HD-20 Straight Posted Connectors



Product Selection Guide

Straight Posted Connectors

| 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 | .120 [3.05] Dia. Holes | Duplex (.000030 [0.00076] Gold/Tin) | .125 [3.18] | High |
| | | | Indents, Tin Plated (pgs. 78 and 79) | 37 50 | Clinch Nuts | Duplex (Gold Flash/ Tin) | .188 [4.78] | i ligit |
| | | | Front Metal-Shell | 9 | .120 [.318] Dia. Holes | Duplex (.000030 [0.00076] | .125 [3.18] | |
| | Plugs and | | With and Without Grounding Indents (pgs. 80 and 81) | 15 25 37 | Threaded Inserts Retention Inserts | 5 Duplex | .170 [4.32] | Medium |
| | Receptacles | | (pge: ee a e .) | 0. | Female Screwlocks | (Gold Flash/ Tin) | .250 [6.35] | |
| | | | | 9 | .120 [3.05] Dia. Holes | Duplex (.000030 [0.00076] | .125 [3.18] | Medium |
| | | | All-Plastic (pgs. 82-85) | 15 25 37 | Threaded Inserts | Gold/Tin) | .170 [4.32] | |
| | | | | 50 | Female Screwlocks | (Gold Flash/ Tin) | .250 [6.35] | |
| ACTION PIN | | | | 9 | .120 [3.05] Dia. Holes | Duplex (.00030 [0.00076] | | Medium |
| | Plugs and Receptacles | | Front Metal-Shell Tin Plated (pgs. 87 and 88) | 15 25 37 | Threaded Inserts | Gold/Tin) | .228 [5.79] | |
| | | | | | Female Screwlocks | Duplex (Gold/Tin) | | |
| | | | | 9 | .120 [3.05] Dia. Holes | Duplex (.000030 [0.00076] | | |
| | Receptacles | | All-Plastic (pg. 89) | 15 25 37 | Threaded Inserts | Gold Flash/Tin) | .228 [5.79] | Low/High |
| | | | 50 | Female Screwlocks | (.000010 [0.000254] Gold Flash/Tin) | | | |
| HD-22 | Front Metal-Shell | | | 15 | .120 [3.05] Dia. Holes | Duplex (.000030 [0.00076] Gold/Tin) | | |
| | Plugs and Receptacles | nd Straight C | With Grounding Indents, Nickel Plated | 26 44 62 78 | Threaded Inserts | Duplex (.000015 [0.00038] Gold/Tin) | .125 [3.18] | Medium |
| | | | (pg. 86) | 10 | Female Screwlocks | Duplex (Gold Flash/Tin) | | |

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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

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| 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 | |

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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, black

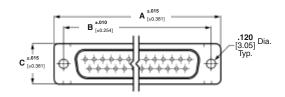
Pin Contacts (Posted)—Brass, plated as follows:

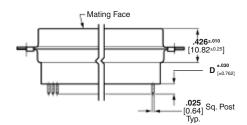
A—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

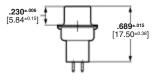
B—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

Technical Documents:

Product Specification—108-40025







See customer drawings for pcb layouts.

| Shell No. of Dimensions | | | | | | Contact | Plug | g Part Numbe | rs | | |
|-------------------------|----------------------|---------------------------------------|-----------------------|----------------------|---------------------|-----------------------------|---------------------------------|------------------------------|------------------------|---|---|
| Shell Size | Contact Positions | A | Dimen B | c C | 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} | 3.18 | В | 5745182-2 | _ | _ | | |
| I | 9 | 30.81 24.99 12.55 .188 4.78 | | | А | — | 5745410-7 | _ | | | |
| 2 | 15 | 1.541 39.14 | 1.312 33.33 | .494 12.55 | .125 3.18 | А | _ | 5745411-1 | _ | | |
| | | | | | .125 | А | _ | 5745412-1 | 5745959-1 | | |
| 3 | 25 | 2.088 | 1.852 | .494 | | | 3.18 | В | 5745186-2 | — | _ |
| 5 | 23 | 53.04 | 47.04 | 12.55 | .188 4.78 | А | — | 5745412-7 | _ | | |
| 4 | 37 | 2.729 69.32 | 2.500 63.50 | .494 12.55 | .125 3.18 | А | — | 5745413-1 | _ | | |
| 5 | 50 | 50 2.635 | | .605 | .125 3.18 | А | _ | 5745414-1 | _ | | |
| 5 | 50 | 66.93 | 61.11 | 15.37 | .188 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 TE.

