

## **HD-20 Straight Posted Connectors**



#### **Product Selection Guide**

Connector Density	Туре	Post Style	Style and Shell Finish	No. of Contact Positions	Mating Hardware	Contact Plating (Mating Area/ Solder Tails)	Post Length	Profile
HD-20			Full Metal-Shell With and Without Grounding	9 15 25	<b>.120</b> [3.05] Dia. Holes	Duplex (.000030 [0.00076] Gold/Tin)	<b>.125</b> [3.18]	High
			Indents, Tin Plated (pgs. 78 and 79)	37 50	Clinch Nuts	Duplex (Gold Flash/ Tin)	<b>.188</b> [4.78]	3
			Front Metal-Shell	9	<b>.120</b> [.318] Dia. Holes	Duplex (.000030 [0.00076]	<b>.125</b> [3.18]	
	Plugs and Receptacles	Straight	With and Without Grounding Indents (pgs. 80 and 81)	15 25 37	Threaded Inserts Retention Inserts		<b>.170</b> [4.32]	Medium
	neceptacles				Female Screwlocks	Tin)	<b>.250</b> [6.35]	
				9 15	<b>.120</b> [3.05] Dia. Holes	Duplex (.000030 [0.00076] Gold/Tin)	<b>.125</b> [3.18]	
			All-Plastic (pgs. 82-85)	25 37 50	Threaded Inserts	Duplex (Gold Flash/	<b>.170</b> [4.32]	Medium
				30	Female Screwlocks	Tin)	<b>.250</b> [6.35]	
ACTION PIN	Plugs		Front Metal-Shell	9 15	. <b>120</b> [3.05] Dia. Holes	Duplex (.00030 [0.00076] Gold/Tin)	.228	
	and Receptacles		Tin Plated (pgs. 87 and 88)	25 37	Threaded Inserts	Duplex	[5.79]	Medium
					Female Screwlocks	(Gold/Tin)		
				9 15	. <b>120</b> [3.05] Dia. Holes	Duplex (.000030 [0.00076] Gold Flash/Tin)		
	Receptacles		All-Plastic (pg. 89)	25 37 50	Threaded Inserts	Duplex (.000010 [0.000254]	<b>.228</b> [5.79]	Low/High
					Female Screwlocks	Gold Flash/Tin)		
HD-22	Divers		Front Metal-Shell	15	<b>.120</b> [3.05] Dia. Holes	Duplex (.000030 [0.00076] Gold/Tin)		
	Plugs and Receptacles	Straight	With Straight Grounding Indents, Nickel Plated (pg. 86)	26 44 62 78	Threaded Inserts	Duplex (.000015 [0.00038] Gold/Tin)	<b>.125</b> [3.18]	Medium
					Female Screwlocks	Duplex (Gold Flash/Tin)		



## **HD-20 Straight Posted Connectors** (Continued)

#### **Product Facts**

- Flame retardant thermoplastic housing material, UL 94V-0 rated
- HD-20 straight posted connectors are available in 9, 15, 25, 37 and 50 positions (Shell Sizes 1 thru 5)
- HD-20 straight posted connectors in Full Metal-Shell, Front Metal-Shell and All-Plastic versions
- HD-20 connectors with ACTION PIN contacts are available in low, medium and high profiles with integral standoffs
- ACTION PIN contact connectors for both .093 [2.36] and .062 [1.58] min. thick pc board application

- Various straight posted connectors offer a choice of through-holes, 4-40 threaded inserts or 4-40 fixed female screwlocks
- Choice of contact platings
- Integral boardlock feature secures connector to pc board prior to soldering
- Connectors are intermateable with any size 20 or 22 subminiature D connectors dimensionally complying with MIL-C-24308
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- CSA Certified, File No. LR 16455 HD-20 Products



#### **Section Contents**

Straight Posted Connectors	
HD-20 Full Metal-Shell	
Straight Posted Connectors	78, 79
HD-20 Front Metal-Shell	
Straight Posted Connectors	80, 81
HD-20 All-Plastic Straight Posted Connectors	82-85
HD-22 Subminiature D Connectors	86
HD-20 Front Metal-Shell Straight Posted	
Connectors with ACTION PIN Contacts	87, 88
HD-20 All-Plastic Straight Posted Connectors	
with ACTION PIN Contacts	89

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## **HD-20 Full Metal-Shell Straight Posted Connectors**

## Plug



Without Grounding Indents



With Grounding Indents

#### **Material and Finish:**

Shell—Steel, tin plated Insert—94V-0 rated thermoplastic,

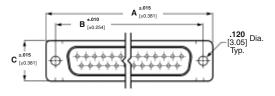
Pin Contacts (Posted)—Brass, plated as follows:

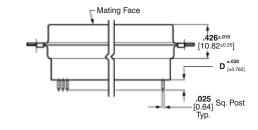
**A**—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

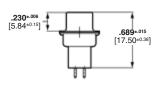
**B**—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

#### **Technical Documents:**

**Product Specification**—108-40025







See customer drawings for pcb layouts.

