	B		
.200 5.08	.400 10.16	208101-1	745007-1
.265 6.73	.530 13.46	208101-5	745007-2

- Notes:**
1. All parts are packaged unassembled.
 2. Each Latching Block kit is comprised of two Latching Blocks and two Phillips Head Metric [M3] Screws, **Part No. 18019-1**.
 3. Latching Blocks can be used on any AMPLIMITE HD-20 metal-shell or HDP-20 all plastic plug or receptacle; **Part No. 745007-1** for shell sizes 1 to 4, and **Part No. 745007-2** for shell size 5.
 4. Latching Blocks mate with Spring Latches (shown above).

Accessories

Dimensioning:
All dimensions in inches and millimetres
Values in brackets are metric equivalents

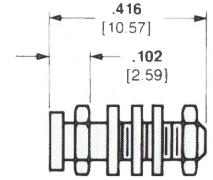
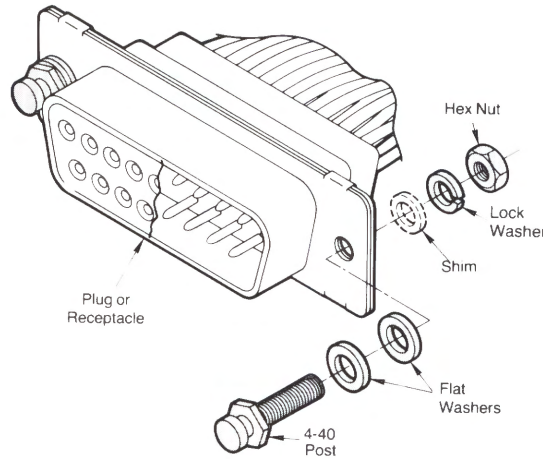
Locking Post Assemblies

Material and Finish:
4-40 Post-Steel: Zinc plated
Washers and Hex Nut—Stainless Steel

Kit Part Nos.
206514-1 (two assemblies per package)
206514-3 (bulk packed)*

*Each part is individually bulk packed for multiple kit orders.

Instruction sheet:
IS 7785



Locking Post Assemblies can be used on any AMPLIMITE HD-20 metal-shell plug or receptacle.

Locking Post Assemblies mate with Slide Latch Clip Assemblies (shown below). For front panel mounting, it is recommended that a shim be used between the connector flange and panel to prevent bowing of the flange.

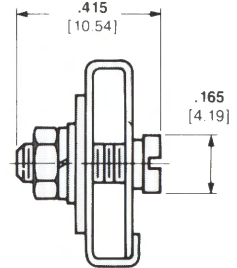
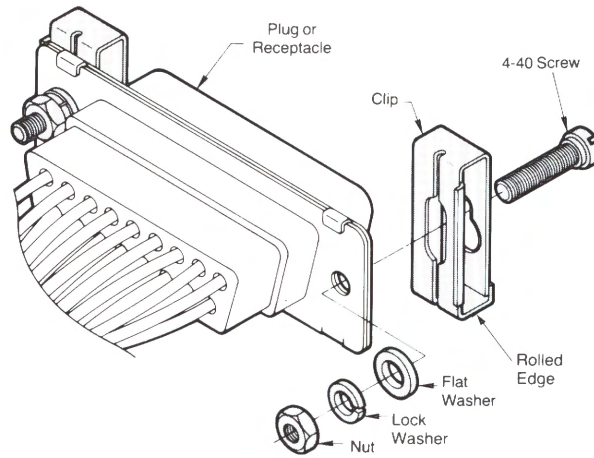
Two-Piece Slide Latch Clip Assemblies

Material and Finish:
4-40 Screw, Washers and Hex Nut—Gold Rolled Steel; Zinc plated
Clip—Stainless Steel

Kit Part Nos.
206942-1 (two assemblies per package)
206942-2 (bulk packed)*

*Each part is individually bulk packed for multiple kit orders.

Instruction sheet:
IS 7785



Slide Latch Clip Assemblies can be used on any AMPLIMITE HD-20 metal-shell plug or receptacle.