Note: All part numbers are RoHS compliant.

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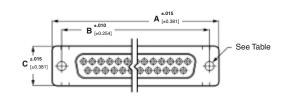
Straight Posted Connectors



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

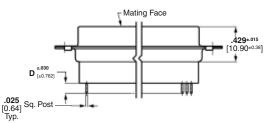
Clinch Nuts—Steel, zinc plated

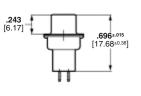
Socket Contacts (Posted)— Phosphor bronze, plated as follows: A—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel

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 | Part 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 | А | 5745183-1 | 5747190-2 | |
| | | 1.213 | .984 | .494 | 3.18 | В | 5745183-2 | 5747190-1 | |
| 1 | 9 | 30.81 | 24.99 | 12.55 | .188 | А | 5745183-7 | 5747190-4 | |
| | | | | | 4.78 | В | _ | _ | |
| | | | | .494 12.55 | .125 | А | 5745185-1 | 5745820-1 | |
| 2 | 15 | 1.541 | 1.312 | | 3.18 | В | _ | 5745820-2 | |
| 2 | 2 15 | 39.14 | 33.33 | | .188 4.78 | А | 5745185-7 | _ | |
| | | | | .494 12.55 | .125 | А | 5745187-1 | 5745886-1 | |
| 3 | 05 | 2.088 | 1.852 | | 3.18 | В | — | 5745886-2 | |
| 3 | 25 | 53.04 | 47.04 | | .188 | А | 5745187-7 | _ | |
| | | | | | 4.78 | В | 5745187-8 | — | |
| 4 | 37 | 2.729 | 2.500 | .494 | .125 3.18 | А | 5745189-1 | 5747315-1 | |
| 4 | 37 | 69.32 | 63.50 | 12.55 | .188 4.78 | А | 5745189-7 | _ | |
| E | 50 | 50 | 2.635 | 2.406 | .605 | .125 3.18 | А | 5745191-1 | 5747302-1 |
| 5 | | 66.93 | 61.11 | 15.37 | .188 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 TE.

Note: All part numbers are RoHS compliant.

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HD-20 Front Metal-Shell Straight Posted Connectors

Plug

Straight Posted Connectors



With Grounding Indents





With Retention

Material and Finish:

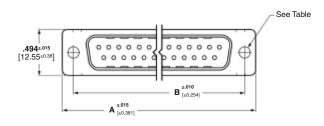
Shell-Steel, tin plated Housing-94V-0 rated thermoplastic, black

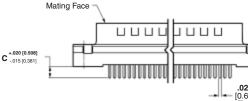
Threaded Inserts—Brass, unplated Female Screwlocks—Zinc

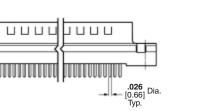
Pin Contacts (Posted)—Brass, plated as follows:

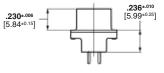
A—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated **B**—Gold flash on mating end, tin on

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 | | Finish | With | | With | | With | | |
| Size | Contact Positions | Α | В | C* | | Standard Mounting Holes | With 4-40 Threaded Inserts (1 | Retention 4-40 Inserts for .062 [1.58] PCB) | With Fixed Female Screwlocks | Retention 4-40 Screwlocks (for .062 [1.58] PCB) | | |
| | | | | .125 | А | 5747871-2 | 5747871-8 | 2-5748003-0 | 1-5747871-4 | — | | |
| 4 | 9 | 1.213 | .984 | 3.18 | В | — | _ | — | 1-5747871-3 | — | | |
| I | 1 9 30.8 | 30.81 | 30.81 24.99 | .170 4.32 | А | 5747871-4 | — | — | 1-5747871-6 | _ | | |
| 2 | 2 15 1 | 1.541 | | 1.312 | .125 3.18 | А | _ | 5747872-8 | _ | _ | 5748026-1 | |
| 2 | 15 | 39.14 | 33.33 | .170 4.32 | А | 5747872-4 | — | — | 1-5747872-6 | _ | | |
| | | | | .125 | А | 5745968-2 | 5745968-8 | 2-5747704-0 | 1-5745968-4 | 5748027-1 | | |
| 3 | 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 B — | — | — | 1-5745968-5 | — | |
| 4 | 37 | 2.732 69.39 | 2.500 63.50 | .125 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^{±002} [3.07^{±0.0508}] for all retention inserts and screwlocks.