	No. of			_		Contact	Plug Part Numbers			
Shell Size	Contact Positions	Α			C D*		Without Grounding Indents	With Grounding Indents	With Clinch Nuts	
					.125	Α	_	5745410-1	5749014-1	
4	9	1.213	.984	.494	3.18	В	5745182-2	_	_	
'	9	30.81	24.99	12.55	<b>.188</b> 4.78	Α	_	5745410-7	_	
2	15	<b>1.541</b> 39.14	<b>1.312</b> 33.33	<b>.494</b> 12.55	<b>.125</b> 3.18	Α	_	5745411-1	_	
					.125	Α	_	5745412-1	5745959-1	
3	25	2.088	1.852	.494	3.18	В	5745186-2	_	_	
3	25	53.04	47.04	12.55	<b>.188</b> 4.78	Α	_	5745412-7	_	
4	37	<b>2.729</b> 69.32	<b>2.500</b> 63.50	<b>.494</b> 12.55	<b>.125</b> 3.18	А	_	5745413-1	_	
5	50	2.635	2.406	.605	<b>.125</b> 3.18	А	_	5745414-1	_	
5		66.93 61.11		15.37	<b>.188</b> 4.78	А	_	5745414-7	_	

<sup>\*.125 [3.18]</sup> post length is for recommended pc board thickness of .062-.093 [1.58-2.36] max.; .188 [4.78] post length is for recommended pc board thickness of .125 [3.18].

- Notes: 1. All plugs are preloaded with size 20 DF posted pin contacts.
  - 2. Special loading of contacts can be arranged upon request.
  - 3. Longer post lengths available, consult TE.



## HD-20 Full Metal-Shell Straight Posted Connectors (Continued)

#### Receptacle





With Clinch Nuts

#### **Material and Finish:**

**Shell**—Steel, tin plated **Insert**—94V-0 rated thermoplastic, black

Clinch Nuts-Steel, zinc plated

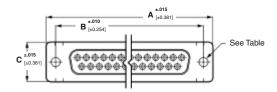
#### Socket Contacts (Posted)-

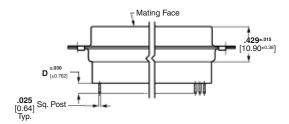
Phosphor bronze, plated as follows: **A**—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

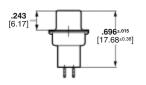
**B**—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

#### **Technical Documents:**

Product Specification—108-40025







See customer drawings for pcb layouts.

						Contact	Receptacle F	art Numbers
Shell	No. of Contact		Dimen			Finish	With .120 [3.05]	With
Size	Positions	Α	В	С	D*	(Plating Code)	Mounting Holes	Clinch Nuts
					.125	Α	5745183-1	5747190-2
1	9	1.213	.984	.494	3.18	В	5745183-2	5747190-1
'	9	30.81	24.99	24.99 12.55		Α	5745183-7	5747190-4
					4.78	В	_	_
					.125	Α	5745185-1	5745820-1
2	15	1.541	1.312	.494	3.18	В	_	5745820-2
2	15	39.14	33.33	12.55	<b>.188</b> 4.78	Α	5745185-7	_
					.125	Α	5745187-1	5745886-1
3	25	2.088	1.852	.494	3.18	В	_	5745886-2
3	25	53.04	47.04	12.55	.188	Α	5745187-7	_
					4.78	В	5745187-8	_
4	37	2.729	2.500	.494	<b>.125</b> 3.18	Α	5745189-1	5747315-1
	37	69.32	63.50	12.55	<b>.188</b> 4.78	Α	5745189-7	_
5	50	2.635	2.406	.605	<b>.125</b> 3.18	А	5745191-1	5747302-1
	50			15.37	<b>.188</b> 4.78	Α	5745191-7	_

<sup>\*.125 [3.18]</sup> post length is for recommended pc board thickness of .062-.093 [1.58-2.36] max.; .188 [4.78] post length is for recommended pc board thickness of .093-.125 [2.36-3.18].

Notes: 1. All receptacles are preloaded with size 20 DF posted socket contacts.