Slide Latch Clip Assemblies mate with Locking Post Assemblies (shown above).

Plugs and receptacles shown for reference only

One-Piece Slide Latch Clip Assemblies and Locking Post Assembly

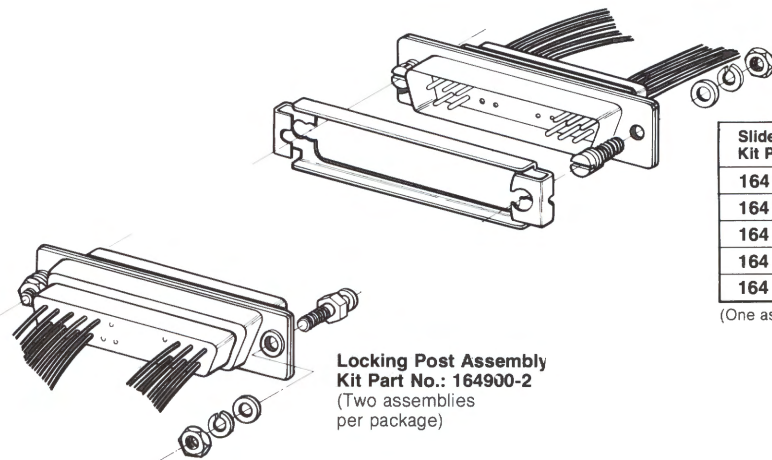
Material and Finish
Clip-Stainless Steel
Post-Steel, Zinc plated

All parts packaged unassembled

These assemblies can be used on any AMPLIMITE HD-20 metal-shell plug or receptacle.

One-Piece Slide Latch Clip Assemblies may NOT be used in combination with Cable Clamp Assemblies (pages 24 to 26)

Instruction Sheet:
I-042-087



Slide Latch Clip Kit Part No.	No. of Pos.
164 892-1	9
164 892-2	15
164 892-3	25
164 892-4	37
164 892-5	50

(One assembly per package)

Locking Post Assembly
Kit Part No.: 164900-2
(Two assemblies per package)

Accessories

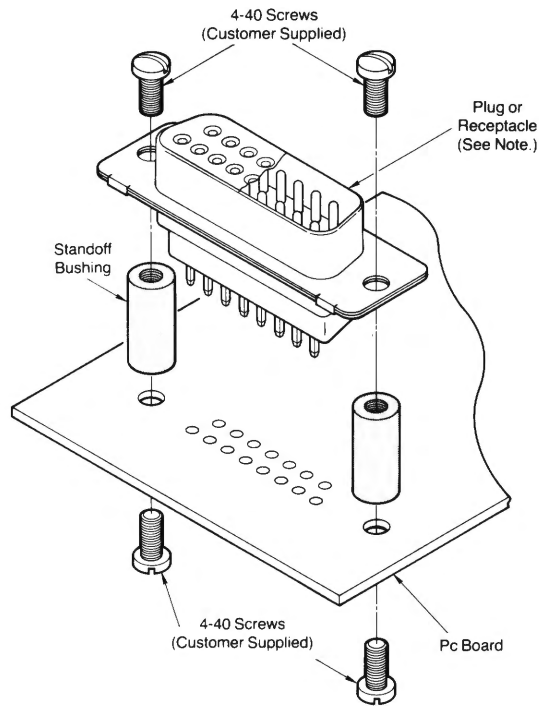
Standoff Bushings (for HD-20 Metal-Shell Connectors with Straight Posted Contacts, Pc Board Mounted)

Material and Finish:
Aluminum; Zinc plated per QQ-Z-325,
Type II, Class 3 (Clear)

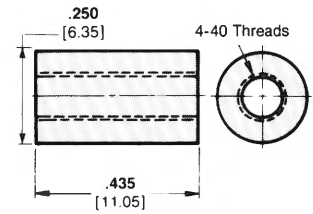
Kit Part Nos.
205933-2 (one assembly per package)
205933-3 (two assemblies per package)
205933-4 (bulk packed)*
*Parts are individually bulk packed for
multiple kit orders.