Note: All part numbers are RoHS compliant.

| O | <u>n</u> |
|---|----------|
| n | U |

| 0 | | | | |
|-------------------------------|--|--|--|---|
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HD-20 Front Metal-Shell Straight Posted Connectors (Continued)

Receptacle







With Fixed Female Screwlock



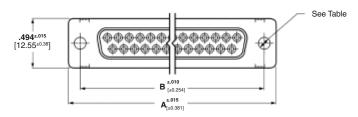
With Retention

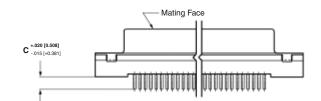
Material and Finish:

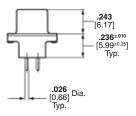
Shell—Steel, tin plated **Housing**—94V-0 rated thermoplastic,

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 A 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 | 9 | 1.216 | .984 | 3.18 | В | — | 5747150-7 | — | 1-5747150-3 | _ | | |
| 1 | 30.89 | 30.89 | 24.99 | .170 | А | 5747150-4 | _ | — | 1-5747150-6 | _ | | |
| | | | | 4.32 | В | | 5747150-9 | _ | _ | _ | | |
| | 0 45 1.541 | | | .125 | А | 5747299-2 | 5747299-8 | 2-5747707-0 | 1-5747299-4 | 5787683-1 | | |
| 2 | | 1.541 | 1.312 | 3.18 | В | _ | 5747299-7 | — | _ | _ | | |
| 2 | 15 | 39.14 | 33.33 | .170 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 | _ | | |
| | | 2.732 69.39 | | | | .125 | А | 5747301-2 | 5747301-8 | 2-5747709-0 | 1-5747301-4 | 5787685-1 |
| 4 | 4 37 | | 2.500 | 3.18 | В | | 5747301-7 | _ | — | _ | | |
| 4 37 | | | 69.39 | | 63.50 | .170 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.

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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

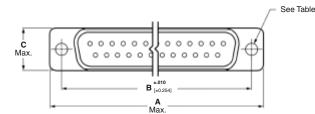
Pin Contacts (Posted)—Brass, plated as follows:

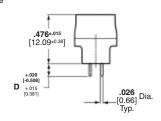
A-.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

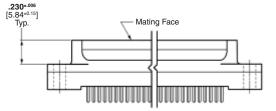
B—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

Technical Documents:

Product Specification—108-40025

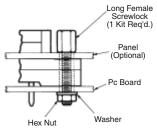


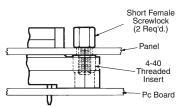




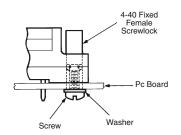
See customer drawings for pcb layouts.

Typical Applications





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

www.te.com

Plug (Continued)

| | | | | | | Contact | PI | ug Part Numb | ers |
|---------------|------|--------------------------|-----------------------------|--|-----------------------------|------------------------------------|-----------|--------------|-----------|
| Shell Size | | | Finish (Plating Code) | With .120 [3.05] Mounting Holes | With Threaded Inserts | With Fixed Female Screwlocks | | | |
| | | | | | .125 | А | 5208006-2 | 5745051-2 | 5745071-2 |
| | | .984 | .420 | 3.18 | В | 5208006-1 | 5745051-1 | 5745071-1 | |
| I | | 32.72 | 24.99 | 10.67 | .170 4.32 | А | _ | _ | 5745071-4 |
| | | | | | .125 | А | 5208007-2 | 5745052-2 | 5745072-2 |
| 0 | 0 45 | 1.546 39.27 | 1.312 33.33 | .420 10.67 | 3.18 | В | | 5745052-1 | _ |
| 2 | 15 | | | | .170 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 | .170 4.32 | В | _ | _ | 5745073-3 |
| | | | | | .125 | А | | _ | 5745074-2 |
| 4 | 27 | 2.737 | 2.500 | .420 | 3.18 | В | 5208009-1 | _ | 5745074-1 |
| 4 | 37 | 37 2.737 69.52 | 63.50 | 10.67 | .170 | А | _ | 5745054-4 | 5745074-4 |
| | | | | | 4.32 | В | 5208009-3 | _ | _ |
| 5 | 50 | 2.643 67.13 | 2.406 61.11 | .527 13.39 | .125 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.

