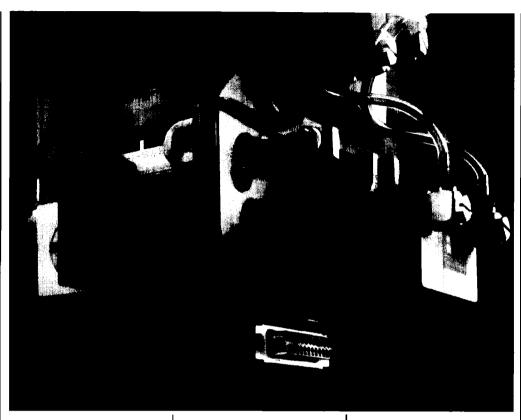
# Subminiature D HD-20 Right-Angle, Metal Shell and All-Plastic Connectors (AMPLIMITE III)

Specifications subject to change. For latest design specifications... 1-800-522-6752



Intermateable with AMPLIMITE and other Subminiature D connectors. **AMPLIMITE III connectors** are designed and packaged for use with robotic component insertion machines, AMPLIMITE III connectors are constructed of UL 94 V-0 rated materials for standard wave soldering and are available in 9, 15, 25 and 37 position. Mating hardware options include threaded inserts and screwlocks. A choice of with or without boardlocks is also offered. Boardlocks provide firm board retention, eliminating the need for under-board tooling.

AMPLIMITE III, HD-20 connector contacts are available in three types of gold plating to meet the needs of different applications: .000030 [0.00076], .000010 [0.00254] and gold flash on the mating end

AMPLIMITE III connectors offer the lead registration, dimensional uniformity and locating features necessary for accurate, robotic pick-and-place handling. Connectors can be gripped front-to-back, side-to-side, or from the top with a vacuum chuck.

Design, Engineering, Technical Support and proven product quality from AMP have set the standards in the connector industry. Now the AMPLIMITE III Connector will be the standards setter in robotically applied connector technology.

#### Dimensioning:

Dimensions are in inches and millimeters.
Values in brackets are metric equivalents.
Metric symbol used is:
C (Celsius)

#### **Product Facts**

- 9, 15, 25 and 37 positions
- Designed and packaged for use with robotic component insertion machines
- Connector housing are UL 94 V-0 rated
- Suitable for standard wave soldering (For high temperature applications contact AMP Incorporated)
- Mating hardware options 4-40 threaded inserts or screwlocks
- With or without boardlocks
- Contacts available in three types of gold plating on the mating end
- Accurate Lead registration
- Robotic guide notch on the connector housing
- Two standard footprints in both metal-shell and allplastic connectors (318 and 590 mount)
- Applied costs savings thru robotic application
- Recognized under the Component Program of Underwriters Laboratories, Inc., No. E28476
- CSA Certified, No. LR 51928



### AMP

#### HD-20 Front Metal-Shell Right-Angle Posted Connectors 318 Mount

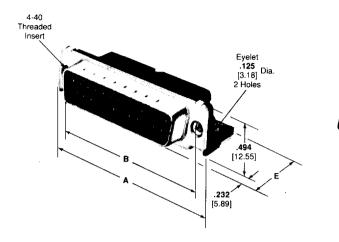
Specifications subject to change. For latest design specifications... 1-800-522-6752

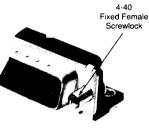
#### Dimensioning:

Dimensions are in inches and millimeters. Values in brackets are metric equivalents.

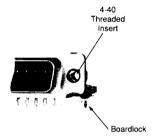
Charts contain dimensions in inches over millimeters.