4-40 Screws may also be
purchased separately

Part No. 205979-1
(one piece)



Dimensioning:
All dimensions in inches and millimetres.
Values in brackets are metric equivalents.

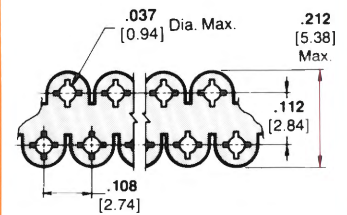
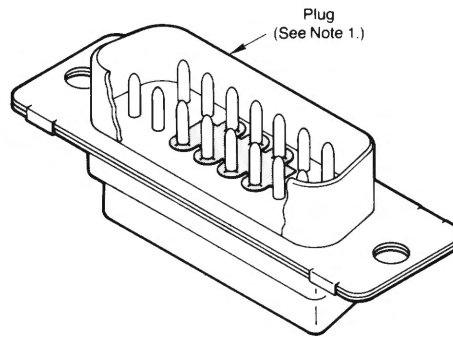


Note: Standoff Bushings are used only for
pc board mounted HD-20 metal-shell
plugs or receptacles with straight
posted contacts.

Commoning Strip (for Size 20 Pin Contacts)

Material and Finish:
Brass per MIL-C-50, .004 [0.1] Thick; Tin
plated per MIL-T-10727

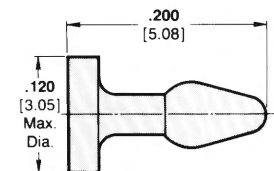
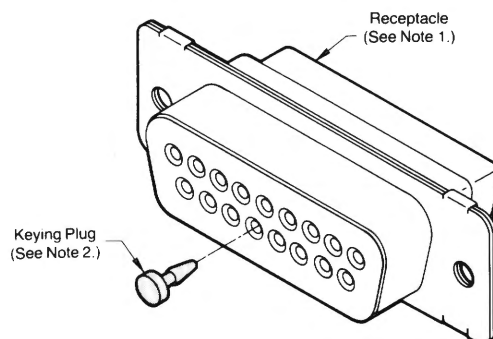
Part No. 206918-1 (continuous strip)



- Notes:**
1. Commoning Strips can be used on any AMPLIMITE plug with pin contacts.
 2. Use Punching Tool to remove undesired pin commoning locations on Commoning Strip. Use mating receptacle to seat strip over pins in plug.
 3. For higher volume production, AMP has available punching dies which can be used in an arbor press.

Keying Plug (for Size 20 Socket Contacts)

Material: Natural Nylon
Part No. 206509-1

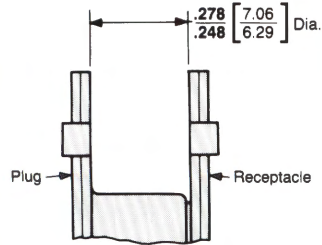


- Notes:**
1. Keying Plugs are used only in socket cavities of AMPLIMITE receptacles.
 2. Keying Plug is installed tape-end first into front of receptacle.

Plug/Receptacle Mating and Mounting Specifications

Dimensioning:
 All dimensions in inches and millimetres.
 Values in brackets are metric equivalents.
 Chart contains dimensions in inches over millimetres.