2. Special loading of contacts can be arranged upon request.

3. Longer post lengths available, consult TE.



## **HD-20 Front Metal-Shell Straight Posted Connectors**

#### Plug



With Grounding Indents



With Threaded Insert



With Fixed Female Screwlock



With Retention

#### **Material and Finish:**

Shell—Steel, tin plated

Housing—94V-0 rated thermoplastic,

Threaded Inserts—Brass, unplated

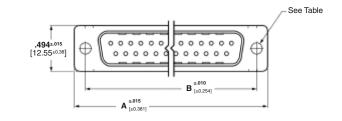
Female Screwlocks—Zinc

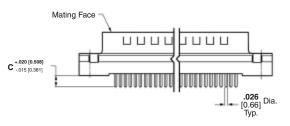
Pin Contacts (Posted)—Brass,

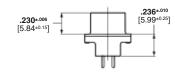
plated as follows:

**A**—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

**B**—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated







See customer drawings for pcb layouts.

#### **Technical Documents:**

Product Specification—108-40025 Application Specification-114-40023

					Contact			Plug Part Numbers																										
Shell	No. of		Dimensions		Finish	With		With		With																								
Size	Contact Positions	Α	В	C*	(Plating Code)	Standard Mounting Holes	With 4-40 Threaded Inserts (f	Retention 4-40 Inserts for .062 [1.58] PCB)	With Fixed Female Screwlocks	Retention 4-40 Screwlocks (for .062 [1.58] PCB)																								
				.125	Α	5747871-2	5747871-8	2-5748003-0	1-5747871-4	_																								
4	9	1.213	.984	3.18	В	_	_	_	1-5747871-3	_																								
ı	1 9	30.81	24.99	<b>.170</b> 4.32	Α	5747871-4	_	_	1-5747871-6	_																								
0	45	1.541	1.312	<b>.125</b> 3.18	Α	_	5747872-8	_	_	5748026-1																								
2	15	39.14		<b>.170</b> 4.32	А	5747872-4	_	_	1-5747872-6	_																								
				.125	Α	5745968-2	5745968-8	2-5747704-0	1-5745968-4	5748027-1																								
0	05	2.090		1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	1.852	3.18	В	_	5745968-7	_	1-5745968-3	_
3	3 25	53.09		.170	Α	5745968-4	_	_	1-5745968-6	_																								
				4.32	В	_	_	_	1-5745968-5	_																								
4	37	<b>2.732</b> 69.39	<b>2.500</b> 63.50	<b>.125</b> 3.18	Α	5747375-2	5747375-8	_	_	5787686-1																								

<sup>\*.125 [3.18]</sup> post length is recommended for pc board thickness of .062-.093 [1.58-2.36] max.; .170 [4.32] post length is recommended for pc board thickness of .093-.125 [2.36-3.18]; .250 [6.35] post length is for special applications

Notes: 1. All plugs are preloaded with size 20 DF posted pin contacts.

- Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.
   PC board hole size is .121<sup>±.002</sup> [3.07<sup>±0.0508</sup>] for all retention inserts and screwlocks.

Note: All part numbers are RoHS compliant.

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## **HD-20 Front Metal-Shell Straight Posted Connectors** (Continued)

#### Receptacle



With Standard **Mounting Holes** 



With Threaded Insert



With Fixed Female Screwlock



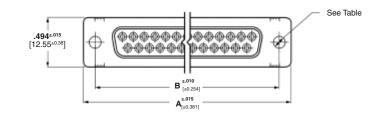
With Retention

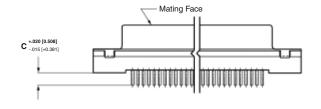
#### **Material and Finish:**

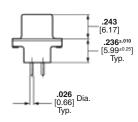
Shell—Steel, tin plated

**Housing**—94V-0 rated thermoplastic,

Threaded Inserts—Brass, unplated Female Screwlocks—Zinc







See customer drawings for pcb layouts.

#### Socket Contacts (Posted)-

Phosphor bronze, plated as follows:

