Thru-Hole Headers—Shrouded, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Product Facts

- High density; contacts spaced on .050 x .100 [1.27 x 2.54] centers
- Single row; select sizes 4 thru 50 positions
- Double row; select sizes 10 thru 100 positions
- Stand-offs for ease of cleaning
- High temperature tolerant thermoplastic housings
- Shrouded and unshrouded headers available in single and double row, vertical and right-angle configurations

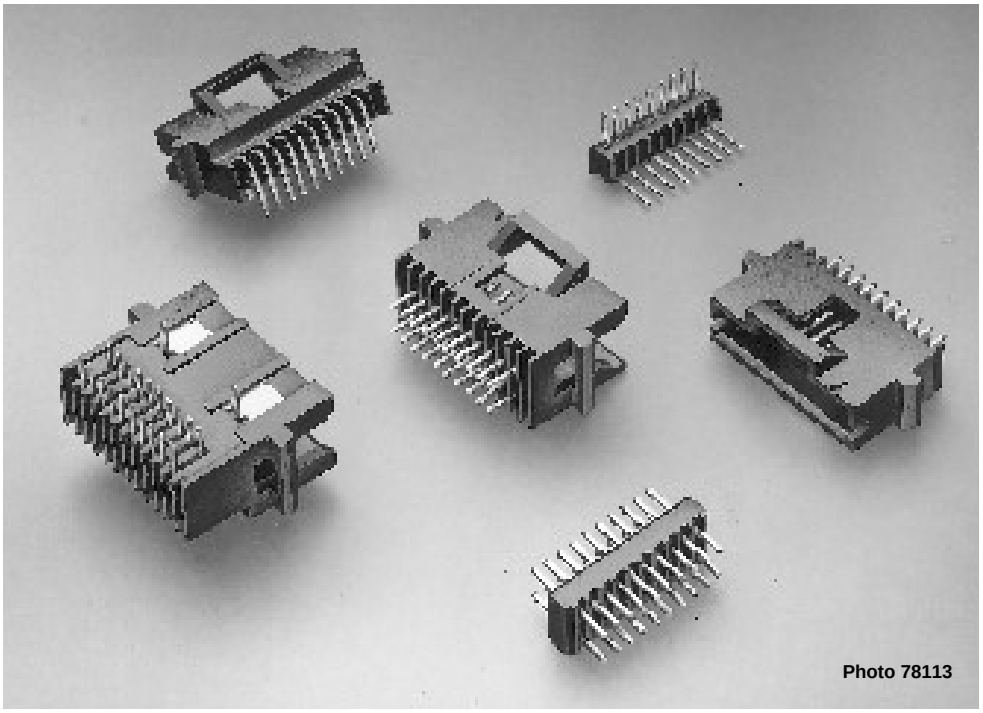

Photo 78113

The AMPMODU System 50 interconnection system is designed to better meet industry's need for a high density interconnect system. The Board Mounted Thru-Hole Headers are available in shrouded and unshrouded versions. They are composed of single and double row post headers with .050 x .100 [1.27 x 2.54] spacing between contacts for extreme density and efficient use of printed circuit board area. The headers are available in 4 through 50 positions, in a single row configuration, and 10 through 100 positions, in a double row design.

Board mounted post headers are available in right-angle and vertical configurations. Shrouded post headers provide polarization and alignment features for mating printed circuit boards and cable connectors, while unshrouded headers allow close stacking of daughter cards. Housings for the headers are made of black thermoplastic material with a 94V-0 rating. The housings have stand-offs for free drainage of flux cleaning solutions.

Catalog 1307819
Revised 6-04

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.

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Canada: 1-905-470-4425
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C. America: 52-55-5-729-0425

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Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967

Thru-Hole Headers—Shrouded, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Single Row, Right-Angle with Solder Clips

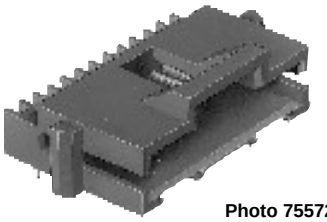
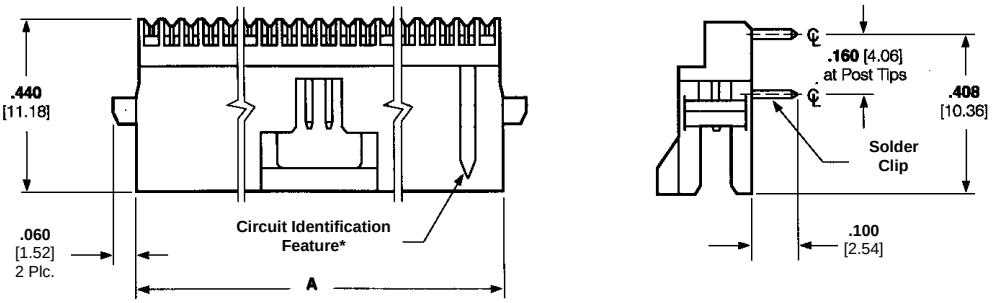
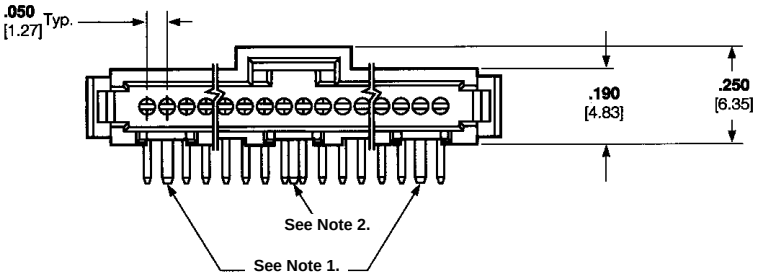


Photo 75572





Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Characteristics—page 63

Mateable Connectors—pages 36, 47 & 48

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031

No. of Pos.	Dimension A	Part Numbers
4	**.330** [8.38]	104074-7
5	**.380** [9.65]	104074-2
6	**.430** [10.92]	104074-8
8	**.530** [13.46]	1-104074-0
10	**.630** [16.00]	104074-1
12	**.730** [18.54]	1-104074-1
15	**.880** [22.35]	104074-3
20	**1.130** [28.70]	104074-4
22	**1.230** [31.24]	1-104074-4
25	**1.380** [35.05]	104074-5
28	**1.530** [38.86]	2-104074-0
30	**1.630** [41.40]	104074-6
36	**1.930** [49.02]	1-104074-6
40	**2.130** [54.10]	1-104074-7
45	**2.380** [60.45]	1-104074-8
50	**2.630** [66.80]	1-104074-9

*Circuit identification feature omitted on 4, 5 and 6 position headers.

Notes:

1. Solder Clips located as shown for 10 through 30 position headers.
2. Solder Clips located as shown for 4 through 8 and 36 through 50 position headers.

Catalog 1307819
Revised 6-04

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UK: 44-141-810-8967

Thru-Hole Headers—Shrouded, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Single Row, Vertical

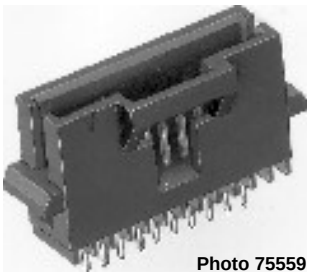
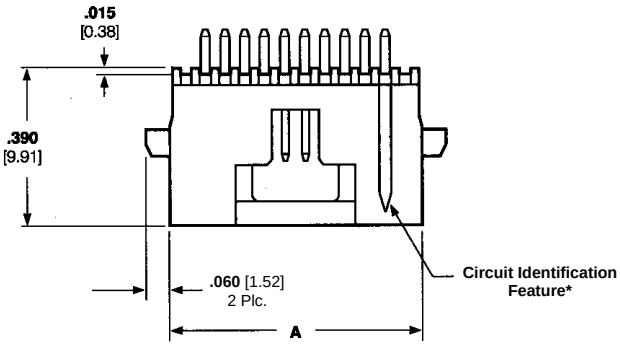
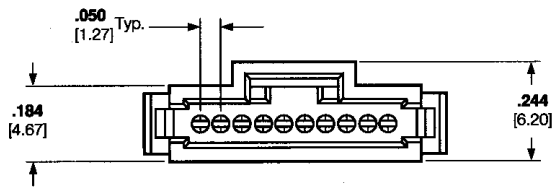
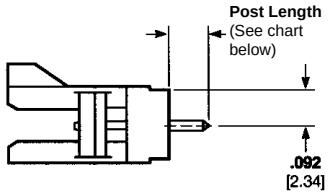


Photo 75559







Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .00050 [0.00127] nickel

Related Product Data:

Performance Characteristics—page 63

Mateable Connectors—pages 36, 47 & 48

Board-to-Board Spacing—page 63

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031

No. of Pos.	Dimension A	Part Numbers	
		Post Length	
		.100 [2.54]	.145 [3.68]
4	**.330** [8.38]	104071-7	—
5	**.380** [9.65]	104071-2	—
6	**.430** [10.92]	104071-8	—
8	**.530** [13.46]	1-104071-0	—
10	**.630** [16.00]	104071-1	—
12	**.730** [18.54]	1-104071-1	—
13	**.780** [19.81]	1-104071-2	—
15	**.880** [22.35]	104071-3	104804-2
17	**.980** [24.89]	1-104071-3	—
20	**1.130** [28.70]	104071-4	—
22	**1.230** [31.24]	1-104071-4	—
25	**1.380** [35.05]	104071-5	104804-1
30	**1.630** [41.40]	104071-6	—
36	**1.930** [49.02]	1-104071-6	—
40	**2.130** [54.10]	1-104071-7	—
50	**2.630** [66.80]	1-104071-9	—

*Circuit identification feature omitted on 4, 5, and 6 position headers.