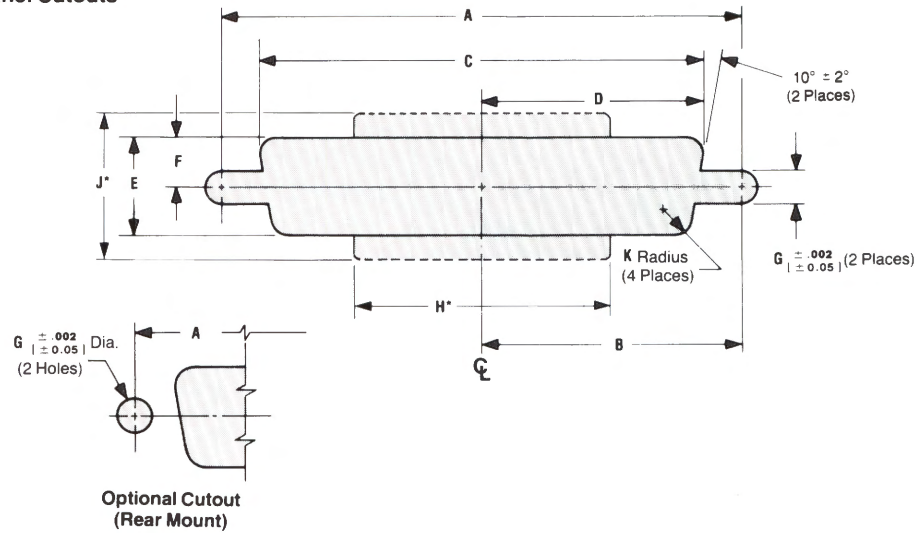
Plug/Receptacle Mating



The .278/.248 [7.06/6.29] dimension is required to assure full mating of connector halves. This dimension must be taken into consideration when determining the method of mounting, panel thickness, etc.

This dimension is valid for any mating combination of central clinched and/or edge clinched metal shell connectors respectively all-plastic connectors.

Panel Cutouts



Shell Size (No. of Contact Pos.)	Mounting Method		Dimensions									
	Front/Rear Panel	With/Without Floating Bushing	A	B	C	D	E	F	G	H*	J*	K
1 (9 Pos.)	Front	With			.906 23.01	.453 11.51	.545 13.84	.273 6.93	.088 2.24	.382 9.7	.662 16.81	.083 2.11
		Without	.984 24.99	.492 12.5	.874 22.2	.437 11.1	.513 13.03	.257 6.53	.120 3.05	.350 8.89	.630 16	
	Rear	With			.838 21.29	.419 10.64	.481 12.22	.241 6.12	.088 2.24	.332 8.43	.662 16.81	.132 3.35
		Without			.806 20.47	.403 10.24	.449 11.4	.225 5.72	.120 3.05	.300 7.62	.630 16	
2 (15 Pos.)	Front	With			1.234 31.34	.617 15.67	.545 13.84	.273 6.93	.088 2.24	.735 18.67	.662 16.81	.083 2.11
		Without	1.312 33.32	.656 16.66	1.202 30.53	.601 15.27	.513 13.03	.257 6.53	.120 3.05	.673 17.09	.630 16	
	Rear	With			1.166 29.62	.583 14.81	.481 12.22	.241 6.12	.088 2.24	.655 16.64	.662 16.81	.132 3.35
		Without			1.134 28.8	.567 14.4	.449 11.4	.225 5.72	.120 3.05	.623 15.82	.630 16	
3 (25 Pos.)	Front	With			1.775 45.09	.888 22.56	.545 13.84	.273 6.93	.088 2.24	1.247 31.67	.662 16.81	.083 2.11
		Without	1.852 47.04	.926 23.52	1.743 44.27	.872 22.15	.513 13.03	.257 6.53	.120 3.05	1.215 30.86	.630 16	
	Rear	With			1.706 43.33	.853 21.67	.481 12.22	.241 6.12	.088 2.24	1.197 30.4	.662 16.81	.132 3.35
		Without			1.674 42.52	.837 21.26	.449 11.4	.225 5.72	.120 3.05	1.165 29.59	.630 16	
4 (37 Pos.)	Front	With			2.423 61.77	1.212 30.78	.545 13.84	.273 6.93	.088 2.24	1.895 48.13	.662 16.81	.083 2.11
		Without	2.500 63.5	1.250 31.75	2.391 60.73	1.196 30.38	.513 13.03	.257 6.53	.120 3.05	1.863 47.32	.630 16	
	Rear	With			2.354 59.79	1.177 29.9	.481 12.22	.241 6.12	.088 2.24	1.845 46.86	.662 16.81	.132 3.35
		Without			2.326 59.08	1.163 29.54	.449 11.4	.225 5.72	.120 3.05	1.813 46.05	.630 16	
5 (50 Pos.)	Front	With			2.329 59.16	1.165 29.59	.655 16.64	.328 8.33	.088 2.24	1.800 45.72	.772 19.61	.083 2.11
		Without	2.406 61.11	1.203 30.56	2.297 58.34	1.149 29.18	.623 15.82	.312 7.92	.120 3.05	1.768 44.91	.740 18.8	
	Rear	With			2.250 57.15	1.125 28.58	.587 14.91	.294 7.47	.088 2.24	1.740 44.2	.772 19.61	.132 3.35
		Without			2.218 56.34	1.109 28.17	.555 14.1	.278 7.06	.120 3.05	1.718 43.64	.740 18.8	