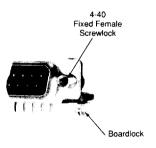
#### **Plugs**

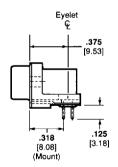




Without Boardlocks







#### Material and Finish:

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

Eyelets - Brass, tin plated

Threaded Inserts - Zinc

Female Screwlock - Zinc

**Boardlock** — Copper alloy, tin-lead plated

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

A — .000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

**B**—Gold flash on mating end, tinlead on termination end, with entire contact nickel underplated

contact nickel underplated

C—.000010 [0.000254] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

	No. of				Contact	Without E	Boardlocks	With Bo	ardlocks
Shell Size	Contact Positions	A	Dimensions B	E	Finish (Plating Code)	With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts	With Fixed Female Screwlocks
					Α	748839-1	748919-1	748879-1	748959-1
1	9	<b>1.222</b> 31.04	. <b>984</b> 24.99	. <b>732</b> 18.59	В	748839-2	748919-2	748879-2	748959-2
			24.99	16.59	С	748839-3	748919-3	748879-3	748959-3
			<b>1.312</b> 24.99	. <b>732</b> 18.59	Α	748840-1	748920-1	748880-1	748960-1
2	15	<b>1.550</b> 39.37			В	748840-2	748920-2	748880-2	748960-2
					С	748840-3	748920-3	748880-3	748960-3
			•	-	Α	748841-1	748921-1	748881-1	748961-1
3	25	<b>2.090</b> 53.09	1 <b>.852</b> 47.04	. <b>738</b> 18.74	В	748841-2	748921-2	748881-2	748961-2
		53.09	47.04	10.74	С	748841-3	748921-3	748881-3	748961-3
					Α	748842-1	748922-1	748882-1	748962-1
4	37	2.738	2.500	. <b>738</b> 18.74	В	748842-2	748922-2	748882-2	748962-2
		69.55	63.50	18.74		748842-3	748922-3	748882-3	748962-3

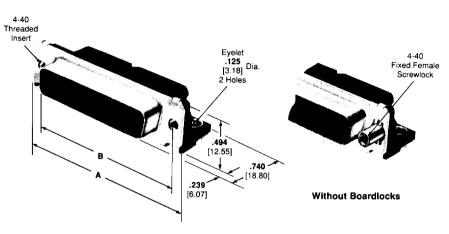
#### **HD-20 Front Metal-Shell Right-Angle Posted Connectors** 318 Mount

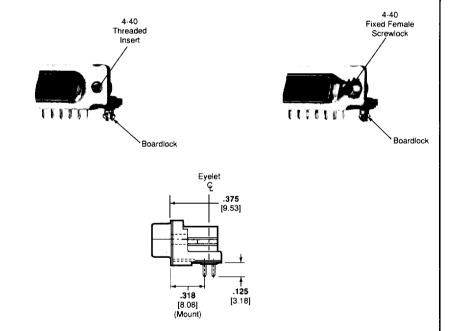
Specifications subject to change. For latest design specifications... 1-800-522-6752

#### Dimensioning:

Dimensions are in inches and millimeters. Values in brackets are metric equivalents. Charts contain dimensions in inches over millimeters

#### Receptacles





#### Material and Finish:

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

thermoplastic, black Eyelets - Brass, tin plated

Threaded Inserts - Zinc

Female Screwlock - Zinc

Boardlock -- Copper alloy, tin-lead plated

#### Socket Contacts (Posted) ---

Phosphor Bronze, duplex plated as follows:

A - .000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

B-Gold flash on mating end, tinlead on termination end, with entire contact nickel underplated

C-.000010 [0.000254] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

	No. of	No. of Dimensions		Contact	Without Boardlocks		With Boardlocks	
Shell Size	Contact Positions	<u>Dimer</u> A	B B	Finish (Plating Code)	With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts	With Fixed Female Screwlocks
		-		Α	748835-1	748915-1	748875-1	748955-1
1	9 <b>1.2</b> 2 31.0	1.222	.984	В	748835-2	748915-2	748875-2	748955-2
		31.04	24.99	C	748835-3	748915-3	748875-3	748955-3
	15	<b>1.550</b> 39.37		Α	748836-1	748916-1	748876-1	748956-1
2			<b>1.312</b> 33.32	В	748836-2	748916-2	748876-2	748956-2
				С	748836-3	748916-3	748876-3	748956-3
				Α	748837-1	748917-1	748877-1	748957-1
3	25	2.090	1 <b>.852</b> 47.04	В	748837-2	748917-2	748877-2	748957-2
		53.09	47.04	C	748837-3	748917-3	748877-3	748957-3
				Α	748838-1	748918-1	748878-1	748958-1
4	37	2.738	2.500	В	748838-2	748918-2	748878-2	748958-2
		69.55	63.50	С	748838-3	748918-3	748878-3	748958-3