Thru-Hole Headers—Shrouded, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Double Row, Right-Angle with Solder Clips

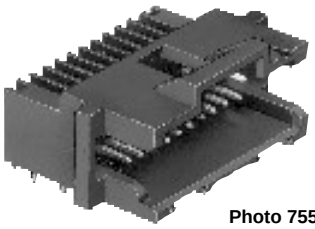
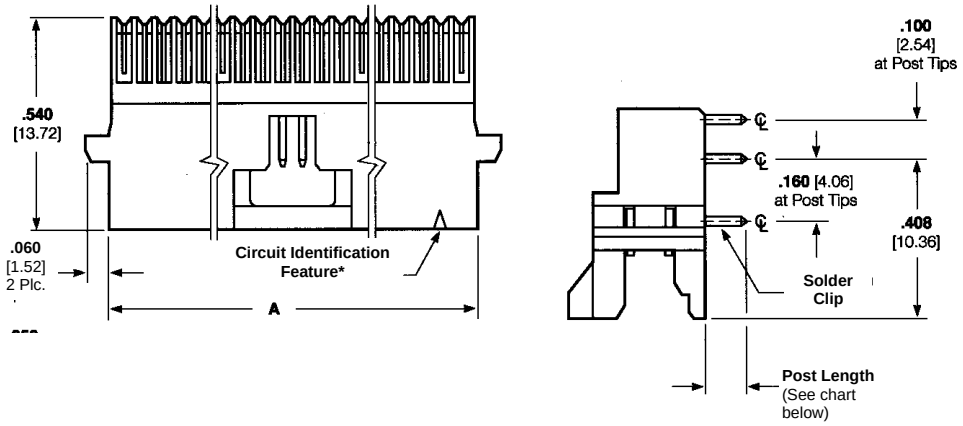
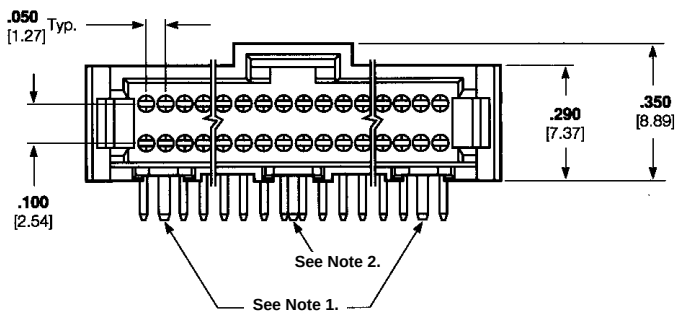


Photo 75561





Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Characteristics—page 63

Mateable Connectors—pages 38, 43, 49, 50, & 54

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031

No. of Pos.	Dimension A	Part Numbers	
		Post Length	
		.100 [2.54]	.145 [3.68]
8	**.330** [8.32]	104069-8	—
10	**.380** [9.65]	104069-4	1-104477-2
14	**.480** [12.19]	1-104069-0	—
16	**.530** [13.46]	1-104069-1	—
20	**.630** [16.00]	104069-1	104477-2
24	**.730** [18.54]	1-104069-2	1-104477-0
26	**.780** [19.81]	1-104069-3	—
30	**.880** [22.35]	104069-5	104477-3
34	**.980** [24.89]	1-104069-4	—
40	**1.130** [28.70]	104069-6	104477-4
50	**1.380** [35.05]	104069-2	104477-5
60	**1.630** [41.40]	104069-7	104477-9
68	**1.830** [46.48]	1-104069-8	—
72	**1.930** [49.02]	1-104069-6	104477-1
80	**2.130** [54.10]	104069-3	104477-6
100	**2.630** [66.80]	1-104069-7	104477-7

*Circuit identification feature omitted on 8, 10 and 12 position headers.

Notes:

1. Solder Clips located as shown for 16 through 100 position headers.
2. Solder Clips located as shown for 8 through 12 and 60 through 100 position headers.

Catalog 1307819
Revised 6-04

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UK: 44-141-810-8967

Thru-Hole Headers—Shrouded, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Double Row, Vertical

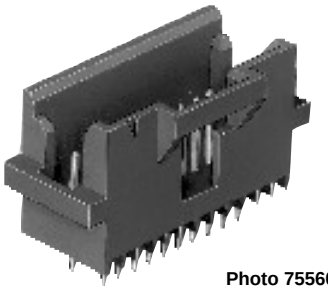
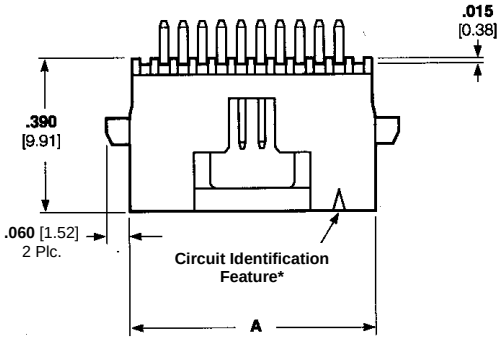


Photo 75560



Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contact—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127]nickel

Related Product Data:

Performance Specifications—page 63

Mateable Connectors—pages 38, 43, 49, 50, & 54

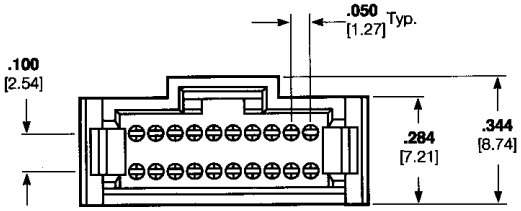
Board-to-Board Spacing—page 63

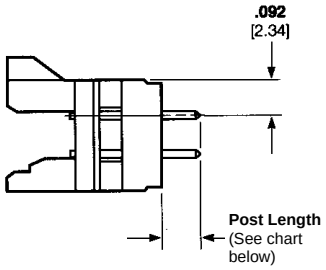
PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031





No. of Pos.	Dimension A	Part Numbers	
		Post Length	
		.100 [2.54]	.145 [3.68]
10	**.380** [9.65]	104068-2	—
12	**.430** [10.92]	104068-8	—
14	**.480** [12.19]	104068-9	—
16	**.530** [13.46]	1-104068-0	104666-9
20	**.630** [16.00]	104068-1	104666-1
24	**.730** [18.54]	1-104068-1	1-104666-0
26	**.780** [19.81]	1-104068-2	—
30	**.880** [22.35]	104068-3	104666-2
34	**.980** [24.89]	1-104068-3	—
40	**1.130** [28.70]	104068-4	104666-3
44	**1.230** [31.24]	1-104068-4	—
50	**1.380** [35.05]	104068-5	104666-4
60	**1.630** [41.40]	104068-6	104666-7
68	**1.830** [46.48]	1-104068-8	104666-8
72	**1.930** [49.02]	1-104068-5	—
80	**2.130** [54.10]	1-104068-6	104666-5
100	**2.630** [66.80]	1-104068-7	104666-6

*Circuit identification feature omitted on 10 and 12 position headers.

Catalog 1307819
Revised 6-04

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UK: 44-141-810-8967

Thru-Hole Headers—Shrouded, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Double Row, Vertical With Card Slots

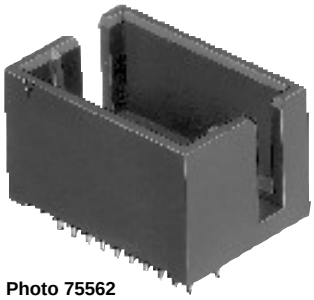


Photo 75562

Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Specifications—page 63

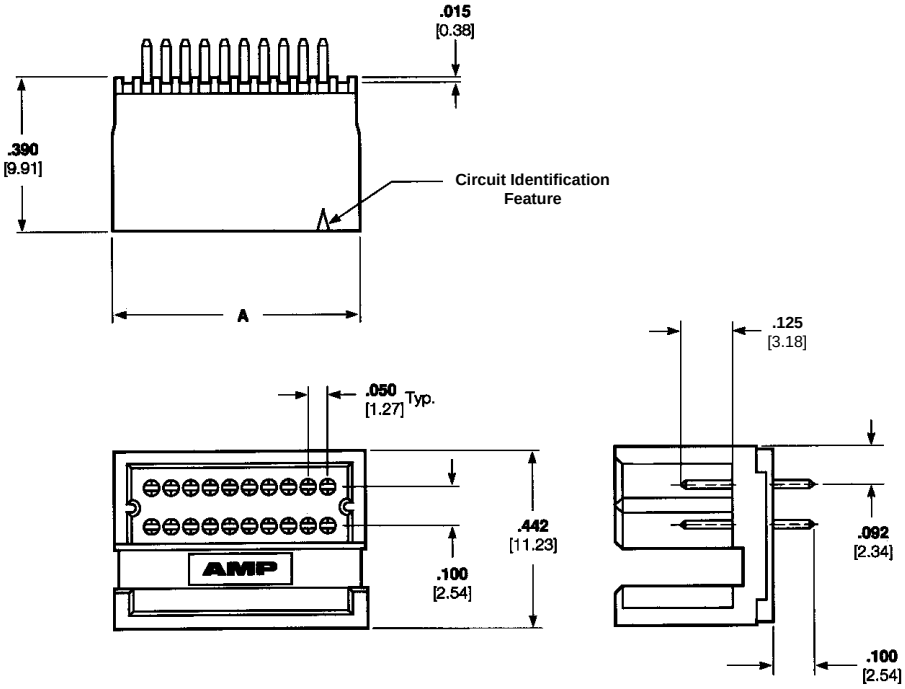
Mateable Connectors—page 37

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031



No. of Pos.	Dimension A	Part Numbers
10	**.394** [10.01]	104076-5
20	**.644** [16.36]	104076-1
30	**.894** [22.71]	104076-6
40	**1.144** [29.06]	104076-3
50	**1.394** [35.41]	104076-7
60	**1.644** [41.76]	104076-2
80	**2.144** [54.46]	104076-4
100	**2.644** [67.16]	104076-8

Catalog 1307819
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Thru-Hole Headers—Unshrouded, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Single Row, Right-Angle

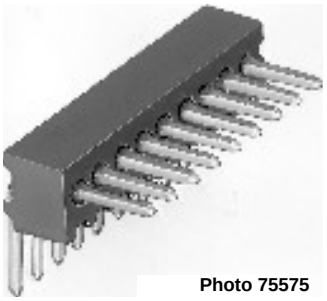
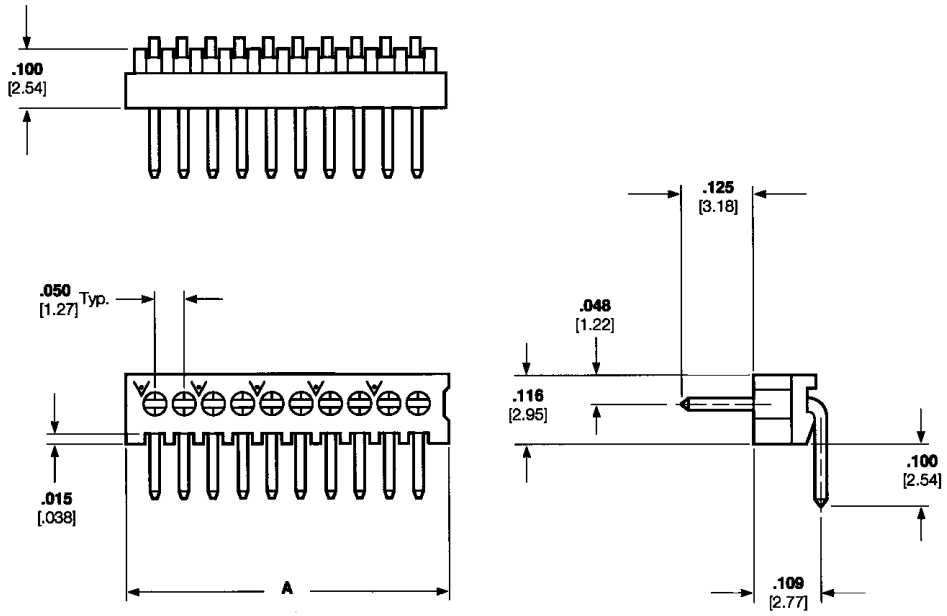


Photo 75575



Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Characteristics—page 63

Mateable Connectors—pages 35, 36, 47, & 48

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031

No. of Pos.	Dimension A	Part Numbers
4	**.215** [5.46]	104186-1
8	**.415** [10.54]	104186-5
12	**.615** [15.62]	104186-7
15	**.765** [19.43]	104186-9
17	**.865** [21.97]	1-104186-0
20	**1.015** [25.78]	1-104186-1
25	**1.265** [32.13]	1-104186-3
30	**1.515** [38.48]	1-104186-5
31	**1.565** [39.75]	2-104186-0
40	**2.015** [51.18]	1-104186-7