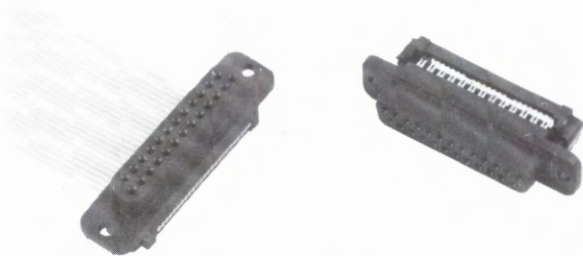
*Panel cutout configuration with these dimensions provides clearance for mounting connectors with cable clamp assemblies.

Note:
 Connectors with Floating Bushings are not listed in this catalogue. For Part Number details please consult cat. 79-546 or 79-547.

Special Assemblies



9, 15, 25 and 37 Positions
Quiet-Line Right Angle and Solder Cup AMPLIMITE
Connectors and Male/Female Adapters (see catalogue 78-487)



HDF-20 All-Plastic Low Profile Receptacle Assemblies for
Round Conductor Flat Ribbon Cable (see data sheet 80-591)



AMPLIMITE Interface Adapter
Part No. 745143-1 25/37 Positions
RS 232C (DTE) to RS-449 (DCE)

Part No. 745150-1 37/25 Position
RS 449 (DTE) to RS-232C (DCE)

(see data sheet 80-580)



In design HDE-20 ALL-Plastic plug and receptacle connectors,
9, 15, 25 and 37 positions, for mass termination of discrete
wires (insulation displacement type).

(see data sheet 80-581)



25 Positions Interface Bus Cable Assembly as per IEC 66.22/
IEC 48B Specification. Plug and receptacle in back-to-back
configuration connected to cable conductors, two-piece hinge
type shield and cable clamp at each end optional provided
with DIN M3 or 4-40 UNC thread jackscrews.
Available in cable lengths 0.6 to 4.0 metres.
For details please consult AMP.