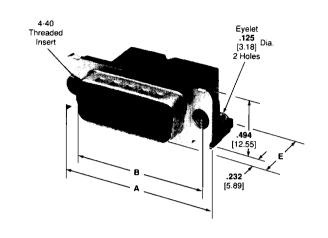
#### HD-20 Front Metal-Shell (Short Leg) **Right-Angle Posted Connectors** 590 Mount

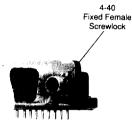
Specifications subject to change. For latest design specifications... 1-800-522-6752

#### Dimensioning:

Dimensions are in inches and millimeters. Values in brackets are metric equivalents. Charts contain dimensions in inches over millimeters.

# Plugs



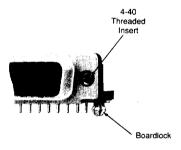


Without Boardlocks

4-40 Fixed Female

Screwlock

Boardlock





Eye (	elet 315 [8.00]
.590 [14.99] (Mount)	.125 [3.18]

#### Material and Finish:

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

Evelets --- Brass, tin plated Threaded Inserts - Zinc

Female Screwlock - Zinc

Boardlock - Copper alloy, tin-lead plated

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

A -- .000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

B-Gold flash on mating end, tinlead on termination end, with entire contact nickel underplated C - .000010 [0.000254] gold on

mating end, tin-lead on termination end, with entire contact nickel underplated

	No. of				Contact	Without E	Boardlocks	With B	oardlocks
Shell	Contact	Dimensions			Finish	With	With Fixed	With	With Fixed
Size	Positions	A	B	E	(Plating Code)	Threaded Inserts	Female Screwlocks	Threaded Inserts	Female Screwlocks
					Α	748847-1	748927-1	748887-1	748967-1
1	9	1 <b>.222</b> 31.04	<b>.984</b> 24.99	<b>.977</b> 24.82	В	748847-2	748927-2	748887-2	748967-2
		31.04		24.02	С	748847-3	748927-3	748887-3	748967-3
			<b>1.312</b> 33.32	. <b>977</b> 24.82	A	748848-1	748928-1	748888-1	748968-1
2	15	<b>1.550</b> 39.37			В	748848-2	748928-2	748888-2	748968-2
		39.37			С	748848-3	748928-3	748888-3	748968-3
					Ä	748849-1	748929-1	748889-1	748969-1
3	25	<b>2.090</b> 53.09	<b>1.852</b> 47.04	<b>.983</b> 24.97	В	748849-2	748929-2	748889-2	748969-2
		55.09	47.04	24.97	С	748849-3	748929-3	748889-3	748969-3
					Α	748850-1	748930-1	748890-1	748970-1
4	37	2.738	2.500	<b>.983</b> 24.97	В	748850-2	748930-2	748890-2	748970-2
		69.55	63.50	24.97	С	748850-3	748930-3	748890-3	748970-3

#### HD-20 Front Metal-Shell (Long Leg) Right-Angle Posted Connectors 590 Mount

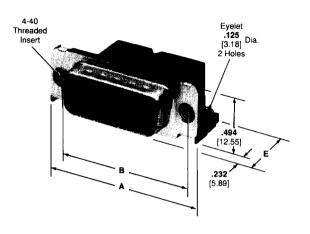
Specifications subject to change.
For latest design specifications...
1-800-522-6752

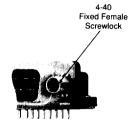
#### Dimensioning:

Dimensions are in inches and millimeters.
Values in brackets are metric equivalents.

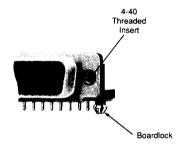
Charts contain dimensions in inches over

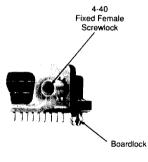
#### Plugs

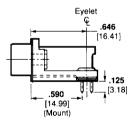




Without Boardlocks







#### Material and Finish:

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

Eyelets — Brass, tin plated
Threaded Inserts — Zinc

Female Screwlock -- Zinc

**Boardlock** — Copper alloy, tin-lead plated

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

A — .000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

**B**—Gold flash on mating end, tinlead on termination end, with entire contact nickel underplated **C**—.000010 [0.000254] gold on