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UK: 44-141-810-8967

Thru-Hole Headers—Unshrouded, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Single Row, Vertical

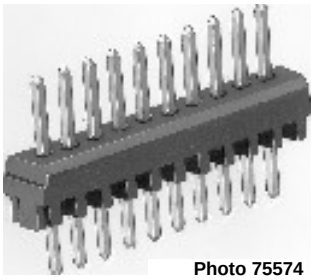
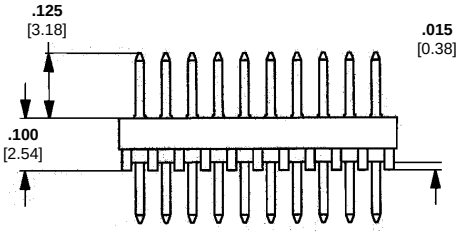
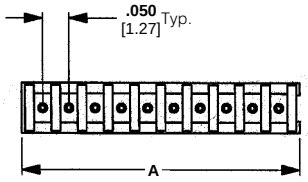
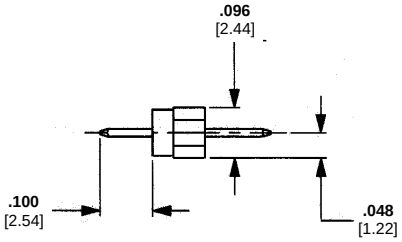


Photo 75574







Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Specifications—page 63

Mateable Connectors—pages 35, 36, 47, & 48

Board-to-Board Spacing—page 63

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031

No. of Pos.	Dimension A	Part Numbers
4	**.215** [5.46]	104178-1
6	**.315** [8.00]	104178-3
8	**.415** [10.54]	104178-5
10	**.515** [13.08]	104178-6
20	**1.015** [25.78]	1-104178-1
25	**1.265** [32.13]	1-104178-3

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Japan: 81-44-844-8013
UK: 44-141-810-8967

Thru-Hole Headers—Unshrouded, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board (Continued)

Double Row, Right-Angle

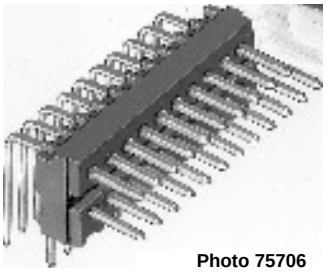
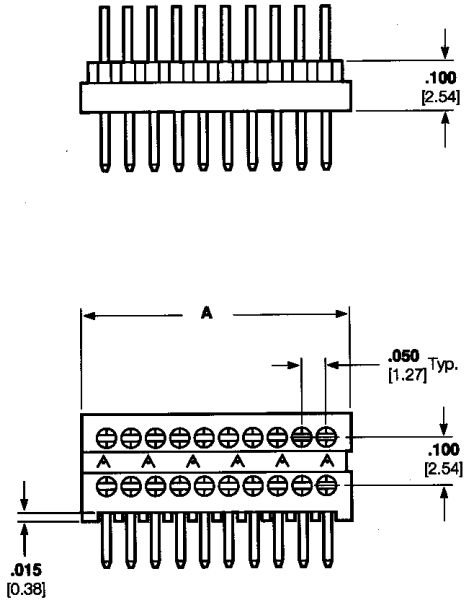
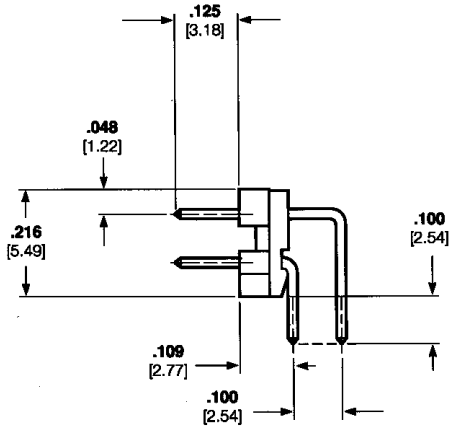


Photo 75706





Material and Finish:

Housing—Black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Specifications—page 63

Mateable Connectors—pages 37, 38, 43, 49 & 50

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031

No. of Pos.	Dimension A	Part Numbers
10	**.265** [6.73]	104118-3
20	**.515** [13.08]	104118-7
30	**.765** [19.43]	1-104118-0
40	**1.015** [25.78]	1-104118-2
50	**1.265** [32.13]	104118-1
60	**1.515** [38.48]	1-104118-4
80	**2.015** [51.18]	1-104118-6
100	**2.515** [63.88]	1-104118-7

Thru-Hole Headers—Unshrouded, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board (Continued)

Double Row, Vertical

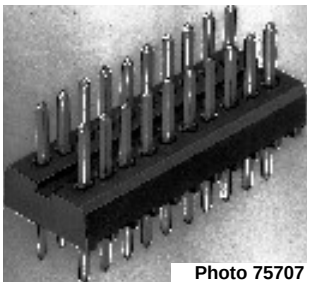
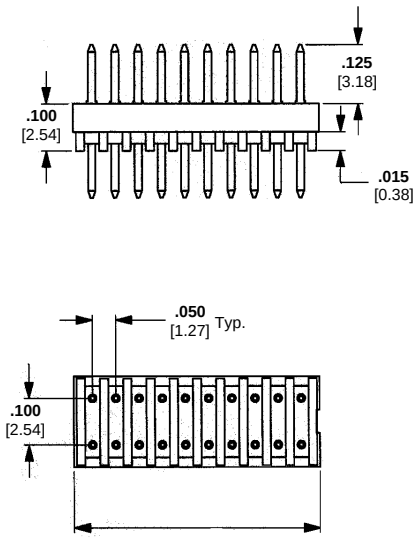


Photo 75707



Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Characteristics—page 63

Mateable Connectors—pages 37, 38, 43, 49, & 50

Board-to-Board Spacing—page 63

PC Board Hole Layout—page 40

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031

No. of Pos.	Dimension A	Part Numbers
8	**.215** [5.46]	103916-3
20	**.515** [13.08]	103916-2
30	**.765** [19.43]	103916-9
36	**.915** [23.24]	1-103916-8
40	**1.015** [25.78]	1-103916-1
50	**1.265** [32.13]	1-103916-3
60	**1.515** [38.48]	1-103916-4
80	**2.015** [51.18]	1-103916-6
100	**2.515** [63.88]	1-103916-7

Catalog 1307819
Revised 6-04

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: 52-55-5-729-0425

South America: 55-11-3611-1514
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967

Thru-Hole Receptacles, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Product Facts

- High density; contacts spaced on .050 x .100 [1.27 x 2.54] centers
- Right-angle and vertical styles
- Single row; select sizes 5 thru 50 positions
- Double row; select sizes 10 thru 100 positions
- Contacts are selectively plated with gold
- Stand-offs for removal of solder flux

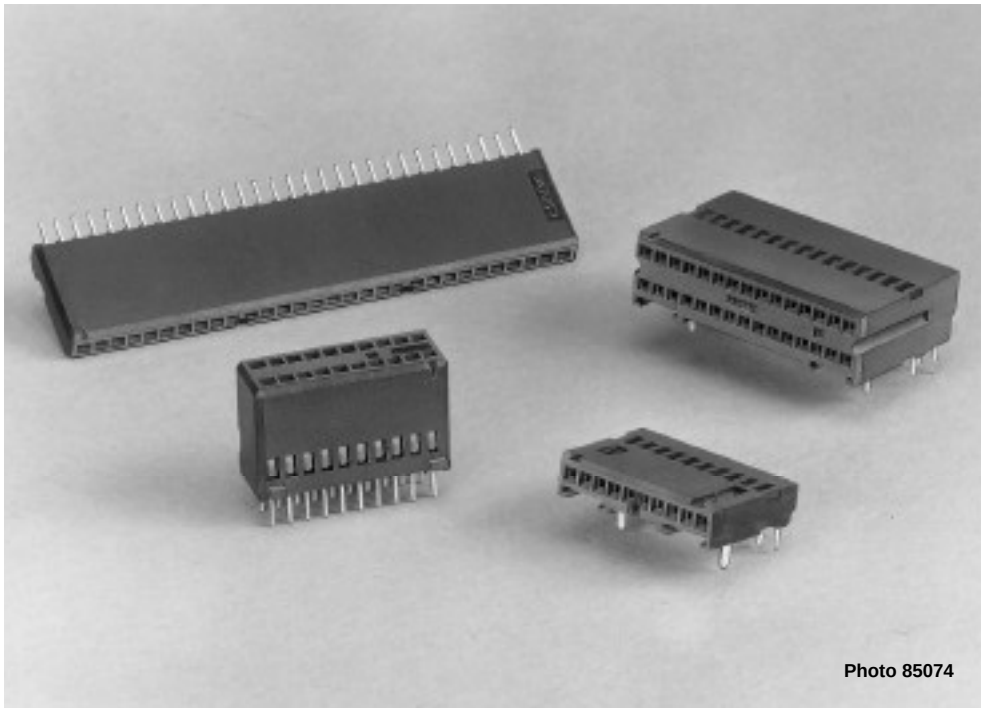


Photo 85074

The AMPMODU System 50 thru-hole receptacles offer a wide variety of high density board-to-board connectors. The .050 [1.27] spacing between each contact provides an extremely dense interconnect package and results in a more efficient use of the printed circuit board space.

AMPMODU System 50 thru-hole receptacles are available in right-angle and vertical configurations and are composed of single and double row versions. The single row versions are available in select sizes of 5 thru 50 positions and double row in positions from 10 thru 100.

Receptacle contacts and mating .015 [0.38] square posts are formed from high conductivity copper alloy and are selectively plated with gold for higher performance and reliability. The receptacle housings are made of black thermoplastic, with a 94V-0 rating to withstand high temperatures of reflow soldering and incorporate stand-offs for free drainage of flux cleaning solutions.