Numerical Index

Part Numbers of
European Manufacture
printed in **bold** type

Part Number	Page	Part Number	Page	Part Number	Page	Part Number	Page
18019-1	28	166051-1	6	206471-1	24	745278-1	10
61831-1	22	5-166051-1	7	206472-1	24	745279-1	11
61884-1	22	166052-1	6	206509-1	30	745280-1	10
		5-166052-1	7	206514-1 & 3	29	745281-1	11
66504-3 & 9	6	166053-1	6	206918-1	30	745282-1	10
1-66504-4 & 6	6	5-166053-1	7	206942-1 & 2	29	745283-1	11
5-66504-3	7	166054-1	6				
66505-3 & 9	6	5-166054-1	7	207345-1	25	826734-1, 2, 3	13
1-66505-4 & 6	6	166255-1	16	207456-2, 3, 4	23	826744-1, 2, 3	12
5-66505-3	7	166257-1	16	207467-1	25	826816-1, 2, 3	12
66506-3 & 9	6	166258-1	16	207470-1	25	826984-1	26
1-66506-4 & 6	6	166259-1	16	207473-1	25	826985-1	26
5-66506-3	7	166262-1	17	207476-1	25	827017-1, 2, 3	13
66507-3 & 9	6	166263-1	17	207719-1	27	827053-1, 2, 3	13
1-66507-4 & 6	6	166291-1	6	207752-1	22	827066-1, 2, 3	13
5-66507-3	7	166292-1	6	207753-1	23	827189-1, 2, 3	12
		166293-1	6	207826-4	19	827190-1, 2, 3	13
66569-3	6	166294-1	6	207827-4	19	827191-1, 2, 3	12
66570-3	6			207828-4	19	827192-1, 2, 3	12
66682-2 & 4	6	166541-1 to 4	27	207829-4	19		
66683-2 & 4	6	166546-1 & 2	27	207830-4	19		
		166573-1	16				
90302-1	6,7	166746-1	14	208006-2	18		
90374-1	6,7	166747-1	14	208007-2	18		
91067-2 & 3	7	166748-1	14	208008-2	18		
91085-2	10	166749-1	14	208009-2	18		
91219-3	20	166750-1	14	208010-2	18		
		166751-1	15	208069-1	21		
126195-3 to 5	7	166752-1	15	208089-1	21		
		166753-1	15	208101-1 & 5	28		
164492-1	14	166754-1	15				
164493-1	14	166755-1	15	626088	22		
164494-1	14	169424-1	7	655044-1	6,7		
164495-1	14						
164496-1	14	205203-1	9	726363-1	7		
		205204-1	8	726364-1	7		
164526-1	8	205205-1	9	731380-1	10		
164527-1	8	205206-1	8				
164528-1	8	205207-1	9	745001-1, 2, 3	23		
164529-1	8	205208-1	8	745002-2	23		
164530-1	8	205209-1	9	745007-1 & 2	28		
164531-1	9	205210-1	8	745011-1	28		
164532-1	9	205211-1	9	745012-1	28		
164533-1	9	205212-1	8	745013-1	28		
164534-1	9			745014-1	28		
164535-1	9	205718-1	26	745015-1	28		
		205729-1	26	745026-1	11		
164800-1	15	205730-1	26	745032-1	22		
164801-1	15	205731-1	26	745081-1	24		
164802-1	15	205732-1	26	745082-1	24		
164803-1	15	205817-1 & 2	27	745143-1	32		
164804-1	15	205933-2, 3, 4	30	745150-1	32		
164892-1 to 5	29	205979-1	30	745276-1	10		
164900-2	29	205980-1 & 3	27	745277-1	11		

AMP companies in:

ARGENTINA

AMP S.A. Argentina
4 de Febrero, 76
1651 Villa San Andres, Buenos Aires
Phone: (01) 752-46-12, 752-09-44
and 755-27-06
Cable: Ampar San Martin
Pia de Buenosaires Telex: 26107

AUSTRALIA

Australian AMP Pty. Limited
155 Briens Road
Northmead, (Sydney) N.S.W. 2152
Postbox 194
Baulkham Hills, N.S.W. 2153
Phone: (02) 630-7377
Cable: AMPAUST Sydney
Telex: AA 22195

AUSTRIA

AMP Österreich Handelsges. m.b.H.
Jacquingasse 16-18
Postbox 18
A 1031 WIEN
Phone: (0222) 782634-38
Cable: AMPOE
Telex: 131246

BELGIUM

AMP Belgium
Branch of AMP-Holland B.V.
Bedrijfspark Keiberg
Excelsiorlaan 5
B-1930 Zaventem
Phone: (02) 721.20.20
Telex: 02 22658

BRAZIL

AMP do Brasil Ltda.
Rua Ado Benatti 53
CEP 05037 Sao Paulo
Postbox 676
CEP 01000 Sao Paulo - SP
Phone: (011) 864-3311
Telex: 1123507 AMPB BR

CANADA

AMP of Canada Ltd.
20 Esna Park Drive
Markham Ontario L3R 1E1
Phone: (416) 4956222
Telex: 216986815