C — .000010 [0.000254] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

	No. of				Contact	Without E	Boardlocks	With B	oardlocks
Shell	No. of Contact	Dimensions			Finish	With	With Fixed	With	With Fixed
Size	Positions	A	В	E	(Plating Code)	Threaded Inserts	Female Screwlocks	Threaded Inserts	Female Screwlocks
					Α	748855-1	748935-1	748895-1	748975-1
1	9	<b>1.222</b> 31.04	. <b>984</b> 24.99	1. <b>003</b> 25.48	В	748855-2	748935-2	748895-2	748975-2
		31.04	24.99	25.40	С	748855-3	748935-3	748895-3	748975-3
			<b>1.312</b> 33.32	<b>1.003</b> 25.48	Α	748856-1	748936-1	748896-1	748976-1
2	15	<b>1.550</b> 39.37			В	748856-2	748936-2	748896-2	748976-2
		39.37			C	748856-3	748936-3	748896-3	748976-3
					Α	748857-1	748937-1	748897-1	748977-1
3	25	2.090	1.852	1.009	В	748857-2	748937-2	748897-2	748977-2
		53.09	47.04	25.63	C	748857-3	748937-3	748897-3	748977-3
			_		Α	748858-1	748938-1	748898-1	748978-1
4	37	2.738	2.500	1.009	В	748858-2	748938-2	748898-2	748978-2
		69.55	63.50	25.63	С	748858-3	748938-3	748898-3	748978-3

### AMP

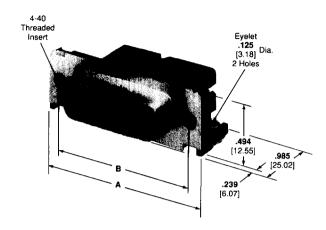
#### HD-20 Front Metal-Shell (Short Leg) Right-Angle Posted Connectors 590 Mount

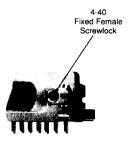
Specifications subject to change. For latest design specifications... 1-800-522-6752

#### Dimensioning

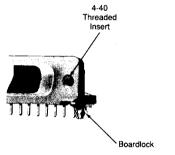
Dimensions are in inches and millimeters. Values in brackets are metric equivalents. Charts contain dimensions in inches over millimeters.

## Receptacles





Without Boardlocks



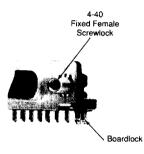
Evelet

.590 [14.99]

(Mount)

.315 [8.00]

[3.18]



#### Material and Finish:

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

Eyelets — Brass, tin plated

Threaded Inserts - Zinc

Female Screwlock --- Zinc

**Boardlock** — Copper alloy, tin-lead plated

**Socket Contacts (Posted)**—
Phosphor Bronze, duplex plated as follows:

A — .000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

**B** — Gold flash on mating end, tinlead on termination end, with entire contact nickel underplated **C** — .000010 [0.000254] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

<b>.</b>	No. of			Contact	Without E	Boardlocks	With B	oardiocks
Shell Size	Contact Positions	A Dimer	nsions B	Finish (Plating Code)	With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts	With Fixed Female Screwlocks
				Α	748843-1	748923-1	748883-1	748963-1
1	9	<b>1.222</b> 31.04	<b>.984</b> 24.99	В	748843-2	748923-2	748883-2	748963-2
			24.55	С	748843-3	748923-3	748883-3	748963-3
		<b>1.550</b> 39.37		Α	748844-1	748924-1	748884-1	748964-1
2	15		<b>1.312</b> 33.32	В	748844-2	748924-2	748884-2	748964-2
			33.32	С	748844-3	748924-3	748884-3	748964-3
				Α	748845-1	748925-1	748885-1	748965-1
3	25	<b>2.090</b> 53.09	<b>1.852</b> 47.04	В	748845-2	748925-2	748885-2	748965-2
		33.09	47.04	С	748845-3	748925-3	748885-3	748965-3
				Α	748846-1	748926-1	748886-1	748966-1
4	37	<b>2.738</b> 69.55	<b>2.500</b> 63.50	В	748846-2	748926-2	748886-2	748966-2
		09.55	03.30	С	748846-3	748926-3	748886-3	748966-3