**A**—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

**B**—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

#### **Technical Documents:**

**Product Specification**—108-40025 Application Specification— 114-40023

					0		Re	eceptacle Part Numb	ers	
Shell Size	No. of Contact Positions	A	Dimensions B	C*	Contact Finish (Plating Code)	With Standard Mounting Holes	With 4-40 Threaded Inserts (	With Retention 4-40 Inserts (for .062 [1.58] PCB)	With Fixed Female Screwlocks	With Retention 4-40 Screwlocks (for .062 [1.58] PCB)
				.125	А	5747150-2	5747150-8	2-5747706-0	1-5747150-4	5750678-1
4	0	1.216	.984	3.18	В	_	5747150-7	_	1-5747150-3	_
ı	1 9 30.8		24.99	.170	Α	5747150-4	_	_	1-5747150-6	_
				4.32	В	_	5747150-9	_	_	_
		<b>1.541</b> 39.14		.125	Α	5747299-2	5747299-8	2-5747707-0	1-5747299-4	5787683-1
0	45		1.312	3.18	В	_	5747299-7	_	_	_
2	15		33.33	<b>.170</b> 4.32	А	5747299-4	_	_	1-5747299-6	_
				.125	А	5745967-2	5745967-8	2-5747708-0	1-5745967-4	5748612-1
3	25	2.090	1.852	3.18	В	_	5745967-7	1-5745967-0	_	_
3	25	53.09	47.04	.170	А	5745967-4	1-5745967-0	_	1-5745967-6	_
				4.32	В	_	_	_	1-5745967-5	_
				.125	Α	5747301-2	5747301-8	2-5747709-0	1-5747301-4	5787685-1
4	37	2.732	2.500	3.18	В	_	5747301-7	_	_	_
4		69.39	63.50	<b>.170</b> 4.32	Α	_	_	_	1-5747301-6	_

<sup>\*.125 [3.18]</sup> post length is recommended for pc board thickness of .062-.093 [1.58-2.36] max.; .170 [4.32] post length is recommended for pc board thickness of .093-.125 [2.36-3.18]; .250 [6.35] post length is for special applications

Notes: 1. All receptacles are preloaded with size 20 DF posted socket contacts.

- 2. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.
- 3. Pc board hole size is .121±.002 [3.07±0.0508] for all retention inserts and screwlocks.



## **HD-20 All-Plastic Straight Posted Connectors**

#### Plug



With Standard Mounting Hole



With Threaded Insert



With Fixed Female Screwlock

#### **Material and Finish:**

**Housing**—94V-0 rated thermoplastic, black

Threaded Inserts—Brass, unplated Female Screwlocks—Brass, nickel plated

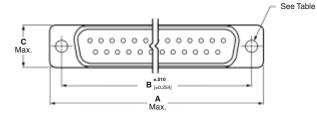
**Pin Contacts (Posted)**—Brass, plated as follows:

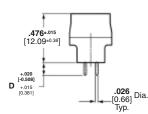
A—.00030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

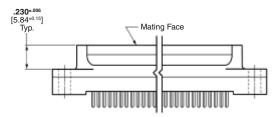
**B**—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

## **Technical Documents:**

Product Specification—108-40025

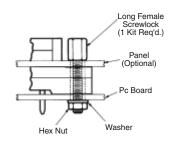


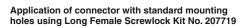


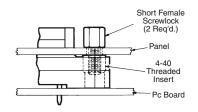


See customer drawings for pcb layouts.

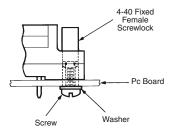
#### **Typical Applications**







Application of connector with 4-40 Threaded Inserts using Short Female Screwlocks included in Kit No. 207952



Application of connector with 4-40 Fixed Female Screwlocks. (See table on next page.)

**Note:** Hardware parts in illustrations above are not included with the connectors listed in the table on page 83. They are to be supplied by the Customer or, where applicable, purchased separately from TE using the part nos. specified

Note: All part numbers are RoHS compliant.

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## **HD-20 All-Plastic Straight Posted Connectors** (Continued)

## Plug (Continued)

						Cantact	PI	ug Part Numb	ers
Shell	No. of Contact		Dimen	sions		Contact Finish	With .120 [3.05]	With	With Fixed
Size	Positions	Α	В	С	D*	(Plating Code)	Mounting Holes	Threaded Inserts	Female Screwlocks
					.125	Α	5208006-2	5745051-2	5745071-2
1	9	1.228	.984	.420	3.18	В	5208006-1	5745051-1	5745071-1
'	9	32.72	24.99	10.67	<b>.170</b> 4.32	Α	_	_	5745071-4
					.125	Α	5208007-2	5745052-2	5745072-2
2 15	1.546	1.312	.420	3.18	В	_	5745052-1	_	
2	15	39.27	33.33	10.67	<b>.170</b> 4.32	Α	_	_	5745072-4
					.125	Α	5208008-2	5745053-2	5745073-2
3	25	2.095	1.852	.420	3.18	В	5208008-1	_	5745073-1
3	25	53.21	47.04	10.67	<b>.170</b> 4.32	В	_	_	5745073-3
					.125	Α	_	_	5745074-2
4	37	2.737	2.500	.420	3.18	В	5208009-1	_	5745074-1
4	37	69.52	63.50	10.67	.170	Α	_	5745054-4	5745074-4
				4.32	В	5208009-3	_	_	
5	50	<b>2.643</b> 67.13	<b>2.406</b> 61.11	<b>.527</b> 13.39	<b>.125</b> 3.18	Α	5208010-2	_	_

<sup>\*.125 [3.18]</sup> post length is recommended for pc board thickness of .062-.093 [1.58-2.36] max.; .170 [4.32] post length is recommended for pc board thickness of .093-.125 [2.36-3.18]; .250 [6.35] post length is for special applications.

