## **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]	g.i
			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	s Duplex	<b>.170</b> [4.32]	Medium
	Receptacies				Female Screwlocks	(Gold Flash/ Tin)	<b>.250</b> [6.35]	
				9 15	<b>.120</b> [3.05] Dia. Holes	Duplex (.000030 [0.00076]	<b>.125</b> [3.18]	
			All-Plastic (pgs. 82-85)	25 37 50	Threaded Inserts	Gold/Tin) Duplex (Gold Flash/	<b>.170</b> [4.32]	Medium
				50	Female Screwlocks	(Gold Flash/ Tin)	<b>.250</b> [6.35]	
ACTION PIN	Plugs and		Front Metal-Shell Tin Plated	9 15 25	<b>.120</b> [3.05] Dia. Holes Threaded	Duplex (.00030 [0.00076] Gold/Tin)	.228	Medium
	Receptacles		(pgs. 87 and 88)	37	Inserts Female Screwlocks	Duplex (Gold/Tin)	[5.79]	moulum
				9 15	<b>.120</b> [3.05] Dia. Holes	Duplex (.000030 [0.00076]		
	Receptacles		All-Plastic (pg. 89)	25 37 50	Threaded Inserts Female	Gold Flash/Tin) Duplex (.000010 [0.000254] Gold Flash/Tin)	<b>.228</b> [5.79]	Low/High
HD-22	Front Metal-Shell		Front Metal-Shell With	15	.120 [3.05] Dia. Holes	Duplex (.000030 [0.00076] Gold/Tin)		
F	Plugs and Receptacles	Plugs and Straight Groun		26 44 62 78	Threaded Inserts	Duplex (.000015 [0.00038] Gold/Tin)	<b>.125</b> [3.18]	Medium
			(pg. 86)	70	Female Screwlocks	Duplex (Gold Flash/Tin)		

76

Catalog 82068 Revised 1-08

www.tycoelectronics.com

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change. USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208

Downloaded from Elcodis.com electronic components distributor

## 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	
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	

Catalog 82068 Revised 1-08 Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change. USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803

## 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, black

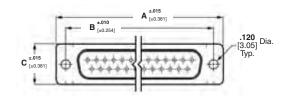
## Pin Contacts (Posted)—Brass, plated as follows:

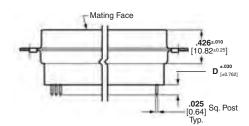
A—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

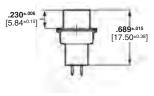
**B**—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

#### **Technical Documents:**

Product Specification—108-40025







See customer drawings for pcb layouts.

	No. of					Contact	Plug Part Numbers			
Shell Size	Contact Positions	A	Dimen A B		D*	Finish (Plating Code)	Without Grounding Indents	With Grounding Indents	With Clinch Nuts	
					.125	А	_	5745410-1	5749014-1	
1	9	1.213	.984	.494	3.18	В	5745182-2		_	
I	9	30.81	24.99	12.55	<b>.188</b> 4.78	А	_	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	А	_	5745411-1	_	
					.125	А	—	5745412-1	5745959-1	
3	25	2.088	1.852	.494	3.18	В	5745186-2		—	
5	25	53.04	47.04	12.55	<b>.188</b> 4.78	А	_	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	50	66.93	61.11	15.37	<b>.188</b> 4.78	А	_	5745414-7	_	

\*.125 [3.18] 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 Tyco Electronics.

Catalog 82068 Revised 1-08 www.tycoelectronics.com

78

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change.

Note: All part numbers are RoHS compliant.

USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208

## 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

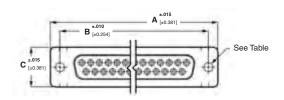
Clinch Nuts-Steel, zinc plated

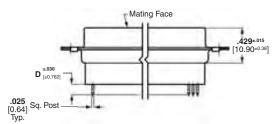
Socket Contacts (Posted)-Phosphor bronze, plated as follows: A-000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel

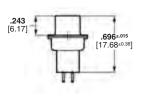
underplated **B**—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

#### **Technical Documents:**

Product Specification—108-40025







See customer drawings for pcb layouts.