Catalog 1307819
Revised 6-04

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UK: 44-141-810-8967

Thru-Hole Receptacles, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board (Continued)

Single Row, Right-Angle With Solder Clips

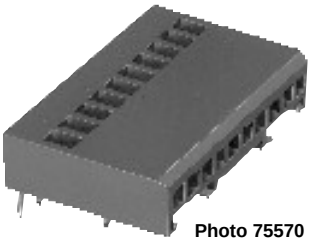


Photo 75570

Material and Finish:

Housing—Black thermoplastic 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Specifications—page 63

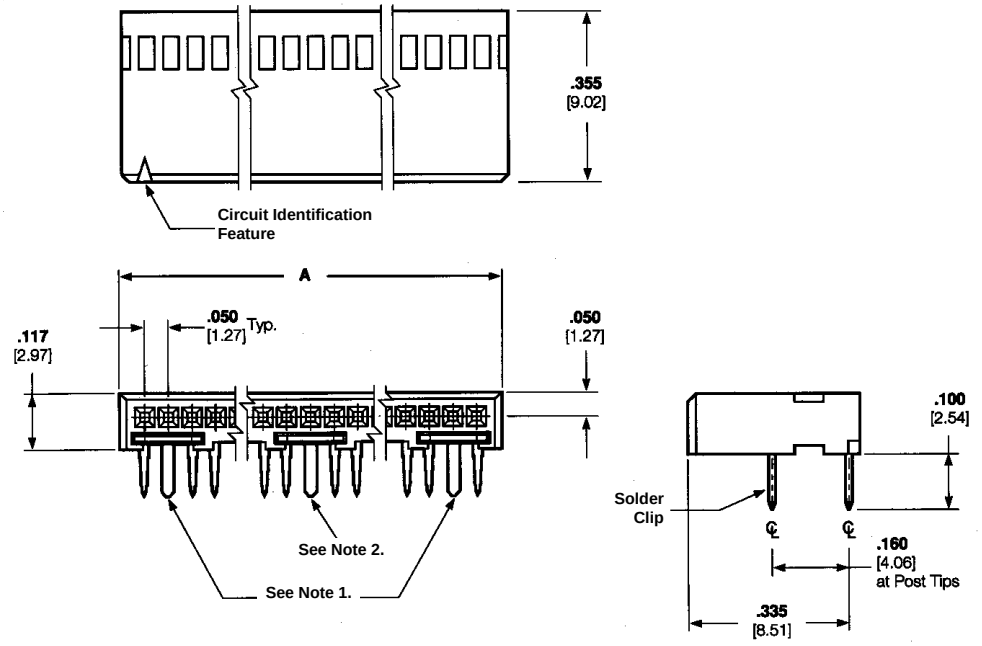
Mateable Connectors—pages 30 & 31

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031



No. of Pos.	Dimension A	Part Numbers
10	**.544** [13.82]	104196-2
15	**.794** [20.17]	104196-4
20	**1.044** [26.52]	104196-5

Notes:

1. Solder Clips located as shown for 10 through 25 position receptacles.
2. Solder Clips located as shown for 5 and 25 position receptacles.

Catalog 1307819
Revised 6-04

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

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Japan: 81-44-844-8013
UK: 44-141-810-8967

Thru-Hole Receptacles, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board (Continued)

Single Row, Vertical

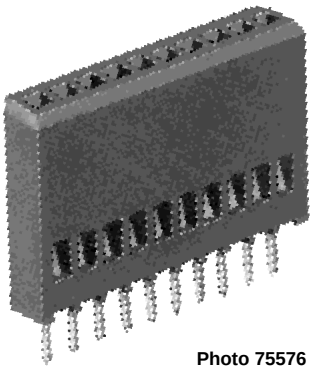
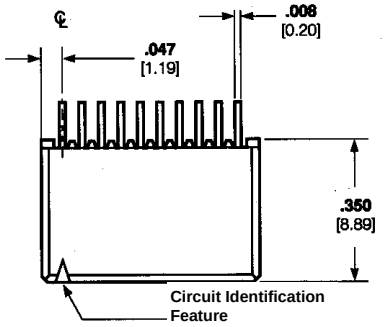
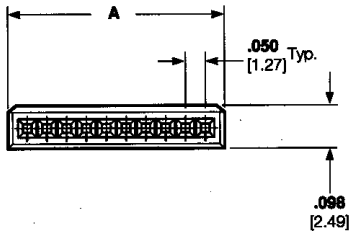
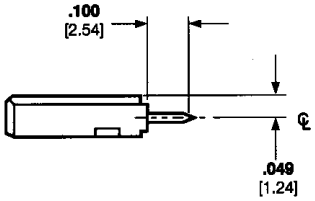


Photo 75576







Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Specifications—page 63

Mateable Connectors—pages 25, 26, 30, & 31

Board-to-Board Spacing—page 63

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031

No. of Pos.	Dimension A	Part Numbers
10	**.544** [13.82]	104192-2
12	**.644** [16.35]	104192-3
15	**.794** [20.17]	104192-4
20	**1.044** [26.52]	104192-5
30	**1.544** [39.22]	104192-7

Catalog 1307819
Revised 6-04

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Japan: 81-44-844-8013
UK: 44-141-810-8967

Thru-Hole Receptacles, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board (Continued)

Double Row, Right-Angle

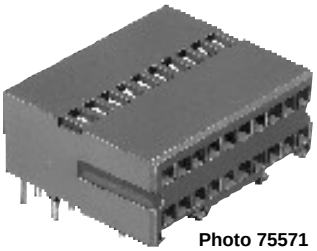
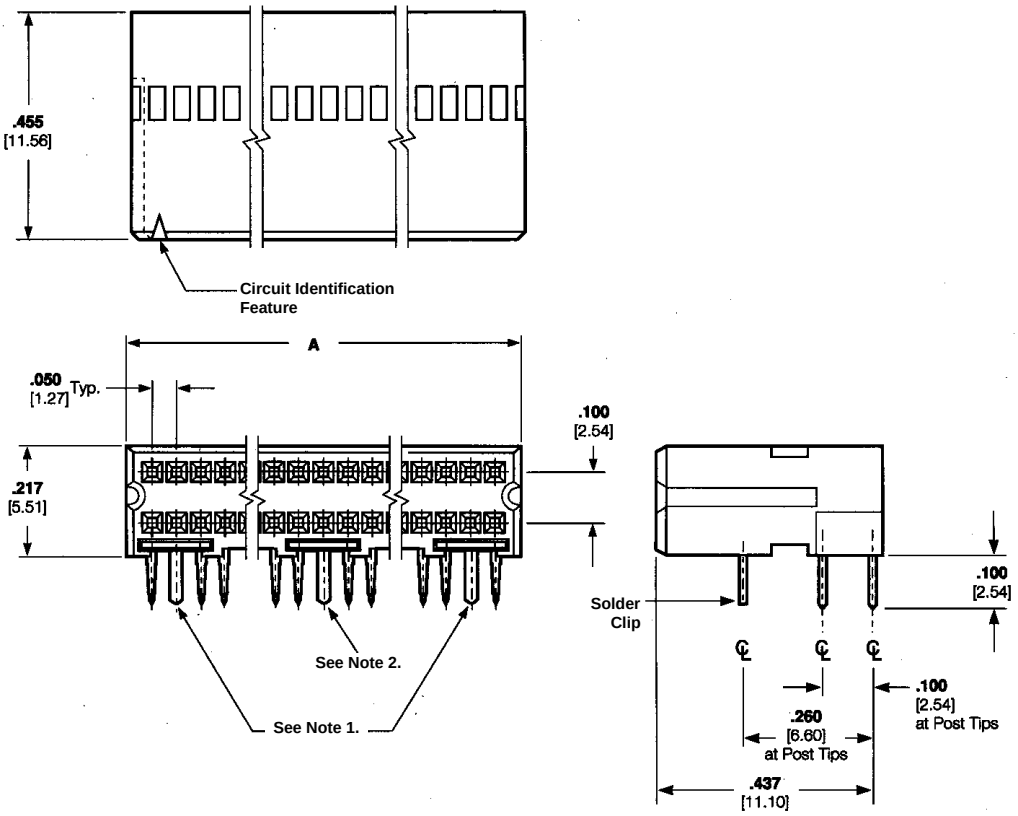


Photo 75571



Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Characteristics—page 63

Mateable Connectors—pages 29, 32 & 33

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031

No. of Pos.	Dimension A	Part Numbers
10	**.294** [7.47]	103911-1
20	**.544** [13.82]	103911-2
30	**.794** [20.17]	103911-7
40	**1.044** [26.52]	103911-5
50	**1.294** [32.87]	103911-4
60	**1.544** [39.22]	103911-3
80	**2.044** [51.92]	103911-6
100	**2.544** [64.62]	103911-8

Notes:
1. Solder Clips located as shown for 20 through 100 position receptacles.
2. Solder Clips located as shown for 10, 60, 80 and 100 position receptacles.

Catalog 1307819
Revised 6-04

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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.

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Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967

Thru-Hole Receptacles, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board (Continued)

Double Row, Vertical

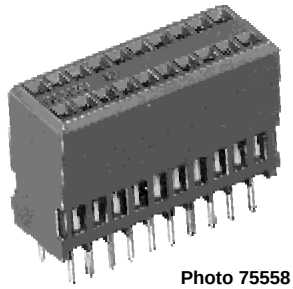
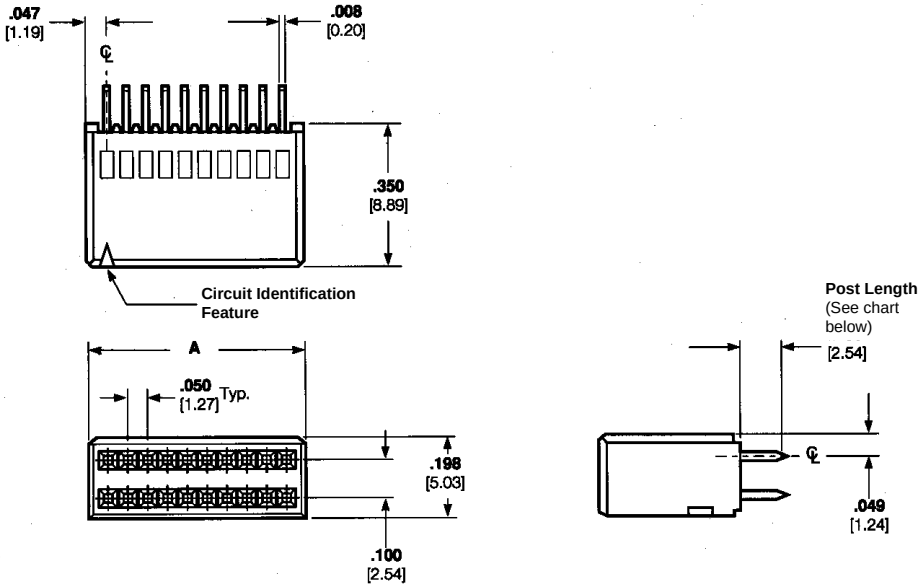


Photo 75558



Material and Finish:

Housing—Glass-filled black thermoplastic, 94V-0 rated

Contacts—Copper alloy, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder posts, with entire contact underplated .000050 [0.00127] nickel

Related Product Data:

Performance Specifications—page 63

Mateable Connectors—pages 27, 28, 32, 33 & 42

Board-to-Board Spacing—page 63

PC Board Hole Layout—page 39

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25031

No. of Pos.	Dimension A	Part Numbers Post Length	
		.100 [2.54]	.145 [3.68]
10	**.294** [7.47]	104078-3	—
20	**.544** [13.82]	104078-1	—
24	**.644** [16.36]	104078-9	—
30	**.794** [20.17]	104078-4	—
34	**.894** [22.71]	1-104078-0	—
40	**1.044** [26.52]	104078-2	—
50	**1.294** [32.87]	104078-5	104744-7
60	**1.544** [39.22]	104078-6	—
68	**1.744** [44.30]	1-104078-3	—
80	**2.044** [51.92]	104078-7	104744-4
100	**2.544** [64.62]	104078-8	104744-5

Catalog 1307819
Revised 6-04

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

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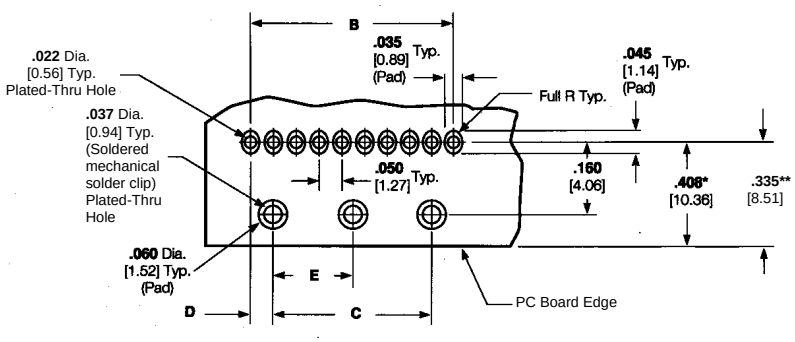
South America: 55-11-3611-1514
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967

Recommended PC Board Hole Layouts, Thru-Hole Board-to-Board Connectors

Single Row, Right-Angle with Solder Clips

Note: Consult Tyco Electronics for customer drawings detailing tolerances.