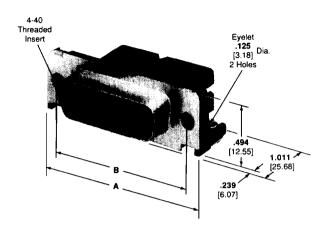
# HD-20 Front Metal-Shell (Long Leg) Right-Angle Posted Connectors 590 Mount

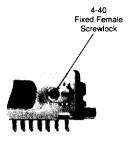
Specifications subject to change. For latest design specifications... 1-800-522-6752

#### Dimensioning:

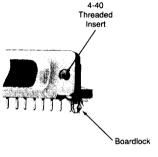
Dimensions are in inches and millimeters. Values in brackets are metric equivalents Charts contain dimensions in inches over millimeters

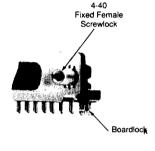
### Receptacles

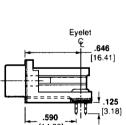




Without Boardlocks







[14.99] (Mount)

#### Material and Finish:

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

thermoplastic, black

Eyelets - Brass, tin plated

Threaded Inserts - Zinc

Female Screwlock - Zinc

**Boardlock** — Copper alloy, tin-lead plated

Socket Contacts (Posted) —

Phosphor Bronze, duplex plated as follows:

A — .000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

B — Gold flash on mating end, tinlead on termination end, with entire contact nickel underplated

C — .000010 [0.000254] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

	No. of			Contact	Without E	Boardlocks	With Be	pardlocks
Shell Size	Contact Positions	Dimei A	nsions_ B	Finish (Plating Code)	With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts	With Fixed Female Screwlocks
		,		Α	748851-1	748931-1	748891-1	748971-1
1	9	<b>1.222</b> 31.04	<b>.984</b> 24.99	В	748851-2	748931-2	748891-2	748971-2
		31.04	24.99	С	748851-3	748931-3	748891-3	748971-3
		_		Α	748852-1	748932-1	748892-1	748972-1
2	15	<b>1.550</b> 39.37	<b>1.312</b> 33.32	В	748852-2	748932-2	748892-2	748972-2
				С	748852-3	748932-3	748892-3	748972-3
				A	748853-1	748933-1	748893-1	748973-1
3	25	2.090	1.852	В	748853-2	748933-2	748893-2	748973-2
		53.09	47.04	С	748853-3	748933-3	748893-3	748973-3
				Α	748854-1	748934-1	748894-1	748974-1
4	37	2.738		В	748854-2	748934-2	748894-2	748974-2
		69.55		С	748854-3	748934-3	748894-3	748974-3

#### **HD-20 All-Plastic Right-Angle Posted Connectors** 318 Mount

Specifications subject to change. For latest design specifications... 1-800-522-6752

**Dimensioning:**Dimensions are in inches and millimeters. Values in brackets are metric equivalents. Charts contain dimensions in inches over

#### Material and Finish:

Housing - 94V-0 rated thermoplastic, black

Eyelets - Brass, tin plated

Threaded Inserts — Zinc

Female Screwlock - Zinc

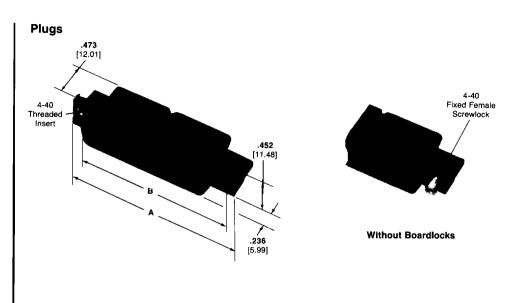
Boardlock - Copper alloy, tin-lead plated

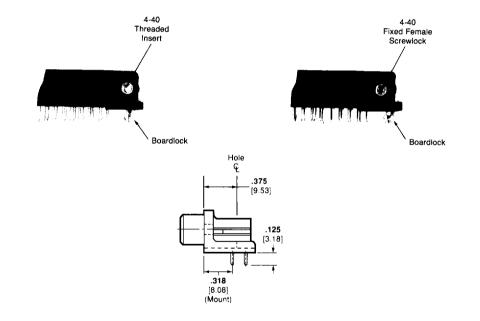
Pin Contacts (Posted) --- Brass, duplex plated as follows:

A--.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

B - Gold flash on mating end tinlead on termination end, with entire contact nickel underplated

C — .000010 [0.000254] gold on mating end, tin-lead on termination end, with entire contact nickel underplated





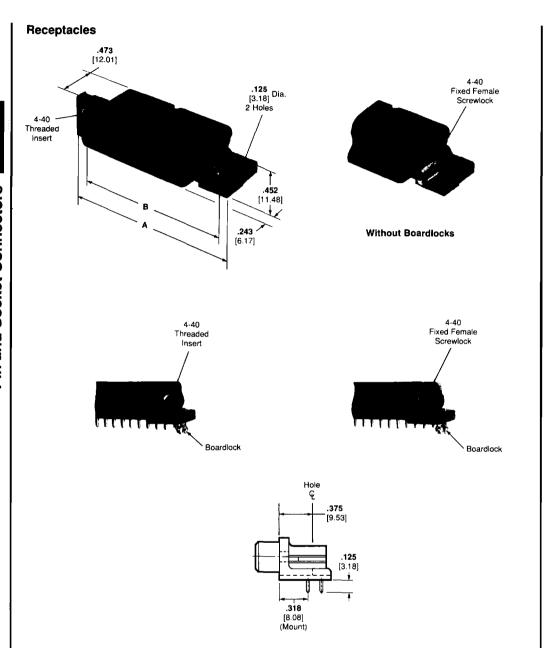
	No. of			Contact	Without	Boardlocks	With B	oardlocks
Shell Size	Contact Positions	Dime:	nsions B	Finish (Plating Code)	With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts	With Fixed Female Screwlocks
				Α	748863-1	748943-1	748903-1	748983-1
1	9	<b>1.222</b> 31.04	<b>.984</b> 24.99	В	748863-2	748943-2	748903-2	748983-2
		31.04	24.55		748863-3	748943-3	748903-3	748983-3
	15			A	748864-1	748944-1	748904-1	748984-1
2		<b>1.550</b> 39.37		В	748864-2	748944-2	748904-2	748984-2
				С	748864-3	748944-3	748904-3	748984-3
				Α	748865-1	748945-1	748905-1	748985-1
3	25	<b>2.090</b> 53.09	1 <b>.852</b> 47.04	В	748865-2	748945-2	748905-2	748985-2
		33.08	47.04	С	748865-3	748945-3	748905-3	748985-3
				Α	748866-1	748946-1	748906-1	748986-1
4	37	2.738 69.55	<b>2.500</b> 63.50	В	748866-2	748946-2	748906-2	748986-2
		09.55	03.30	С	748866-3	748946-3	748906-3	748986-3

#### HD-20 All-Plastic Right-Angle Posted Connectors 318 Mount

Specifications subject to change. For latest design specifications... 1-800-522-6752

#### Dimensioning:

Dimensions are in inches and millimeters. Values in brackets are metric equivalents. Charts contain dimensions in inches over millimeters



#### Material and Finish:

Housing — 94V-0 rated thermoplastic, black

Eyelets - Brass, tin plated

Threaded Inserts - Zinc

Female Screwlock - Zinc

**Boardlock** — Copper alloy, tin-lead plated

Socket Contacts (Posted)—

Phosphor Bronze, duplex plated as follows:

**A**—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

B — Gold flash on mating end, tinlead on termination end, with entire contact nickel underplated C — .000010 [0.000254] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

	No. of			Contact	Without E	Boardlocks	With Bo	oardlocks			
Shell Size	Contact Positions	Dimer	B B	Finish (Plating Code)	With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts	With Fixed Female Screwlocks			
				Ā	748859-1	748939-1	748899-1	748979-1			
1	9	<b>1.222</b> 31.04	<b>.984</b> 24.99	В	748859-2	748939-2	748899-2	748979-2			
			24.99	C	748859-3	748939-3	748899-3	748979-3			
		15 <b>1.550</b> 39.37		Α	748860-1	748940-1	748900-1	748980-1			
2	15		<b>1.312</b> 33.32	В	748860-2	748940-2	748900-2	748980-2			
				С	748860-3	748940-3	748900-3	748980-3			
			-	Α	748861-1	748941-1	748901-1	748981-1			
3	25	<b>2.090</b> 53.09	<b>1.852</b> 47.04	В	748861-2	748941-2	748901-2	748981-2			
		53.09	47.04	С	748861-3	748941-3	748901-3	748981-3			
			2.500				A	748862-1	748942-1	748902-1	748982-1
4	37	2.738		В	748862-2	748942-2	748902-2	748982-2			
		69.55	63.50		748862-3	748942-3	748902-3	748982-3			