						Contact	Receptacle F	art Numbers	
Shell Size	No. of Contact Positions	A	Dimen B	sions C	D*	Finish (Plating Code)	With .120 [3.05] Mounting Holes	With Clinch Nuts	
					.125	A	5745183-1	5747190-2	
		1.213	.984	.494	3.18	B	5745183-2	5747190-1	
1	9 <b>1.215 .964 .494</b> 30.81 24.99 12.55	.188	A	5745183-7	5747190-4				
					4.78	B	_	_	
					.125	А	5745185-1	5745820-1	
0	15	1.541	1.312	.494	3.18	В	_	5745820-2	
2	15	39.14	33.33	12.55	<b>.188</b> 4.78	А	5745185-7	_	
				<b>.494</b> 12.55	.125	А	5745187-1	5745886-1	
3	25	<b>2.088</b> 53.04	<b>1.852</b> 47.04			3.18	В	—	5745886-2
3	25					.188	А	5745187-7	_
					4.78	В	5745187-8	—	
4	37	2.729	2.500	.494	<b>.125</b> 3.18	А	5745189-1	5747315-1	
4	57	69.32	63.50	12.55	<b>.188</b> 4.78	А	5745189-7	_	
F	50	2.635	2.406	.605	<b>.125</b> 3.18	А	5745191-1	5747302-1	
5	50	66.93	61.11	15.37	<b>.188</b> 4.78	А	5745191-7	_	

\*.125 [3.18] 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 Tyco Electronics.

Note: All part numbers are RoHS compliant.

Catalog 82068 Revised 1-08

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents

Dimensions are shown for reference purposes only. Specifications subject to change.

USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803

South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208

79

www.tycoelectronics.com

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

## Plug



With Grounding Indents







With Retention

#### Material and Finish:

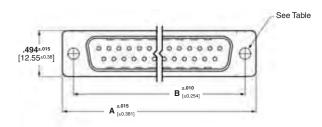
Shell-Steel, tin plated Housing-94V-0 rated thermoplastic, black

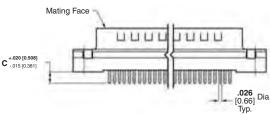
Threaded Inserts—Brass, unplated Female Screwlocks—Zinc

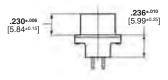
Pin Contacts (Posted)—Brass, plated as follows:

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		C* (Plating C* Code)	With		With		With		
Size	Contact Positions	Α	В	C*		Standard Mounting Holes	With 4-40 Threaded Inserts (i	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	1 9	1.213	.984	3.18	В	_	_	—	1-5747871-3	_		
I		30.81	24.99	<b>.170</b> 4.32	А	5747871-4	_	_	1-5747871-6	—		
2	0 45	1.541	1.312	<b>.125</b> 3.18	А	_	5747872-8	_	_	5748026-1		
2	15	39.14	4 33.33	<b>.170</b> 4.32	А	5747872-4	_	_	1-5747872-6	—		
				.125	А	5745968-2	5745968-8	2-5747704-0	1-5745968-4	5748027-1		
2	25	2.090	1.852	3.18	В	—	5745968-7	—	1-5745968-3	—		
3	3 25	53.09	47.04	.170	А	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	А	5747375-2	5747375-8	_	_	5787686-1		

\*.125 [3.18] 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.

80

Catalog 82068 Revised 1-08 www.tycoelectronics.com

millimeters unless otherwise specified. Values in brackets are metric equivalents

Dimensions are in inches and

Dimensions are shown for reference purposes only. Specifications subject to change.

USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803

South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208

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

## Receptacle





With Fixed Female Screwlock



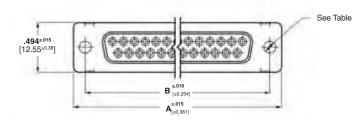
#### With Retentio

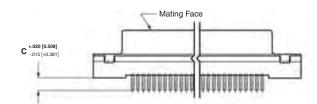
## Material and Finish:

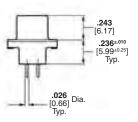
Shell—Steel, tin plated Housing—94V-0 rated thermoplastic, black

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

					Ormitest		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						
-	9	1.216	.984	3.18	В	—	5747150-7	—	1-5747150-3	_						
1	9	30.89	24.99	.170	А	5747150-4	—	—	1-5747150-6	—						
				4.32	В		5747150-9	_	_	_						
		1.541		.125	А	5747299-2	5747299-8	2-5747707-0	1-5747299-4	5787683-1						
2	15									1.312	3.18	В		5747299-7	_	—
2	15	39.14	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	_	_						
5	25	53.09	47.04	.170	А	5745967-4	1-5745967-0	—	1-5745967-6	_						
				4.32	В		_	_	1-5745967-5	_						
				.125	А	5747301-2	5747301-8	2-5747709-0	1-5747301-4	5787685-1						
4	37	2.732	2.500	3.18	В	_	5747301-7	—	_	_						
	01	69.39	63.50	<b>.170</b> 4.32	А	_	_	_	1-5747301-6	_						

\*.125 [3.18] 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.