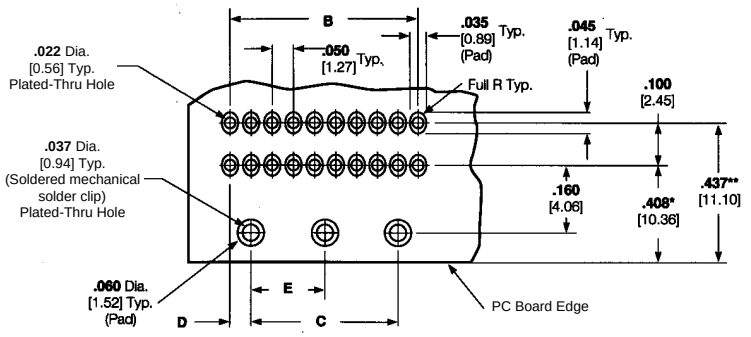
* This dimension is for Shrouded, Single Row Right-Angle Headers only.

** This dimension is for Single Row Right-Angle Receptacles only.

No. of Pos.	Dimensions			
	B	C	D	E
4	**.150** [3.81]	—	**.075** [1.91]	—
5	**.200** [5.08]	—	**.100** [2.54]	—
6	**.250** [6.35]	—	**.125** [3.18]	—
8	**.350** [8.89]	—	**.175** [4.45]	—
10	**.450** [11.43]	**.350** [8.89]	**.050** [1.27]	—
12	**.550** [13.97]	**.450** [11.43]	**.050** [1.27]	—
15	**.700** [17.78]	**.600** [15.24]	**.050** [1.27]	—
20	**.950** [24.13]	**.850** [21.59]	**.050** [1.27]	—
22	**1.050** [26.67]	**.950** [24.13]	**.050** [1.27]	—
25	**1.200** [30.48]	**1.100** [27.94]	**.050** [1.27]	—
28	**1.350** [34.29]	**1.250** [31.75]	**.050** [1.27]	**.625** [15.88]
30	**1.450** [36.83]	**1.350** [34.29]	**.050** [1.27]	**.675** [17.15]
36	**1.750** [44.45]	**1.650** [41.91]	**.050** [1.27]	**.825** [20.96]
40	**1.950** [49.53]	**1.850** [46.99]	**.050** [1.27]	**.925** [23.50]
45	**2.200** [55.88]	**2.100** [53.34]	**.050** [1.27]	**1.050** [26.67]
50	**2.450** [62.23]	**2.350** [59.69]	**.050** [1.27]	**1.175** [29.85]

Double Row, Right-Angle with Solder Clips

Note: Consult Tyco Electronics for customer drawings detailing tolerances.



* This dimension is for Shrouded, Double Row Right-Angle Headers only.
** This dimension is for Double Row Right-Angle Receptacles only.

No. of Pos.	Dimensions			
	B	C	D	E
10	**.200** [5.08]	—	**.100** [2.54]	—
20	**.450** [11.43]	**.350** [8.89]	**.050** [1.27]	—
24	**.550** [13.97]	**.450** [11.43]	**.050** [1.27]	—
26	**.600** [15.24]	**.500** [12.70]	**.050** [1.27]	—
30	**.700** [17.78]	**.600** [15.24]	**.050** [1.27]	—
34	**.800** [20.32]	**.700** [17.78]	**.050** [1.27]	—
40	**.950** [24.13]	**.850** [21.59]	**.050** [1.27]	—
50	**1.200** [30.48]	**1.100** [27.94]	**.050** [1.27]	—
60	**1.450** [36.83]	**1.350** [34.29]	**.050** [1.27]	**.675** [17.15]
68	**1.650** [41.91]	**1.550** [39.37]	**.050** [1.27]	**.775** [19.69]
72	**1.750** [44.45]	**1.650** [41.91]	**.050** [1.27]	**.825** [20.96]
80	**1.950** [49.53]	**1.850** [46.99]	**.050** [1.27]	**.925** [23.50]
100	**2.450** [62.23]	**2.350** [59.69]	**.050** [1.27]	**1.175** [29.85]

Catalog 1307819
Revised 6-04

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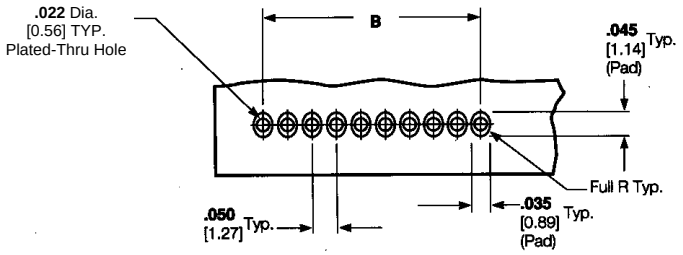
Recommended PC Board Hole Layouts, Thru-Hole Board-to-Board Connectors (Continued)

Single Row Without Solder Clips

Note: Consult Tyco Electronics for customer drawings detailing tolerances.

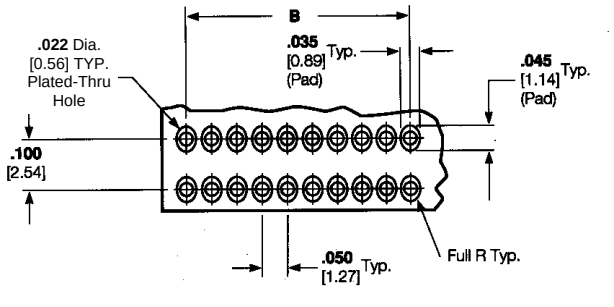


No. of Pos.	Dimension B
4	**.150** [3.81]
5	**.200** [5.08]
6	**.250** [6.35]
8	**.350** [8.89]
10	**.450** [11.43]
12	**.550** [13.97]
13	**.600** [15.24]
15	**.700** [17.78]

No. of Pos.	Dimension B
17	**.800** [20.32]
20	**.950** [24.13]
22	**1.050** [26.67]
25	**1.200** [30.48]
30	**1.450** [36.83]
31	**1.500** [38.10]
36	**1.750** [44.45]
40	**1.950** [49.53]
50	**2.450** [62.23]

Double Row Without Solder Clips

Note: Consult Tyco Electronics for customer drawings detailing tolerances.



No. of Pos.	Dimension B
8	**.150** [3.81]
10	**.200** [5.08]
12	**.250** [6.35]
14	**.300** [7.62]
16	**.350** [8.89]
20	**.450** [11.43]
24	**.550** [13.97]
26	**.600** [15.24]
30	**.700** [17.78]
34	**.800** [20.32]

No. of Pos.	Dimension B
36	**.850** [21.59]
40	**.950** [24.13]
44	**1.050** [26.67]
50	**1.200** [30.48]
60	**1.450** [36.83]
68	**1.650** [41.91]
72	**1.750** [44.45]
80	**1.950** [49.53]
100	**2.450** [62.23]

Catalog 1307819
Revised 6-04

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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.

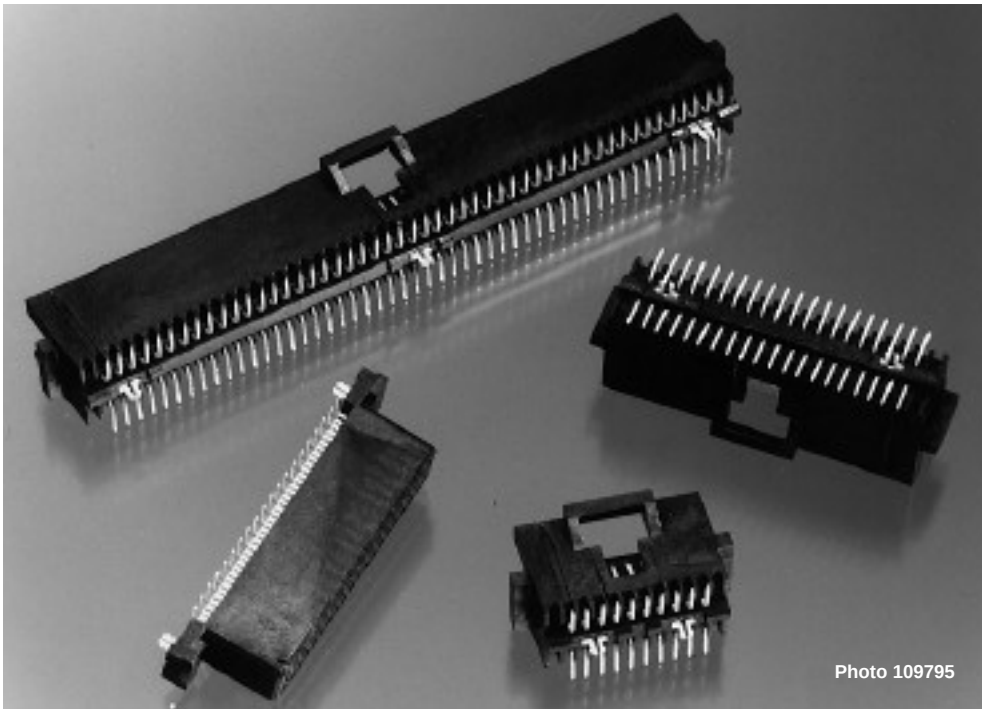
USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-5-729-0425

South America: 55-11-3611-1514
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967

Surface-Mount Connectors, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Product Facts

- Surface-mount option for parallel board-to-board applications; completely intermateable with AMPMODU System 50 through-hole board-to-board and cable-to-board systems
- Double row, vertical, shrouded header and receptacle assemblies
- Available in select sizes from 10 through 100 positions
- High Density; contacts spaced on .050 x .100 [1.27 x 2.54] centers; compact footprint
- Compatible with standard surface-mount processes
- Stand-offs for free drainage of flux cleaning solutions; visible solder joints for easy inspection
- Simple, low insertion-force holddown for process retention and long-term strain relief for solder joints
- Available in tape and reel packaging (with vacuum covers) for automatic placement.



The high-density surface-mount connector is another mounting option in the AMPMODU System 50 connector family.

This surface-mount system is fully intermateable with the AMPMODU System 50 thru-hole and cable-to-board connectors.

Additionally, the design of the mating interface has not been changed, maintaining the same high reliability as the thru-hole product.