Notes: 1. All plugs are preloaded with size 20 DF posted pin contacts.

<sup>2.</sup> It is recommended that these connectors be secured with appropriate hardware to a pc board and/or panel.

<sup>3.</sup> Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.



## HD-20 All-Plastic Straight Posted Connectors (Continued)

#### Receptacle



With Standard Mounting Hole



With Threaded Insert



With Fixed Female Screwlock

#### **Material and Finish:**

Housing—94V-0 rated thermoplastic,

Threaded Inserts—Brass, unplated Female Screwlocks—Brass, nickel plated

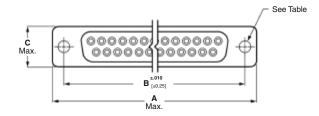
#### Socket Contacts (Posted)-

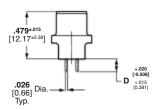
Phosphor bronze, plated as follows:

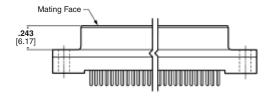
- **A**—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated
- **B**—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

## **Technical Documents:**

Product Specification—108-40025

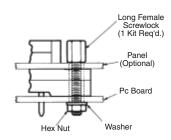




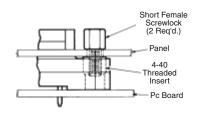


See customer drawings for pcb layouts.

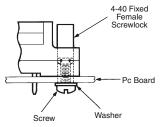
#### **Typical Applications**



Application of connector with standard mounting holes using Long Female Screwlock Kit No. 207719



Application of connector with 4-40 Threaded Inserts using Short Female Screwlocks included in Kit No. 207952



Application of connector with 4-40 Fixed Female Screwlocks. (See table on next page.)

Note: Hardware parts in illustrations above are not included with the connectors listed in the table on page 85. They are to be supplied by the Customer or, where applicable, purchased separately from TE using the part nos.

Note: All part numbers are RoHS compliant.

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## **HD-20 All-Plastic Straight Posted Connectors** (Continued)

#### Receptacle

(Continued)

						Contact	Rece	ptacle Part Nu	ımbers
Shell Size	No. of Contact Positions	Α	Dimen B	sions C	D*	Finish (Plating Code)	With .120 [3.05] Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks
					.125	А	5207826-4	5207841-4	5745076-4
	_	1.228	.984	.420	3.18	В	5207826-3	5207841-3	5745076-3
1	9	32.72	24.99	10.67	<b>.170</b> 4.32	Α	_	_	5745076-6
					.125	Α	5207827-4	5745057-4	5745077-4
0		1.546	<b>1.312</b> 33.33	<b>.420</b> 10.67	3.18	В	5207827-3	5745057-3	5745077-3
2	15	39.27			<b>.170</b> 4.32	Α	_	_	5745077-6
					.125	Α	5207828-4	5745058-4	5745078-4
0	25	2.095	1.852	.420	3.18	В	5207828-3	5745058-3	5745078-3
3	25	53.21	47.04	10.67	.170	Α	_	_	5745078-6
					4.32	В	_	_	5745078-5
4	37	2.737	2.500	.420	<b>.125</b> 3.18	А	5207829-4	5745059-4	5745079-4
4	3/	69.52	63.50	10.67	<b>.170</b> 4.32	Α	_	_	5745079-6
5	<b>E</b> 0	2.643	2.643 2.406	.527	<b>.125</b> 3.18	Α	_	_	5745080-4
3		67.13	61.11	13.39	<b>.170</b> 4.32	Α	_	_	5745080-6

<sup>\*.125 [3.18]</sup> post length is recommended for pc board thickness of .062-.093 [1.58-2.36] max.; .170 [4.32] post length is recommended for pc board thickness of .093-.125 [2.36-3.18]; .250 [6.35] post length is for special applications.

Notes: 1. All receptacles are preloaded with size 20 DF posted socket contacts.

<sup>2.</sup> It is recommended that these connectors be secured with appropriate hardware to a pc board and/or panel.

<sup>3.</sup> Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.



## **HD-22 Straight Subminiature D Connectors**

#### **Material and Finish:**

**Housing**—94V-0 rated thermoplastic, black

▲ VESA Std. 15-position Receptacle Housing Material—Thermoplastic 94V-0 blue per VESA Std.