Note: All part numbers are RoHS compliant.

Catalog 82068 Revised 1-08 www.tycoelectronics.com

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change. USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208 81

## 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

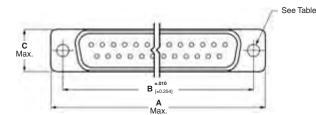
**Pin Contacts (Posted)**—Brass, plated as follows:

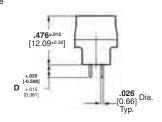
A—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

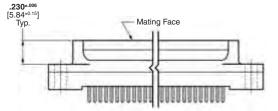
**B**—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

#### **Technical Documents:**

Product Specification—108-40025

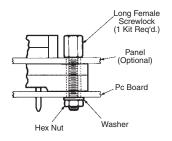




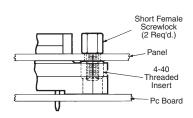


See customer drawings for pcb layouts.

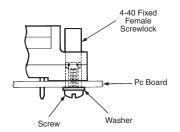
**Typical Applications** 



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 83. They are to be supplied by the Customer or, where applicable, purchased separately from Tyco Electronics using the part nos. specified.

Note: All part numbers are RoHS compliant.

Catalog 82068 Revised 1-08

82

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change. USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208

www.tycoelectronics.com

**Straight Posted Connectors** 

Plug (Continued)

						Plug Part Numbers			
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	А	5208006-2	5745051-2	5745071-2
4	9	1.228	.984	.420	3.18	В	5208006-1	5745051-1	5745071-1
I	9	32.72	24.99	10.67	<b>.170</b> 4.32	А	_	_	5745071-4
					.125	А	5208007-2	5745052-2	5745072-2
2	15	<b>1.546</b> 39.27	1.312	<b>.420</b> 10.67	3.18	В	—	5745052-1	_
	15		33.33		<b>.170</b> 4.32	А	_	_	5745072-4
					.125	А	5208008-2	5745053-2	5745073-2
3	25	2.095	1.852	.420	3.18	В	5208008-1	_	5745073-1
3	20	53.21	47.04	10.67	<b>.170</b> 4.32	В	_	_	5745073-3
					.125	А	_	_	5745074-2
4	37	2.737	2.500	.420	3.18	В	5208009-1	_	5745074-1
4	57	69.52	63.50	10.67	.170	А	_	5745054-4	5745074-4
		4.32	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	А	5208010-2	_	_

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

\*.125 [3.18] 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.

All plugs are preloaded with size 20 DF posted pin contacts.
It is recommended that these connectors be secured with appropriate hardware to a pc board and/or panel.

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

Dime

Catalog 82068 Revised 1-08

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change.

Note: All part numbers are RoHS compliant.

USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 83

Downloaded from Elcodis.com electronic components distributor

www.tycoelectronics.com

## 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, black

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

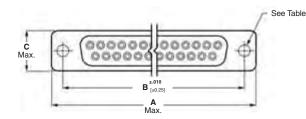
#### Socket Contacts (Posted)-

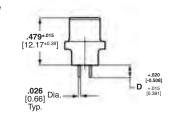
Phosphor bronze, plated as follows: **A**—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

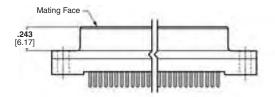
**B**—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

#### **Technical Documents:**

Product Specification—108-40025

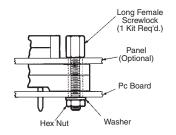




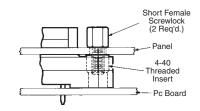


See customer drawings for pcb layouts.

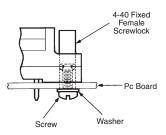
**Typical Applications** 



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 Tyco Electronics using the part nos. specified.

Note: All part numbers are RoHS compliant.