The surface-mount system includes double row, vertical, shrouded header and receptacle assemblies in select sizes from 10 through 100 positions. It meets the tight dimensional requirements of surface-mount technology. The simple, low insertion-force holddown provides both processing retention and long-term strain relief for the solder joints in the headers and receptacles.

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UK: 44-141-810-8967

Surface-Mount Headers, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Double Row, Vertical

Photo 109793

Material and Finish:

Housing—Glass-filled, black thermoplastic, 94V-0 rated

Contacts—Phosphor bronze, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder tail, with entire contact underplated .000050 [0.00127] nickel

Holddown—Copper alloy, plated .000150 tin-lead over .000050 [0.00127] nickel

Related Product Data:

Performance Characteristics—page 63

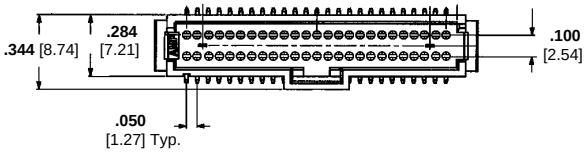
Mateable Connectors—pages 38, 43, 49, 50, & 54

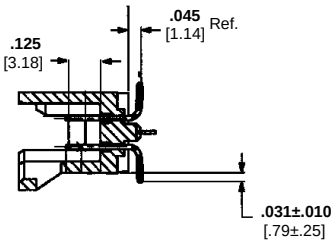
Board-to-Board Spacing—page 63

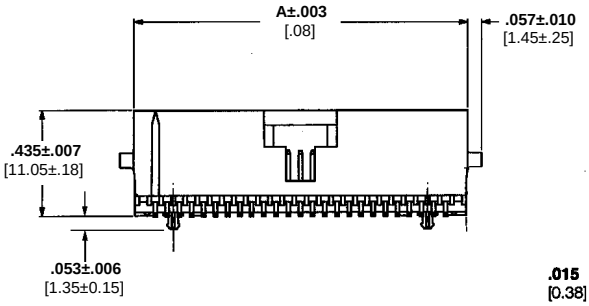
Technical Documents (page 64):

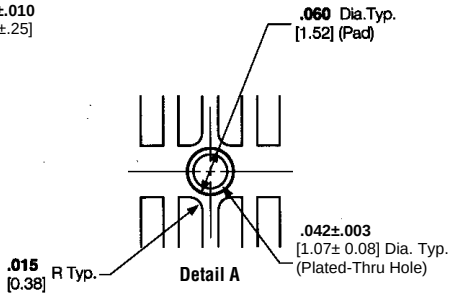
Product Specification 108-1093

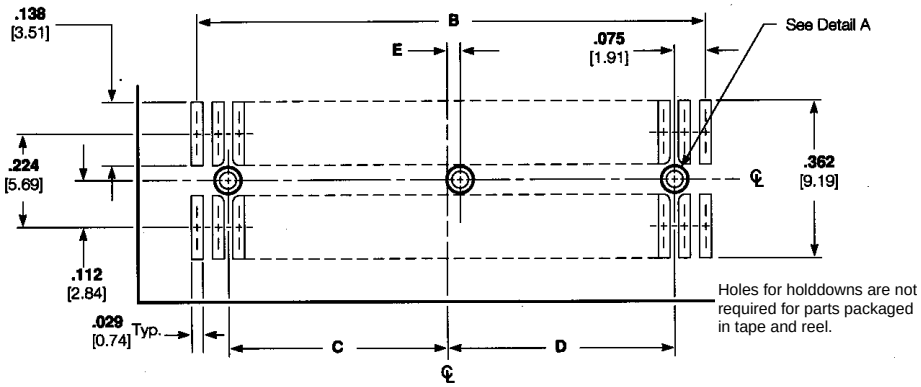
Application Specification 114-25035











Recommended PC Board Layout

No. of Pos.	Dimensions					Part Numbers	
	A	B	C	D	E	Pkg in Tube	Pkg in Tape & Reel*
10	**.380** [9.65]	**.200** [5.08]	—	**.025** [0.64]	—	104549-1	147377-1
12	**.430** [10.92]	**.250** [6.35]	—	—	—	1-104549-1	—
20	**.630** [16.00]	**.450** [11.43]	**.150** [3.81]	**.150** [3.81]	—	104549-2	147377-2
24	**.730** [18.54]	**.550** [13.97]	**.200** [5.08]	**.200** [5.08]	—	104549-3	147377-9
30	**.880** [22.35]	**.700** [17.78]	**.275** [6.99]	**.275** [6.99]	—	104549-5	147377-3
40	**1.130** [28.70]	**.950** [24.13]	**.400** [10.16]	**.400** [10.16]	—	104549-6	147377-4
44	**1.230** [31.24]	**1.050** [26.67]	—	—	—	—	1-147377-0
50	**1.380** [35.05]	**1.200** [30.48]	**.525** [13.34]	**.525** [13.34]	**.025** [0.64]	104549-7	147377-5
60	**1.630** [41.40]	**1.450** [36.83]	**.650** [16.51]	**.650** [16.51]	**.000**	104549-8	147377-6
80	**2.130** [54.10]	**1.950** [49.53]	**.900** [22.86]	**.900** [22.86]	**.000**	104549-9	147377-7
100	**2.630** [66.80]	**2.450** [62.23]	**1.150** [29.21]	**1.150** [29.21]	**.000**	1-104549-0	147377-8

*Parts packaged in tape and reel are without hold downs and include a vacuum pick and place cover

Catalog 1307819
Revised 6-04

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Surface-Mount Receptacles, .050 x .100 [1.27 x 2.54] Centerline, Board-to-Board

Double Row, Vertical

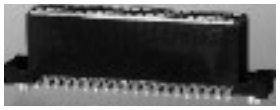
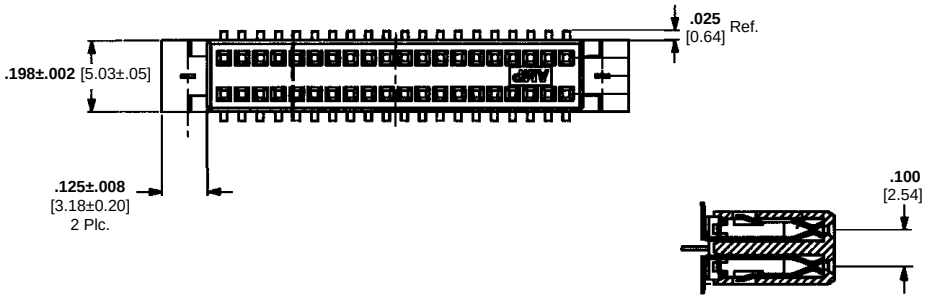
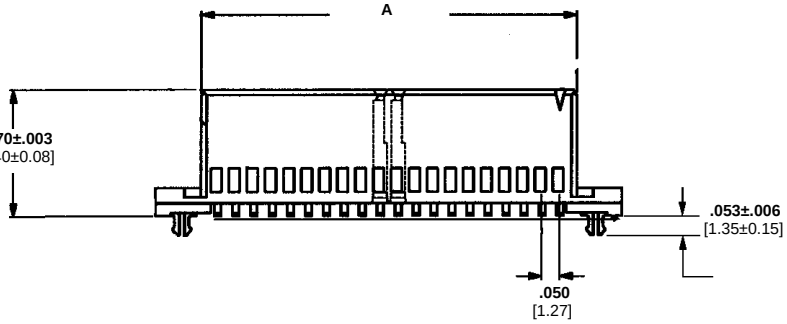
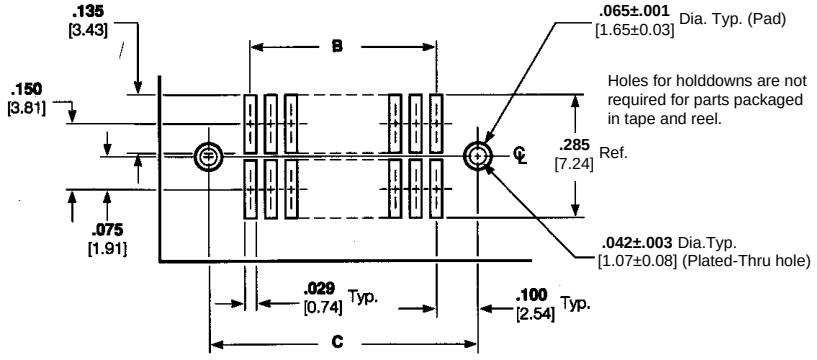


Photo 109794







Recommended PC Board Layout

Material and Finish:

Housing—Glass-filled, black thermpolastic, 94V-0 rated

Contacts—Phosphor bronze, plated .000030 [0.00076] gold in mating area, .000150 [0.00381] tin-lead on solder tail, with entire contact underplated .000050 [0.00127] nickel

Holddown—Copper alloy, plated .000150 tin-lead over .000050 [0.00127] nickel

Related Product Data:

Performance Characteristics—page 63

Mateable Connectors—pages 27, 28, 32, 33 & 42

Board-to-Board Spacing—page 63

Technical Documents (page 64):

Product Specification 108-1093

Application Specification 114-25035

No. of Pos.	Dimensions			Part Numbers	
	A	B	C	Pkg in Tube	Pkg in Tape & Reel*
10	**.294** [7.47]	**.200** [5.08]	**.400** [10.16]	104550-1	147378-1
20	**.544** [13.82]	**.450** [11.43]	**.650** [16.51]	104550-2	147378-2
24	**.644** [16.36]	**.550** [13.97]	**.750** [19.05]	104550-3	147378-9
30	**.794** [20.17]	**.700** [17.78]	**.900** [22.86]	104550-4	147378-3
40	**1.044** [26.52]	**.950** [24.13]	**1.150** [29.21]	104550-5	147378-4
50	**1.294** [32.87]	**1.200** [30.48]	**1.400** [35.56]	104550-6	147378-5
60	**1.544** [39.22]	**1.450** [36.83]	**1.650** [41.91]	104550-7	147378-6
80	**2.044** [51.92]	**1.950** [49.53]	**2.150** [54.61]	104550-8	147378-7
100	**2.544** [64.62]	**2.450** [62.23]	**2.650** [67.31]	104550-9	147378-8

*Parts packaged in tape and reel are without hold downs and include a vacuum pick and place cover