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.

Note: All part numbers are RoHS compliant.

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

Receptacle



With Standard Mounting Hole



With Threaded Insert



With Fixed Female Screwlock

Material and Finish:

Straight Posted Connectors

Housing—94V-0 rated thermoplastic, black

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

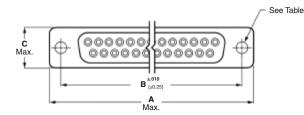
Socket Contacts (Posted)-

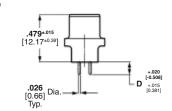
Phosphor bronze, plated as follows: **A**—.000030 [0.00076] gold on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

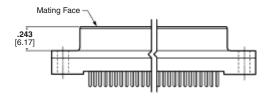
B—Gold flash on mating end, tin on termination end, with entire contact .000050 [0.00127] (min.) nickel underplated

Technical Documents:

Product Specification—108-40025

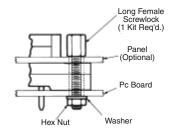




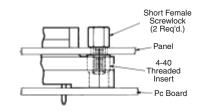


See customer drawings for pcb layouts.

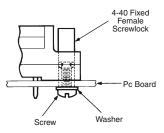
Typical Applications



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 TE using the part nos. specified.

Note: All part numbers are RoHS compliant.

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reference | Specificati to change.

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

Receptacle

(Continued)

| | | | | | | Contact | Rece | ptacle Part Nu | umbers |
|---------------|--------------------------------|---------------------|-----------------------|----------------------|---------------------|-----------------------------|--|-----------------------------|------------------------------------|
| Shell Size | No. of Contact Positions | A | Dimen B | sions C | D* | Finish (Plating Code) | With .120 [3.05] Mounting Holes | With Threaded Inserts | With Fixed Female Screwlocks |
| | | | | | .125 | A | 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 | .170 4.32 | А | _ | _ | 5745076-6 | |
| | | | 1.312 33.33 | .420 10.67 | .125 | А | 5207827-4 | 5745057-4 | 5745077-4 |
| | 1.546 | 3.18 | | | В | 5207827-3 | 5745057-3 | 5745077-3 | |
| | 39.27 | .170 4.32 | | | А | _ | _ | 5745077-6 | |
| | | | | .420 10.67 | | А | 5207828-4 | 5745058-4 | 5745078-4 |
| 3 | 25 | 2.095 | 1.852 | | | В | 5207828-3 | 5745058-3 | 5745078-3 |
| 3 | 25 | 53.21 | 47.04 | | | А | | _ | 5745078-6 |
| | | | | | 4.32 | В | | _ | 5745078-5 |
| 4 | 37 | 2.737 | 2.500 | .420 | .125 3.18 | А | 5207829-4 | 5745059-4 | 5745079-4 |
| 4 | 3/ | 69.52 | 63.50 | 10.67 | .170 4.32 | А | _ | _ | 5745079-6 |
| 5 | 50 | | | .527 | .125 3.18 | А | _ | _ | 5745080-4 |
| 5 | 50 | | | 13.39 | .170 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.

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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

Straight Posted Connectors

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

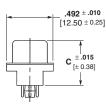
Technical Documents:

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

See customer drawings for printed circuit board layouts.