DENMARK

AMP Danmark
Gunnar Clausens Vej 32
Postbox 2211
DK-8260 Viby J/Aarhus
Phone: (06) 295055
Cable: AMPDEN DK
Telex: 68600

FINLAND

AMP Finland OY
Valimontie 1 A
Postbox 96
SF-00381 Helsinki 38
Phone: 0/556533
Cable: AMPFI
Telex: 12-2496

FRANCE

AMP de France
29, Chaussée Jules-César
BP 39
95301 Cergy-Pontoise Cedex
Phone: (3) 0309220
Telex: 698 205 AMPFR

GERMANY

AMP Deutschland G.m.b.H.
Ampèrestrasse 7-11
D-6070 Langen, FFM.
Phone: (06103) 7091
Cable: AMPLA Langen
Telex: 415043

GREAT BRITAIN

AMP of Great Britain Limited
Terminal House
Stanmore, Middlesex HA7 4RS
Phone: (01) 954-2356
Cable: AMPLO Stanmore
Telex: 929547

HOLLAND

AMP-Holland B.V.
Rietveldenweg 32
Postbox 288
5201 AG 's-Hertogenbosch
Phone: (073) 200911
Cable: AMPNETH
Telex: 50150

HONG KONG

AMP Products Pacific Ltd.
Unit D, 8th Floor
Leroy Industrial Building
15 Cheung Shun Street
Cheung Sha Wan
Kowloon, Hong Kong
Phone: (03) 744-0210, -0218, -0219
Telex: 37455 AMPHK

IRELAND

AMP Ireland Limited
65 Broomhill Road
Tallaght Industrial Estate
Tallaght Co. Dublin

ITALY

AMP Italia S.p.A.
Via Fratelli Cervi 15
10093-Collegno (Torino)
Phone: (011) 785-656
Cable: AMPITA Torino
Telex: 210250

JAPAN

AMP (Japan), Ltd.
Engyo Kaikan Building
No. 15-14, 7-Chome Roppongi
Minato-Ku, Tokyo
Phone: (03) 404-1717
Cable: AMPNIHON Tokyo
Telex: J 22692

MEXICO

AMP de Mexico, S.A.
Apdo. Postal 581
Tlalivepantla
Edo. de Mexico
Phone: (905) 557-97-77
Cable: AMPTERM Mexico City
Telex: 1773126

NEW ZEALAND

AMP New Zealand Limited
Postbox 12764, Penrose Auckland 6
Lake's Industrial Court 10 Olive Road
Penrose
Phone: (09) 592010
Telex: 60034

NORWAY

AMP Norge A/S
Olav Ingstads Vei 16
Postbox 96
N-1351 RUD
Phone: (02) 135080
Cable: AMPN
Telex: 19827

SINGAPORE

AMP Singapore Pte. Ltd.
Unit No. 1D-3D
Block 7, Ayer Rajah Industrial Estate
51, Ayer Rajah Road
Singapore 5,
Phone: 776/1635, 1636
Telex: RS 26651 AMPORE

SPAIN

AMP Espanola S.A.
Muntaner 249
Planta 5A
Barcelona 21
Phone: (03) 200.84.66
Cable: AMPES Barcelona
Telex: 53034

SWEDEN

AMP Svenska AB
Datavägen 5, Jakobsberg
Postbox 512
S-175 26 Järfälla
Phone: (0758) 104 00
Cable: AMPSCA
Telex: 10985

SWITZERLAND

AMP'A.G.
Grossmatte 26a
CH-6014 Littau-Luzern
Phone: (041) 55 05 00
Telex: 72248

TAIWAN

AMP Taiwan B.V.
Chung Shan-Building
2nd Floor,
2 Ming Tsu E. Road
Taipei
Phone: 594-3135, 594-3136
Telex: 28454 AMPBV

U.S.A.

AMP Incorporated
499, Eisenhower Blvd.
Harrisburg
Pennsylvania 17105
Phone: 717-564-0100
TWX: 510-657-4110

AMP