Shell—Steel, nickel plated

Contacts

Pins—Brass

Sockets—Phosphor bronze

Contact Plating—

Gold flash, .000010 [0.00025] or .000030 [0.00076] on mating end, tin on solder tails with overall nickel underplate

Boardlocks—Brass, tin plated

Female Screwlocks—Brass, nickel plated

Threaded Inserts—Brass, tin plated

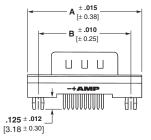
#### **Technical Documents:**

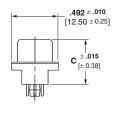
**Product Specification**—108-1092 **Application Specification**— 114-13199

See customer drawings for printed circuit board layouts.

- Recognized under the Component Program of Underwriters Laboratories, Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

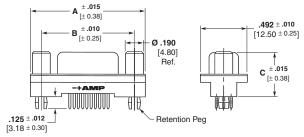






**Vertical Plug** 

No. of	D	imensio	ns	Mounting	РСВ	1	Part Numbers			
Contact Positions	A	В	С	Hardware	Mounting Style	Gold Flash	15µ" Gold	30µ" Gold		
15	<b>1.212</b> 30.80	<b>.984</b> 25.00	<b>.476</b> 12.10	4-40 inserts	retention pegs	5750489-4	5750489-3	5750489-1		
15	<b>1.212</b> 30.80	<b>.984</b> 25.00	<b>.476</b> 12.10	4-40 inserts	_	5749798-4	5749798-3	5749798-1		
78	<b>2.640</b> 67.00			4-40 inserts	_	5749019-6	5749019-5	5749019-1		



Vertical Receptacle

No. of	D	imensio	ns	Mounting	РСВ	F	Part Numbers	
Contact Positions	A	В	С	Hardware	Mounting Style	Gold Flash	15μ" Gold	30μ" Gold
	<b>1.212</b> 30.80	<b>.984</b> 25.00	<b>.465</b> 11.80	4-40 inserts	_	_	5749374-7	5749374-1
15	<b>1.212</b> 30.80	<b>.984</b> 25.00	<b>.465</b> 11.80	4-40 screw locks	_	5786356-4	5786356-3	5786356-1
15 ·	<b>1.212</b> 30.80	<b>.984</b> 25.00	<b>.465</b> 11.80	4-40 inserts	retention pegs	_	_	5749374-3
	<b>1.212</b> 30.80	<b>.984</b> 25.00	<b>.465</b> 11.80	4-40 screw locks	retention pegs	_	5786382-3	5786382-1
26	<b>1.543</b> 39.20	<b>1.310</b> 33.30	<b>.465</b> 11.80	4-40 inserts	_	5749030-4	5749030-3	5749030-1
20	<b>1.543</b> 39.20	<b>1.310</b> 33.30	<b>.465</b> 11.80	4-40 screw locks	retention pegs	5788623-4	5788623-3	_
62	<b>2.732</b> 69.40	<b>2.500</b> 63.50	<b>.465</b> 11.80	4-40 inserts	_	3-5747786-4	_	5747786-6
78	<b>2.638</b> 67.00	<b>2.400</b> 61.00	<b>.476</b> 12.10	4-40 inserts	_	1-5748831-0	5748831-9	5748831-1

Note: All part numbers are RoHS compliant.

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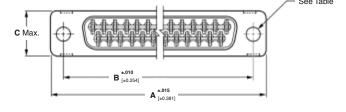


# HD-20 Front Metal-Shell Straight Posted Connectors With ACTION PIN Contacts

### Receptacle



With Standard Mounting Holes







With Threaded Insert



With Fixed Female Screwlock

## .243 [6.17 .080-.010 [2.03-025]

See customer drawings for pcb layouts.

#### **Material and Finish:**

Front Shell—Steel, tin plated
Housing—94V-0 rated thermoplastic,
black

Threaded Inserts—Brass, unplated Female Screwlocks—Zinc

**ACTION PIN Contacts**—Copper alloy, duplex plated as follows:

A—.000030 [0.00076] gold on mating end, tin on ACTION PIN post surface, with entire contact .000050 [0.00127] (min.) nickel underplated

B—Gold flash on mating end, tin on ACTION PIN post surface, with entire contact .000050 [0.00127] (min.) nickel underplated