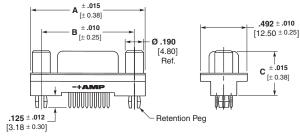
- Recognized under the Component Program of Underwriters Laboratories, Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

| - | $A_{[\pm 0.38]}^{\pm .015}$ $B_{[\pm 0.25]}^{\pm .010}$ |
|---------------------------------|---|
| | |
| . 125 ± .0 [3.18 ± 0. | |



Vertical Plug

| No. of | D | imensio | าร | Mounting | PCB | Part Numbers | | | | |
|----------------------|-----------------------|-----------------------|----------------------|-----------------|-------------------|---------------|--------------|--------------|--|--|
| Contact Positions | A | В | C | Hardware | Mounting Style | Gold Flash | 15µ" Gold | 30µ" Gold | | |
| 15 | 1.212 30.80 | .984 25.00 | .476 12.10 | 4-40 inserts | retention pegs | 5750489-4 | 5750489-3 | 5750489-1 | | |
| 15 | 1.212 30.80 | .984 25.00 | .476 12.10 | 4-40 inserts | _ | 5749798-4 | 5749798-3 | 5749798-1 | | |
| 78 | 2.640 67.00 | 2.500 63.50 | .476 12.10 | 4-40 inserts | _ | 5749019-6 | 5749019-5 | 5749019-1 | | |



Vertical Receptacle

| 30µ" Gold |
|--------------|
| |
| 49374-1 |
| 86356-1 |
| 49374-3 |
| 86382-1 |
| 49030-1 |
| _ |
| 47786-6 |
| 48831-1 |
| |

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

Material and Finish:

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

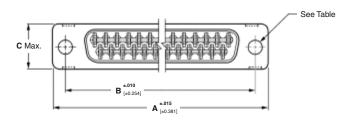
Threaded Inserts—Brass, unplated

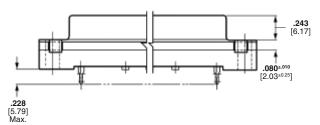
Female Screwlocks—Zinc

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 | D | imensior B | C | Finish (Plating Code) | With .120 [3.05] Mounting Holes | With Threaded Inserts | With Fixed Female Screwlocks | Seating Tool Part No. |
| 1 | 9 | 1.213 30.81 | .984 24.99 | .509 12.93 | А | _ | _ | _ | 91164-2 |
| 2 | 15 | 1.541 39.14 | 1.312 33.33 | .509 12.93 | А | _ | _ | _ | 91165-2 |
| 3 | 25 | 2.088 53.04 | 1.852 47.04 | .509 12.93 | В | _ | _ | 5748688-1 | 91168-2 |
| 5 | 50 | 2.635 66.93 | 2.406 61.11 | .620 15.75 | А | _ | 5748485-2 | _ | 91167-2 |

For .093 [2.36] min. Thick Pc Boards

| | | Conta | | | | Recep | | | | |
|-------|-------------------|-----------------------|-----------------------|----------------------|-------------------|----------------------------------|---------------------|------------|-----------------|--|
| 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 | | | |
| 1 | 9 | 1.213 30.81 | .984 24.99 | .509 12.93 | А | 5747089-2 | 5747090-2 | 5747091-2 | 91164-2 | |
| 2 | 15 | 1.541 39.14 | 1.312 33.32 | .509 12.93 | А | 5747140-2 | 5747141-2 | 5747142-2 | 91165-2 | |
| 3 | 25 | 2.088 53.04 | 1.852 47.04 | .509 12.93 | А | 5745922-2 | 5745925-2 | 5745928-2 | 91168-2 | |
| 4 | 37 | 2.729 | 2.500 | .509 | А | 5747713-2 | 5747714-2 | 5747715-2 | 91166-2 | |
| 4 | 57 | 69.32 | 63.50 | 12.93 | В | | 5747714-1 | _ | 91100-2 | |
| 5 | 50 | 2.635 66.93 | 2.406 61.11 | .620 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.

Straight Posted Connectors

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

Plug

Straight Posted Connectors



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

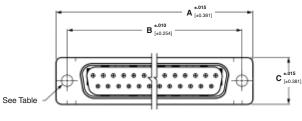
Threaded Inserts—Brass, unplated Female Screwlocks—Zinc

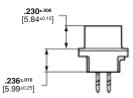
ACTION PIN Contacts—Copper alloy, duplex plated as follows: A—.000030 [0.00076] gold on mating end, tin on ACTION PIN post surface,

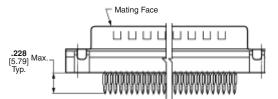
with entire contact .000050 [0.00127] (min.) nickel underplated

Technical Documents:

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







See customer drawings for pcb layouts.