Catalog 82068 Revised 1-08

84

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change. USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208

www.tycoelectronics.com

**Straight Posted Connectors** 

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

## Receptacle

(Continued)

						Contact	Rece	ptacle Part Nu	umbers
Shell Size			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	А	_	—	5745076-6
					.125	А	5207827-4	5745057-4	5745077-4
0	0 15 1.540 1.512 .420	3.18	В	5207827-3	5745057-3	5745077-3			
2	15	39.27	33.33	10.67	<b>.170</b> 4.32	А	_	—	5745077-6
					.125	А	5207828-4	5745058-4	5745078-4
3	25	2.095	1.852	.420	3.18	В	5207828-3	5745058-3	5745078-3
3	25	53.21	47.04	10.67	.170	А	—	—	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	57	69.52	63.50	10.67	<b>.170</b> 4.32	А	_	_	5745079-6
5	50	2.643	2.406	.527	<b>.125</b> 3.18	А	_	—	5745080-4
5	50	67.13	61.11	13.39	<b>.170</b> 4.32	А	_	_	5745080-6

\*.125 [3.18] 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.

It is recommended that these connectors be secured with appropriate hardware to a pc board and/or panel.
Male screw retainers are used as mating hardware for connectors with 4-40 female screwlocks.

Note: All part numbers are RoHS compliant.

Catalog 82068 Revised 1-08

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change. USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 85

www.tycoelectronics.com

## HD-22 Straight Subminiature D Connectors

## Material and Finish:

Housing-94V-0 rated thermoplastic, black

Shell-Steel, nickel plated Contacts Pins—Brass

## Sockets—Phosphor bronze Contact Plating-

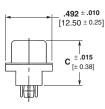
Gold flash, .000015 [0.00038] or .000030 [0.00076] on mating end, tin on solder tails with overall nickel underplate

Boardlocks—Brass, tin plated Female Screwlocks—Brass, nickel plated

Threaded Inserts-Brass, tin plated

No. of Contact

.125 ± 0.12 [3.18 ± 0.30]	$ \begin{array}{c c} & & A \xrightarrow{\pm .015} \\ \hline & \pm 0.38 \end{array} \\ \hline \\ & & B \xrightarrow{\pm .010} \\ \hline & & & \\ \hline \\ & & & \\ \hline \end{array} $
Vertical Plug	.125 ± .012 _] [3.18 ± 0.30]

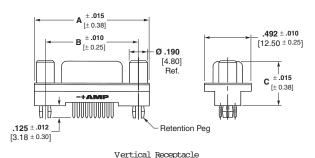


Dimensions B C		Mounting	PCB		Part Numbers
		Hardware	Mounting	Gold	15K"
		Haldwale	Style	Flash	Goĺd

		D1	THEIDTO	115	Mounting		-		
Technical Documents:	Contact Positions	A	В	C	Hardware	Mounting Style	Gold Flash	15K" Goĺd	30K" Goĺd
Product Specification—108-1092	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
Application Specification— 114-13199		<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
See customer drawings for printed	78	<b>2.640</b> 67.00	<b>2.500</b> 63.50	<b>.476</b> 12.10	4-40 inserts	—	5749019-6	5749019-5	5749019-1

See customer drawings for printed circuit board layouts.

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



No. of	Di	imensio	าร	Mounting	РСВ	P	Part Numbers				
Contact Positions	A	В	C	Hardware	Mounting Style	Gold Flash	15K" Goĺd	30K" Goĺd			
	<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			
	<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 1.310 .465</b> 4-40 39.20 33.30 11.80 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.

Catalog 82068 Revised 1-08 www.tycoelectronics.com

86

Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208

Downloaded from Elcodis.com electronic components distributor

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

## Receptacle



With Standard Mounting Holes



With Threaded Insert



With Fixed Female Screwlock

#### Material and Finish:

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

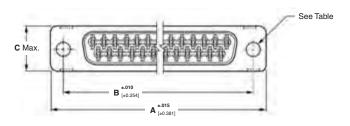
Threaded Inserts—Brass, unplated

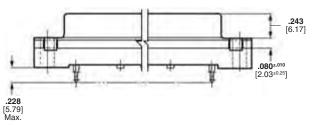
Female Screwlocks—Zinc

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

#### **Technical Documents:**

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





See customer drawings for pcb layouts.