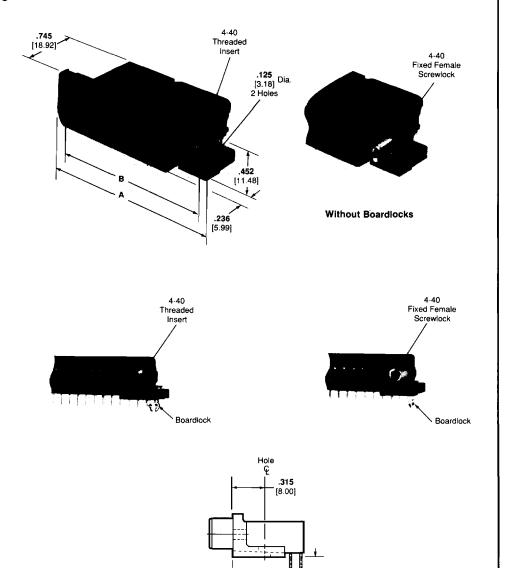
#### **HD-20 All-Plastic Right-Angle Posted Connectors** 590 Mount

Specifications subject to change. For latest design specifications... 1-800-522-6752

#### Dimensioning:

Dimensions are in inches and millimeters. Values in brackets are metric equivalents. Charts contain dimensions in inches over millimeters.

# Plugs



#### Material and Finish:

Housing - 94V-0 rated thermoplastic, black

Eyelets --- Brass, tin plated

Threaded Inserts - Zinc

Female Screwlock — Zinc

Boardlock --- Copper alloy, tin-lead plated

Pin Contacts (Posted) — Brass,

duplex plated as follows: A—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

B - Gold flash on mating end tinlead on termination end, with entire contact nickel underplated **C** — .000010 [0.000254] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

	No. ad			Contact	Without E	oardlocks	With B	oardlocks
Shell Size	No. of Contact Positions	Dimer A	nsions B	Finish (Plating Code)	With Threaded Inserts	With Fixed Female Screwlocks	With Threaded Inserts	With Fixed Female Screwlocks
				A	748871-1	748951-1	748911-1	748991-1
1	9	<b>1.222</b> 31.04	<b>.984</b> 24.99	В	748871-2	748951-2	748911-2	748991-2
			24.55	С	748871-3	748951-3	748911-3	748991-3
_	15	15 <b>1.550</b> 39.37		Α	748872-1	748952-1	748912-1	748992-1
2			1 <b>.312</b> 33.32	В	748872-2	748952-2	748912-2	748992-2
				С	748872-3	748952-3	748912-3	748992-3
				A	748873-1	748953-1	748913-1	748993-1
3	25	<b>2.090</b> 53.09	<b>1.852</b> 47.04	В	748873-2	748953-2	748913-2	748993-2
		33.09	47.04	С	748873-3	748953-3	748913-3	748993-3
				Α	748874-1	748954-1	748914-1	748994-1
4	37	<b>2.738</b> 69.55	<b>2.500</b> 63.50	В	748874-2	748954-2	748914-2	748994-2
		09.33	63.50	С	748874-3	748954-3	748914-3	748994-3

.125

[3.18]

.590

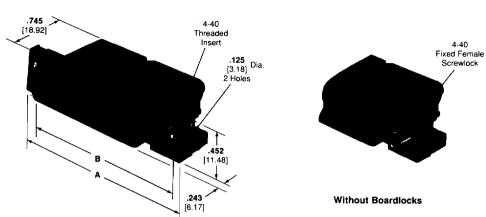
(Mount)

# Pin and Socket Connectors

Specifications subject to change. For latest design specifications... 1-800-522-6752 **Right-Angle Posted Connectors** 590 Mount

Dimensions are in inches and millimeters. Values in brackets are metric equivalents. Charts contain dimensions in inches over millimeters