For .062 [1.57] min. Thick Pc Boards

	N				Contact	Rece	umbers		
Shell		D	imension	IS	Finish	With	With	With Fixed	Seating Tool
Size	Positions	Α	В	С	(Plating Code)	.120 [3.05] Mounting Holes	Threaded Inserts	Female Screwlocks	Part No.
1	9	<b>1.213</b> 30.81	<b>.984</b> 24.99	<b>.509</b> 12.93	Α	_	_	_	91164-2
2	15	<b>1.541</b> 39.14	<b>1.312</b> 33.33	<b>.509</b> 12.93	Α	_	_	_	91165-2
3	25	<b>2.088</b> 53.04	<b>1.852</b> 47.04	<b>.509</b> 12.93	В	_	_	5748688-1	91168-2
5	50	<b>2.635</b> 66.93	<b>2.406</b> 61.11	<b>.620</b> 15.75	Α	_	5748485-2	_	91167-2
	1 2 3	Size         Contact Positions           1         9           2         15           3         25	Shell Size         Contact Positions         A           1         9         1.213 30.81           2         15         1.541 39.14           3         25         2.088 53.04           5         50         2.635	Shell Size         Contact Positions         A         B           1         9         1.213 30.81 24.99           2         15         1.541 33.33 33.33           3         25         2.088 1.852 53.04 47.04 47.04 47.04           5         50         2.635 2.406	Shell Size         Contact Positions         A         B         C           1         9         1.213         .984         .509           30.81         24.99         12.93           2         15         1.541         1.312         .509           39.14         33.33         12.93           3         25         2.088         1.852         .509           55.0.04         47.04         12.93           5         50.0635         2.406         .620	Shell Size         Contact Positions         A         B         C         Innish (Plating Code)           1         9         1.213 3.84 24.99 12.93 2.93         A           2         15         1.541 1.312 3.33 12.93 3.12.93         A           3         25         2.088 1.852 5.99 53.04 47.04 12.93         B           5         50         2.635 2.406 6.620         620 620	Shell Size         No. of Contact Positions         Dimensions         Contact Positions         Dimensions         Contact Positions         With Including Code         With Including Code         With Including Pinions         With Including Pinions	Shell Size         No. of Contact Positions         Dimensions         Compositions         Dimensions         Compositions         With (Plating Code)         With (Plating Code)         With (Plating Holes)         With (Plating Holes)         With (Plating Code)         With (Plating Code)         With (Plating Code)         With (Plating Holes)         With (Plating Code)         With (Plating Code)         With (Plating Code)         With (Plating Holes)         With (Plating Code)         With (Plating Code)<	No. 01   Contact Positions

#### **Technical Documents:**

**Product Specification**—108-40014 **Application Specification**— 114-40026

#### For .093 [2.36] min. Thick Pc Boards

	No. of				Contact	Recep	tacle Part N	umbers	
Shell	No. of Contact	Dimensions			Finish	With	With	With Fixed	Seating Tool
Size	Positions	Α	В	С	(Plating Code)	.120 [3.05] Mounting Holes	Threaded Inserts	Female Screwlocks	Part No.
1	9	<b>1.213</b> 30.81	<b>.984</b> 24.99	<b>.509</b> 12.93	Α	5747089-2	5747090-2	5747091-2	91164-2
2	15	<b>1.541</b> 39.14	<b>1.312</b> 33.32	<b>.509</b> 12.93	Α	5747140-2	5747141-2	5747142-2	91165-2
3	25	<b>2.088</b> 53.04	<b>1.852</b> 47.04	<b>.509</b> 12.93	Α	5745922-2	5745925-2	5745928-2	91168-2
4	37	2.729	2.500	.509	Α	5747713-2	5747714-2	5747715-2	91166-2
4	37	69.32	63.50	12.93	В	_	5747714-1	_	91100-2
5	50	<b>2.635</b> 66.93	<b>2.406</b> 61.11	<b>.620</b> 15.75	Α	5747143-2	5747144-2	5747145-2	91167-2

Notes: 1. All receptacles are preloaded with straight posted ACTION PIN socket contacts.

2. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

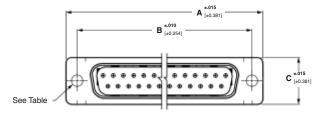


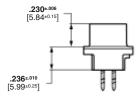
# HD-20 Front Metal-Shell Straight Posted Connectors With ACTION PIN Contacts (Continued)

#### Plug



With Standard Mounting Holes



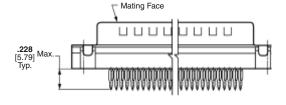




With Threaded Insert



With Fixed Female Screwlock



See customer drawings for pcb layouts.