Catalog 1307819
Revised 6-04

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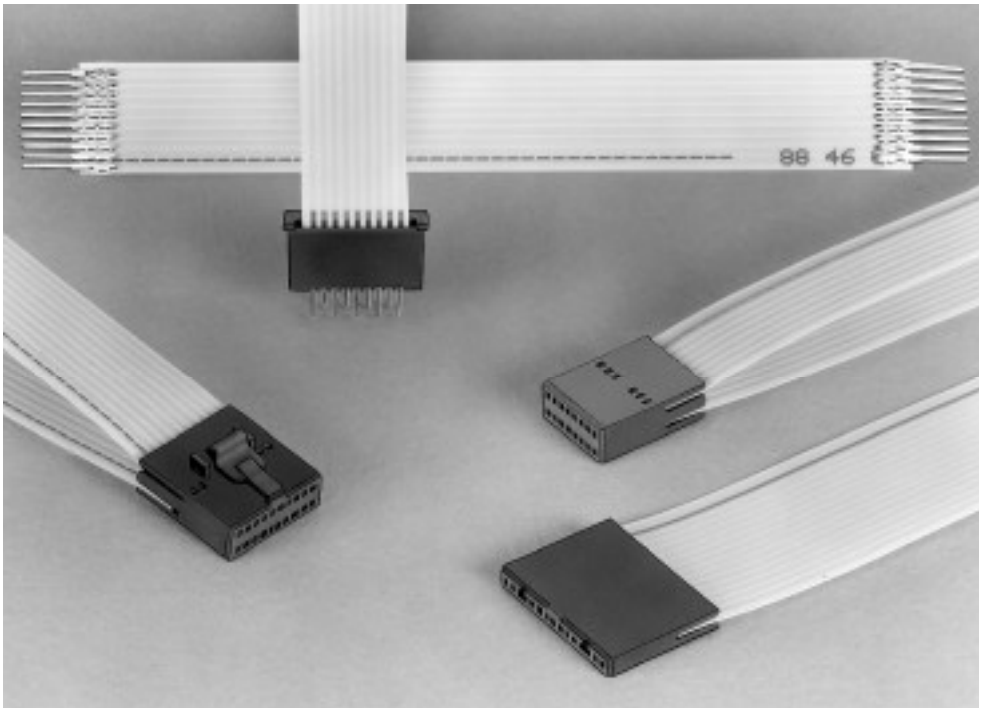
Japan: 81-44-844-8013
UK: 44-141-810-8967

Cable-to-Board Connectors, .050 x .100 [1.27 x 2.54] Centerline FFC Cable

Product Facts

- Signal application only, 1.5 amperes maximum single circuit
- Single or double row connectors
- Terminates flexible flat conductor cable and flexible etched circuitry
- Shielded cable provides for customizing
- Center latch housing providing positive latching



The cable-to-board .050 [1.27] center FFC receptacle connectors are part of the AMPMODU System 50 family for terminating flexible flat conductor cable and flexible etched circuitry.

The FFC receptacle uses a dual beam contact with 30 microinches of gold plating. The FFC receptacle connectors have an integral latch for positive locking to shrouded mating headers.

Flexible flat conductor cable is a planar parallel conductor cable. It can be used as a one-to-one connector or as a complex harness, allowing split-outs and special routing. The cable is comprised of .026 [0.66] wide x .003 [0.08] thick conductors made of copper per QQ-C-502 and insulated with a flame retardant polyester film.

The FFC contacts are available in receptacle and solder tab. Receptacle contacts are made of phosphor bronze with a finish of plated gold duplex, while the solder tab contacts are finished in a bright tin-lead overall.

The complete product line provides solder tabs for board mounting at low cost and custom shielding of the cable.

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UK: 44-141-810-8967

Cable-to-Board Connectors, .050 x .100 [1.27 x 2.54] Centerline
FFC Cable (Continued)

Custom Designed Cable Assemblies

Tyco Electronics can supply customized flexible flat conductor cable assemblies using the components shown on pages 46 thru 52. Typical examples of these cable assemblies are shown to the right.

And, to meet the internal shielding requirements of today's complex electronic equipment, custom designed shielded FFC cable assemblies can be made to your specific specifications.

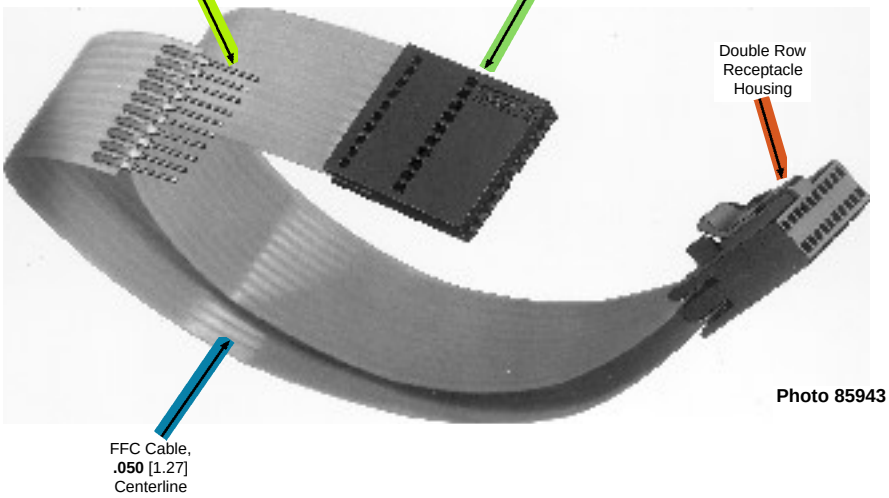

Photo 85943

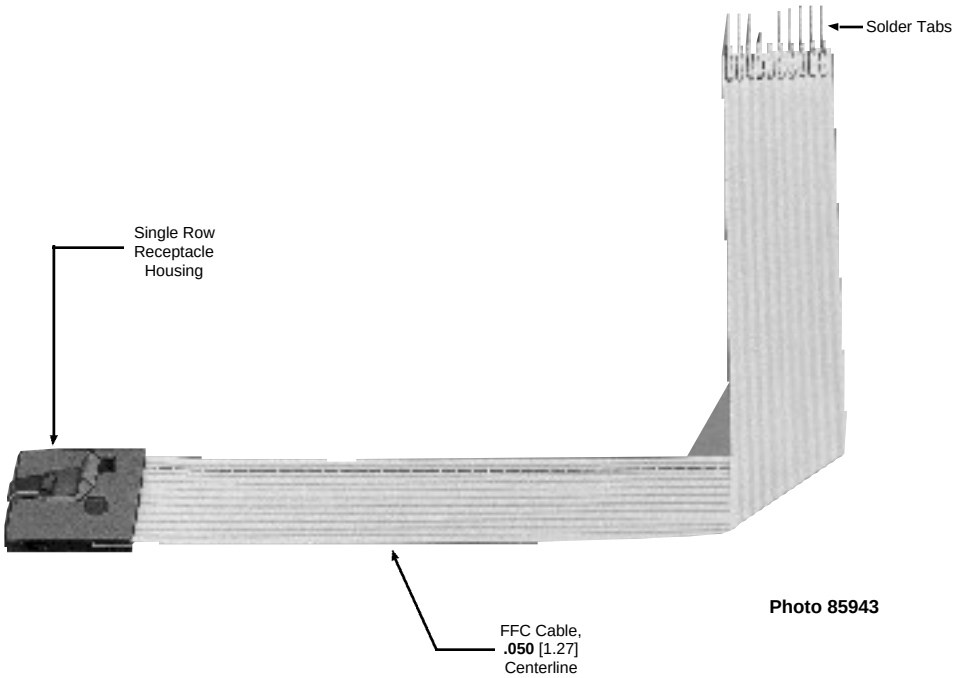

Photo 85943

Catalog 1307819
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UK: 44-141-810-8967

FFC Contacts, .050 x .100 [1.27 x 2.54] Centerline

Receptacle Strip

Solder Tab Strip

Material and Finish:

Phosphor bronze; plated gold duplex or bright tin-lead overall (See chart.)

Related Product Data:

Performance Characteristics—page 63

Housings—pages 47-50

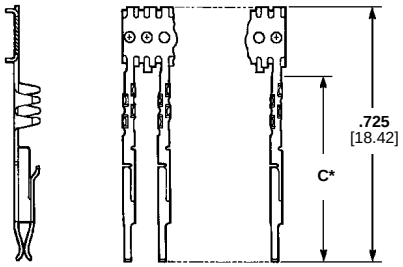
Application Tooling— page 62

Technical Documents (page 64):

Product Specification 108-16022

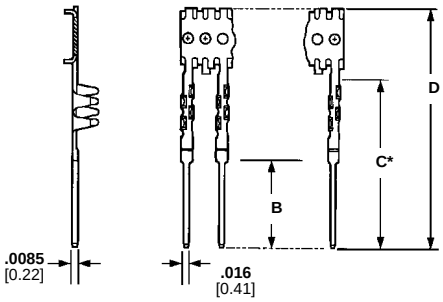
Application Specification 114-16008

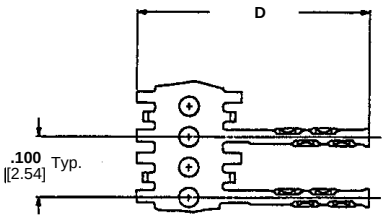
Receptacle

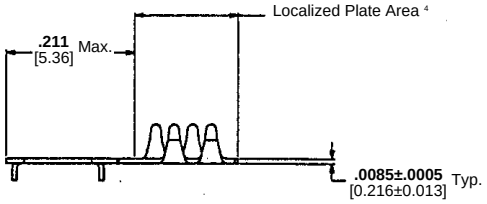


Accepts .015 [0.38] Sq. Post
.125-.350 [3.18-8.89] Long

Solder Tab







Contacts						Application Tooling Part Numbers	
Type	Configuration	Part No./ Finish	Dimensions B	Dimensions C*	Dimensions D	Machine	Machine With Programmer
Receptacle	Strip	487547-1[1]	—	**.520** [13.21]	**.725** [18.42]		
Solder Tab	Strip	487923-1[2]	**.245** [6.22]	**.480** [12.19]	**.685** [17.40]	224910-4 (120 V) 224910-6 (240 V)	318619-4 (120 V) 318619-6(240 V)
	Strip	487923-3[3]	**.245** [6.22]	**.480** [12.19]	**.685** [17.40]		
	Strip	487940-3[2]	**.110** [2.79]	**.345** [8.76]	**.550** [13.97]		
Contact Splice	Strip	487941-2[4]	—	—	**.385** [9.78]		

[1]Duplex plated .000030 [0.00076] gold on mating area, .000100 [0.00254] min. bright tin-lead in crimp area, with entire contact underplated .000050 [0.00127] min. nickel.
[2]Plated .000100 [0.00254] min. tin-lead over .000050 [0.00127] min. nickel.
[3]Duplex plated .000015 [0.00038] gold on solder tab end, .000100 [0.00254] min. bright tin-lead in crimp area, with entire contact underplated .000050 [0.00127] min. nickel.
[4]Plated .000150 [3.81µm] min. bright tin lead over .000050 [1.27µm] min. nickel.
*After cut-off from carrier strip.