For .093 [2.36] min. Thick Pc Board

| | | | | | | PI | | | |
|---------------|--------------------------------|-----------------------|-----------------------|----------------------|--|----------------------------|-----------|------------------------------------|-----------------------------|
| Shell Size | No. of Contact Positions | Dimensions A B | | C C | Contact Finish (Plating Code) | .120 [3.05] Threaded Femal | | With Fixed Female Screwlocks | Seating Tool Part No. |
| 1 | 9 | 1.213 30.81 | .984 24.99 | .494 12.55 | А | _ | 5786830-1 | 5787176-1 | 58274-3 |
| 2 | 15 | 1.541 39.14 | 1.312 33.32 | .494 12.55 | А | _ | _ | 5787177-1 | 58274-6 |
| 3 | 25 | 2.088 53.04 | 1.852 47.04 | .494 12.55 | А | 5748146-2 | 5748146-4 | 5748146-6 | 58274-1 |
| 4 | 37 | 2.732 69.39 | 2.500 63.50 | .494 12.55 | А | 5788458-1 | 5786534-1 | 5750060-1 | 58274-5 |
| 5 | 50 | 2.635 66.93 | 2.406 61.11 | .605 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.

Note: All part numbers are RoHS compliant.

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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

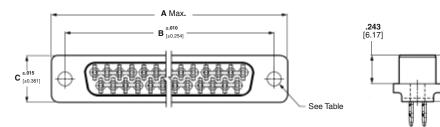
Material and Finish:

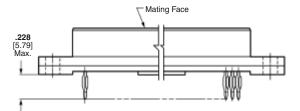
Housing—94V-0 rated thermoplastic, black

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

| | | | | | | | | Receptacle Part Numbers | | | | | | | | | | | | | | | | |
|---------------|----------------------|-----------------------|-----------------------|----------------------|----------------------|---------|-----------------------------|--|-----------------------------|------------------------------------|--|-----------------------------|------------------------------------|----------------------|----------------------|----------------------|------|-----------|---|-----------|---|---|-----------|--------|
| Shell Size | No. of | | Dimo | nsions | | | Contact | For .093 [2. | 36] (min.) Thio | k Pc Boards | For .062 [1.57] (min.) Thick PC Boards | | | Seating | | | | | | | | | | |
| | Contact Positions | Α | B | 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 | 1.221 | 1.221 | 1.221 | 1.221 | 1.221 | 1.221 | 1.221 | .984 | .410 | .395 10.03 | Low | А | _ | _ | 5745454-2 | _ | _ | _ | 91164-1 | | | | |
| I | 1 ⁹ 31 | 31.01 | 24.99 | 10.41 | .695 17.65 | High | А | _ | _ | 5745455-2 | _ | _ | _ | 91164-3 | | | | | | | | | | |
| | 15 | 1.546 | 1.312 33.32 | 1.312 | 1.312 | 1.312 | 1.312 | 1.312 | 1.312 | 1.312 | 1.312 | 1.312 | 1.312 | .410 10.41 | .395 10.03 | Low | А | _ | _ | 5745456-2 | — | — | — | 91165- |
| 2 | 15 | 39.27 | | | 10.41 | 10.41 | 10.41 | 10.41 | 10.41 | 10.41 | 10.41 | 10.41 | 10.41 | | 10.41 | .695 17.65 | High | А | _ | _ | _ | _ | 5745612-2 | _ |
| | | 2.095 53.21 | 1.852 | | .395 10.03 | Low | Α | _ | _ | 5745458-2 | _ | _ | _ | 01100 | | | | | | | | | | |
| 3 | 25 | | | .410 | | | В | _ | — | 5745458-1 | _ | _ | _ | 91168- | | | | | | | | | | |
| 5 | 25 | | 53.21 | | | | 53.21 | 53.21 | | | | | 10.41 | .695 17.65 | High | А | — | 5745465-2 | — | — | — | — | 91168- | |
| 4 | 37 | 2.737 69.52 | 2.500 63.50 | .410 10.41 | .395 10.03 | Low | А | _ | _ | 5745459-2 | 5745589-2 | _ | _ | 91166- | | | | | | | | | | |
| 5 | 50 | 2.643 67.13 | 2.406 61.11 | .517 13.13 | .395 10.03 | Low | А | _ | _ | 5745461-2 | _ | _ | _ | 91167- | | | | | | | | | | |

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.



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