#### **Material and Finish:**

**Front Shell**—Steel, tin plated **Housing**—94V-0 rated thermoplastic, black

Threaded Inserts—Brass, unplated Female Screwlocks—Zinc

**ACTION PIN Contacts**—Copper alloy, duplex plated as follows:

A—.000030 [0.00076] gold on mating end, tin on ACTION PIN post surface, with entire contact .000050 [0.00127] (min.) nickel underplated

## For .093 [2.36] min. Thick Pc Board

	Shell Size	No. of Contact Positions				Contact	PI				
			D	imensio B	C C	Finish (Plating Code)	With .120 [3.05] Mounting	With Threaded	With Fixed Female	Seating Tool Part No.	
				Code)		Holes	Inserts	Screwlocks			
	1	9	<b>1.213</b> 30.81	<b>.984</b> 24.99	<b>.494</b> 12.55	Α	_	5786830-1	5787176-1	58274-3	
	2	15	<b>1.541</b> 39.14	<b>1.312</b> 33.32	<b>.494</b> 12.55	Α	_	_	5787177-1	58274-6	
	3	25	<b>2.088</b> 53.04	<b>1.852</b> 47.04	<b>.494</b> 12.55	Α	5748146-2	5748146-4	5748146-6	58274-1	
	4	37	<b>2.732</b> 69.39	<b>2.500</b> 63.50	<b>.494</b> 12.55	Α	5788458-1	5786534-1	5750060-1	58274-5	
	5	50	<b>2.635</b> 66.93	<b>2.406</b> 61.11	<b>.605</b> 15.37	Α	_	5749892-1	_	58273-1	
_											

Notes: 1. All plugs are preloaded with straight posted ACTION PIN pin contacts.

2. Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

#### **Technical Documents:**

**Product Specification**—108-40014 **Application Specification**— 114-40026



## **HD-20 All-Plastic Straight Posted Connectors** With ACTION PIN Contacts

#### Receptacles (Low and High Profile)



With Standard Mounting Holes



With Threaded Insert



With Fixed Female Screwlock

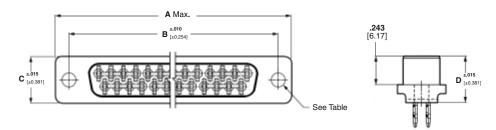
#### **Material and Finish:**

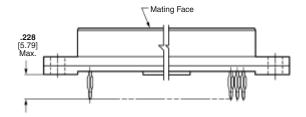
**Housing**—94V-0 rated thermoplastic, black

Threaded Inserts—Brass, unplated Female Screwlocks—Brass, nickel

ACTION PIN Contacts—Copper alloy, duplex plated as follows:

**A**—.000030 [0.00076] gold on mating end, tin on ACTION PIN post surface, with entire contact .000050 [0.00127] (min.) nickel underplated





See customer drawings for pcb layouts.

**B**—Gold flash on mating end, tin on ACTION PIN post surface, with entire contact .000050 [0.00127] (min.) nickel underplated

#### **Technical Documents:**

Product Specification—108-40014

	No. of Contact Positions							Receptacle Part Numbers						
		Dimensions					Contact	For .093 [2.36] (min.) Thick Pc Boards			For .062 [1.57] (min.) Thick PC Boards			Seating
Shell Size		A	В	C	D	Profile	Finish (Plating Code)	With .120 [3.05] Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks	With .120 [3.05] Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks	Tool Part No.
1	9	<b>1.221</b> 31.01	<b>.984</b> 24.99	<b>.410</b> 10.41	<b>.395</b> 10.03	Low	Α	_	_	5745454-2	_	_	_	91164-1
					<b>.695</b> 17.65	High	Α	_	_	5745455-2	_	_	_	91164-3
2	15	<b>1.546</b> 39.27	<b>1.312</b> 33.32	<b>.410</b> 10.41	<b>.395</b> 10.03	Low	Α	_	_	5745456-2	_	_	_	91165-1
2					<b>.695</b> 17.65	High	Α	_	_	_	_	5745612-2	_	91165-3
	25	<b>2.095</b> 53.21	<b>1.852</b> 47.04	<b>.410</b> 10.41	<b>.395</b> 10.03	Low	Α	_		5745458-2	_	_	_	01100.1
3							В	_	_	5745458-1	_	_	_	91168-1
3					<b>.695</b> 17.65	High	Α	_	5745465-2	_	_	_	_	91168-3
4	37	<b>2.737</b> 69.52	<b>2.500</b> 63.50	<b>.410</b> 10.41	<b>.395</b> 10.03	Low	Α	_	_	5745459-2	5745589-2	_	_	91166-1
5	50	<b>2.643</b> 67.13	<b>2.406</b> 61.11	<b>.517</b> 13.13	<b>.395</b> 10.03	Low	А	_	_	5745461-2	_	_	_	91167-1

Notes: 1. All receptacles are preloaded with straight posted ACTION PIN socket contacts.

<sup>2.</sup> Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

## **Mouser Electronics**

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TE Connectivity: 5745925-2