### Receptacles



4-40

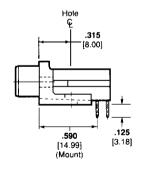
Threaded

Insert

Boardlock

# 4-40 Fixed Female Screwlock

Boardlock



#### Material and Finish:

Housing -- 94V-0 rated thermoplastic, black

Eyelets - Brass, tin plated

Threaded Inserts - Zinc

Female Screwlock - Zinc

Boardlock - Copper alloy, tin-lead plated

Socket Contacts (Posted) -Phosphor Bronze, duplex plated as follows:

**A**—.000030 [0.00076] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

B-Gold flash on mating end, tinlead on termination end, with entire

contact nickel underplated

C — .000010 [0.000254] gold on mating end, tin-lead on termination end, with entire contact nickel underplated

	N4	_ <b>*</b>		Contact	Without E	Boardiocks	With Bo	ardlocks
Shell Size	No. of Contact Positions	Dimer	nsions B	Finish (Plating	With Threaded	With Fixed Female	With Threaded	With Fixed Female
	Positions		-	`Code)	Inserts	Screwlocks	Inserts	Screwlocks
	· <del>-</del> .			A	748867-1	748947-1	748907-1	748987-1
1	9	<b>1.222</b> 31.04	<b>.984</b> 24.99	В	748867-2	748947-2	748907-2	748987-2
		31.04	24.99	C	748867-3	748947-3	748907-3	748987-3
		-	<b>1.312</b> 33.32	Α	748868-1	748948-1	748908-1	748988-1
2	15	<b>1.550</b> 39.37		В	748868-2	748948-2	748908-2	748988-2
				С	748868-3	748948-3	748908-3	748988-3
				A	748869-1	748949-1	748909-1	748989-1
3	25	2.090	1.852	В	748869-2	748949-2	748909-2	748989-2
		53.09	47.04	С	748869-3	748949-3	748909-3	748989-3
				A	748870-1	748950-1	748910-1	748990-1
4	37	2.738	2.500	В	748870-2	748950-2	748910-2	748990-2
		69.55	63.50	С	748870-3	748950-3	748910-3	748990-3

#### **Pc Board Mounting Specifications**

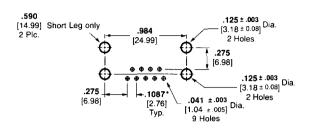
Specifications subject to change. For latest design specifications... 1-800-522-6752

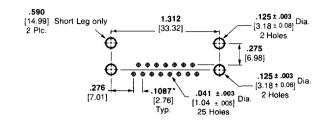
#### Dimensioning:

Dimensions are in inches and millimeters. Values in brackets are metric equivalents.

Charts contain dimensions in inches over millimeters

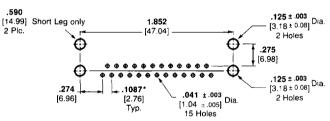
#### **HD-20 Right-Angle Posted Connectors**

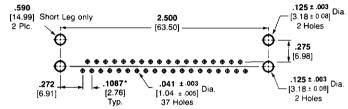




Shell Size 1 (9 position)

Shell Size 2 (15 Position)





Shell Size 3 (25 Position)

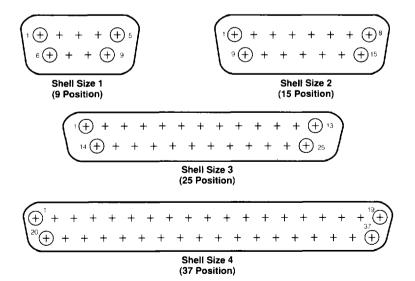
Shell Size 4 (37 Position)

- \* This dimension is non-cumulative.
- Notes: 1. All receptacles are preloaded with size 20 DF socket contacts.

  - 2. Recommended pc board thickness is .062 [1.57] for connectors with boardlocks and .093 [2.36] max. for all others.

    3. Pc board layouts illustrated above serve as a guide only; they are not to be used for actual design or construction of customer equipment. Consult AMP Incorporated for detailed pc board layout requirements.

#### **Contact Arrangements** Plug\*



<sup>\*</sup>Receptacle contact arrangements are mirror image of plugs.