[12

#### For .062 [1.57] min. Thick Pc Boards

	NI				Contact	Rece			
Shell Size	No. of Contact Positions	Dimensions A B C		Finish (Plating Code)	With .120 [3.05] Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks	Seating Tool Part No.	
1	9	<b>1.213</b> 30.81	<b>.984</b> 24.99	<b>.509</b> 12.93	А	_	_	_	91164-2
2	15	<b>1.541</b> 39.14	<b>1.312</b> 33.33	<b>.509</b> 12.93	А	_	_	_	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	А	—	5748485-2	_	91167-2

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

					Contact	Recep				
Shell	No. of Contact	D	imensior	IS	Finish	With	With	With Fixed	Seating Tool Part No.	
Size	Positions	Α	В	С	(Plating Code)	.120 [3.05] Mounting Holes	Threaded Inserts	Female Screwlocks		
1	9	<b>1.213</b> 30.81	<b>.984</b> 24.99	<b>.509</b> 12.93	А	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	А	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	А	5745922-2	5745925-2	5745928-2	91168-2	
4	37	2.729	2.500	.509	Α	5747713-2	5747714-2	5747715-2	91166-2	
-+	57	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	А	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.

Note: All part numbers are RoHS compliant.

Catalog 82068 Revised 1-08 Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change. USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208 87

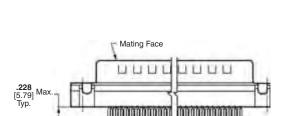
Plug

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

B ±.010

A 1+0 381

# .230±006 [5.84±0.15]



See customer drawings for pcb layouts.

C [+0 381

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

See Table

					Contact	PI				
Shell Size	No. of Contact Positions	Dimensior A B		ns C	Finish (Plating Code)	With .120 [3.05] Mounting Holes	With Threaded Inserts	With Fixed Female Screwlocks	Seating Tool Part No.	
1	9	<b>1.213</b> 30.81	<b>.984</b> 24.99	<b>.494</b> 12.55	А	_	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	А	_	_	5787177-1	58274-6	
3	25	<b>2.088</b> 53.04	<b>1.852</b> 47.04	<b>.494</b> 12.55	А	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	А	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	А	_	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.

With Fixed Female Screwlock

With Standard Mounting Holes

With Threaded Insert

#### 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 and tip an ACTION DIN part surface.

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

#### **Technical Documents:**

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

Note: All part numbers are RoHS compliant.

Catalog 82068 Revised 1-08 www.tycoelectronics.com

88

millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are in inches and

Dimensions are shown for reference purposes only. Specifications subject to change. USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208

Downloaded from Elcodis.com electronic components distributor

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



With Standard Mounting Holes



With Threaded Insert



With Fixed Female Screwlock

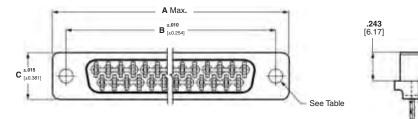
#### Material and Finish:

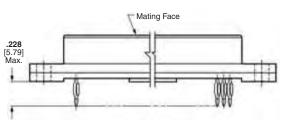
Housing—94V-0 rated thermoplastic, black

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

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

A—.00030 [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										
<u>.</u>			Dimo	nsions		Profile	Contact	For .093 [2.	For .093 [2.36] (min.) Thick Pc Boards			For .062 [1.57] (min.) Thick PC Boards						
Shell Size		A	B	C	D		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	Seating Tool Part No.				
4	9	<b>1.221</b> 31.01	1.221	.984	.410	<b>.395</b> 10.03	Low	А	_	—	5745454-2	_	—	_	91164-1			
1	1 9		24.99	10.41	<b>.695</b> 17.65	High	А	_	_	5745455-2	_		—	91164-3				
	15	<b>1.546</b> 39.27	1.546	1.312	.410	<b>.395</b> 10.03	Low	А	_	—	5745456-2	_	_	_	91165-1			
2	2 15			10.41	<b>.695</b> 17.65	High	А	_	—	—	_	5745612-2	_	91165-3				
		<b>2.095</b> 53.21				.395	Law	Α	_	_	5745458-2	_	_	_	01100.1			
3	25				1.852	.410	10.03	Low	В	_	—	5745458-1	_	_	_	91168-1		
3 25	53.21				53.21					47.04	10.41	<b>.695</b> 17.65	High	А	_	5745465-2	—	_
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	А	_	_	5745459-2	5745589-2	_	_	91166-1				
5	50	2.643 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.

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

Note: All part numbers are RoHS compliant.

Catalog 82068 Revised 1-08 Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change. USA: 1-800-522-6752 Canada: 1-905-470-4425 Mexico: 01-800-733-8926 C. America: 52-55-1106-0803 South America: 55-11-2103-6000 Hong Kong: 852-2735-1628 Japan: 81-44-844-8013 UK: 44-8706-080-208 89