Single Row Receptacle Housings, .050 x .100 [1.27 x 2.54] Centerline, Cable-to-Board

Plain Style Housings

Latch Style Housings

Material and Finish:

Housing—Black thermoplastic, flame retardant, 94V-0 rated

Contacts—Phosphor bronze; plated gold duplex

Related Product Data:

Performance Characteristics—page 63

Receptacle Contacts—page 46

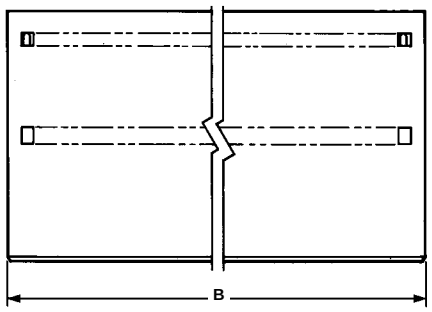
Mateable Headers—pages 25, 26, 30 & 31

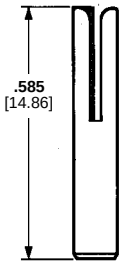
Technical Documents (page 64):

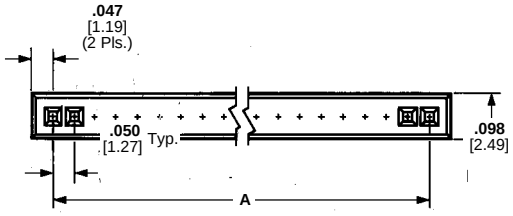
Product Specification 108-16022

Application Specification 114-16008

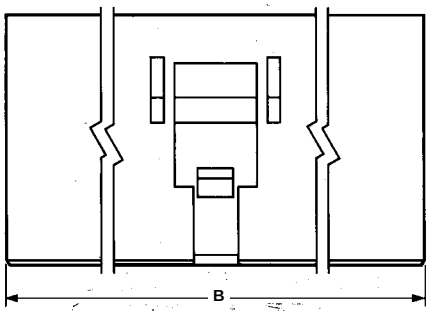
Plain Style Housings

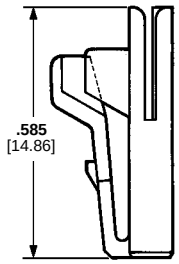


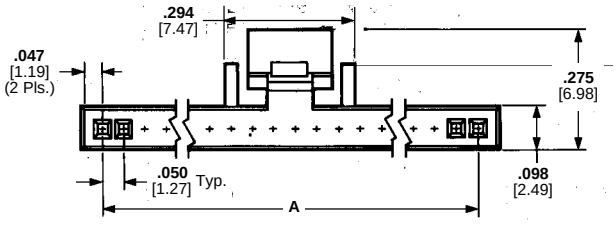




Latch Style Housings







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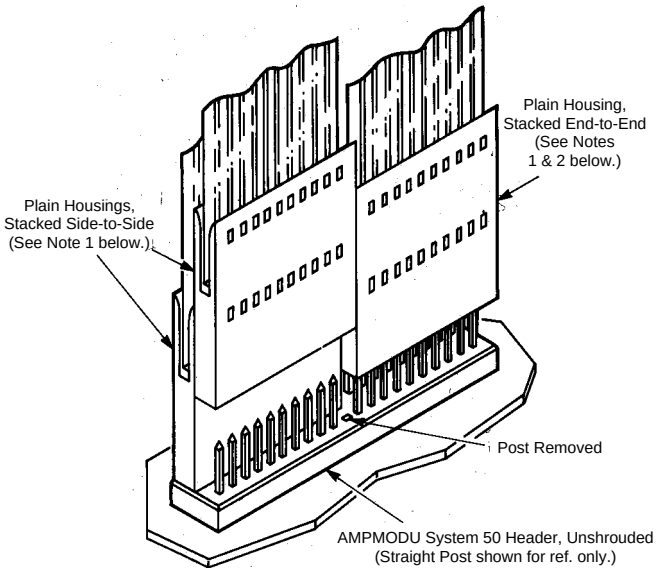
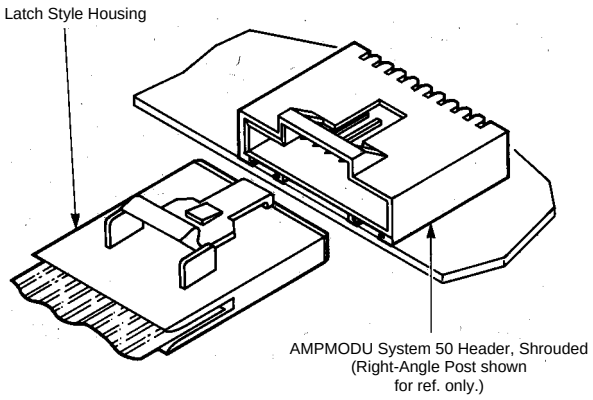
Single Row Receptacle Housings, .050 x .100 [1.27 x 2.54] Centerline, Cable-to-Board (Continued)

No. of Pos.	Dimensions		Part Numbers	
	A	B	Plain Receptacle Housing	Latch Style Receptacle Housing
4	**.150** [3.18]	**.244** [6.20]	487544-1	487545-1
5	**.200** [5.08]	**.294** [7.47]	487544-2	487545-2
6	**.250** [6.35]	**.344** [8.74]	487544-3	487545-3
7	**.300** [7.62]	**.394** [10.01]	487544-4	487545-4
8	**.350** [8.89]	**.444** [11.28]	487544-5	487545-5
10	**.450** [11.43]	**.544** [13.82]	487544-7	487545-7
12	**.550** [13.97]	**.644** [16.36]	487544-9	487545-9
13	**.600** [15.24]	**.694** [17.63]	—	1-487545-0
15	**.700** [17.78]	**.794** [20.17]	1-487544-2	1-487545-2
16	**.750** [19.05]	**.844** [21.44]	1-487544-3	—
17	**.800** [20.32]	**.894** [22.71]	1-487544-4	1-487545-4
20	**.950** [24.13]	**1.044** [26.52]	1-487544-7	1-487545-7
22	**1.050** [26.67]	**1.144** [29.06]	1-487544-9	1-487545-9
25	**1.200** [30.48]	**1.294** [32.87]	2-487544-2	2-487545-2
26	**1.250** [31.75]	**1.343** [34.11]	—	2-487545-3
28	**1.350** [34.29]	**1.443** [36.65]	—	2-487545-5
30	**1.450** [36.83]	**1.544** [39.22]	—	2-487545-7
36	**1.750** [44.45]	**1.844** [46.84]	3-487544-3	3-487545-3
40	**1.950** [49.53]	**2.044** [51.92]	—	3-487545-7
45	**2.200** [55.88]	**2.294** [58.27]	—	4-487545-2
50	**2.450** [62.23]	**2.544** [64.62]	4-487544-7	4-487545-7

Note: Other sizes of receptacle housings (plain and latch style) can be made available, consult Tyco Electronics.





Notes: 1. Plain housings are side-to-side stackable on either straight or right-angle posted, unshrouded AMPMODU System 50 headers.

2. For end-to-end stacking, the posts located between the adjoining housings must be removed to provide housing end clearance.

Typical Cable-to-Board Application of Plain Receptacle Housing

Typical Cable-to-Board Application of Latch Style Receptacle Housing

Double Row Receptacle Housings, .050 x .100 [1.27 x 2.54] Centerline, Cable-to-Board

Plain Style Housings

Latch Style Housings

Material:

Black thermoplastic, flame retardant, 94V-0 rated

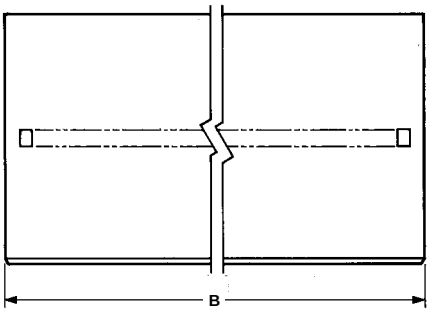
Related Product Data:

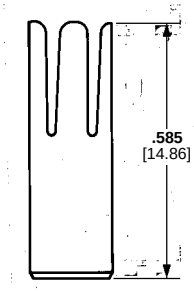
Performance Characteristics—page 63
Receptacle Contacts—page 46
Mateable Headers—pages 27, 28, 32, 33, & 42

Technical Documents (page 64):

Product Specification 108-16022
Application Specification 114-16008

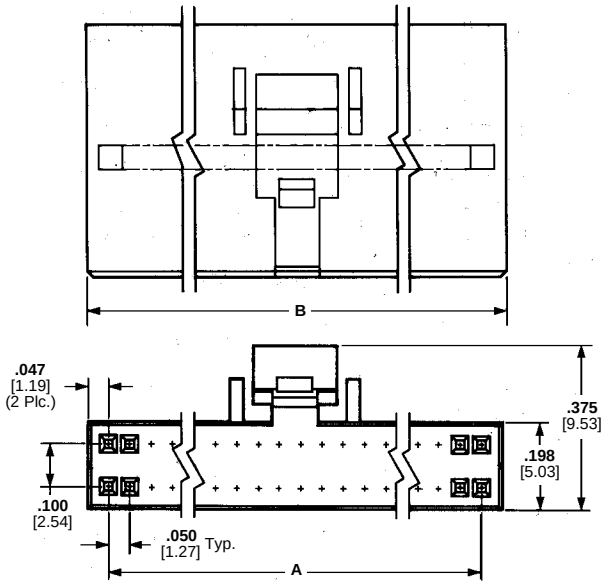
Plain Style Housings

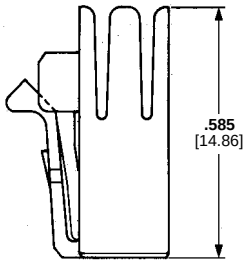




Plain

Latch Style Housings





Latch

Catalog 1307819
Revised 6-04

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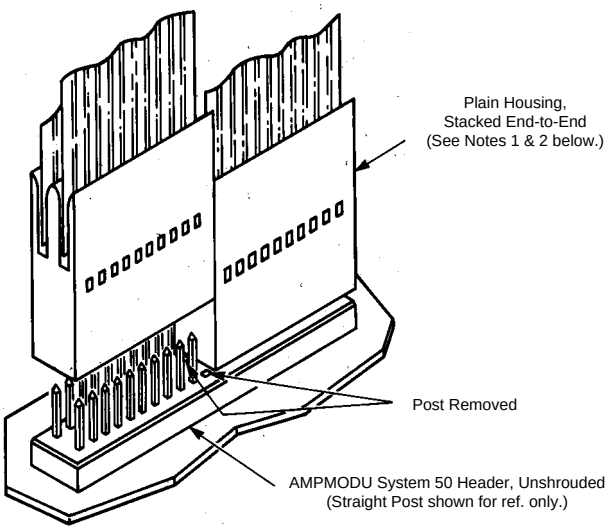
UK: 44-141-810-8967

Double Row Receptacle Housings, .050 x .100 [1.27 x 2.54] Centerline, Cable-to-Board (Continued)

No. of Pos.	Dimensions		Plain Housing Part Numbers	Latch Style Housing Part Numbers
	A	B		
8	**.150** [3.81]	**.247** [6.27]	487938-8	487937-8
10	**.200** [5.08]	**.297** [7.54]	1-487938-0	1-487937-0
12	**.250** [6.35]	**.374** [8.81]	1-487938-2	1-487937-2
14	**.300** [7.62]	**.397** [10.08]	1-487938-4	1-487937-4
16	**.350** [.889]	**.447** [11.35]	1-487938-6	1-487937-6
20	**.450** [11.43]	**.547** [13.89]	2-487938-0	2-487937-0
24	**.550** [13.97]	**.647** [16.43]	2-487938-4	2-487937-4
26	**.600** [15.24]	**.697** [17.7]	2-487938-6	2-487937-6
30	**.700** [17.78]	**.797** [20.24]	3-487938-0	3-487937-0
34	**.800** [20.32]	**.897** [22.78]	3-487938-4	3-487937-4
40	**.950** [24.13]	**1.047** [26.59]	4-487938-0	4-487937-0
44	**1.050** [26.67]	**1.147** [29.13]	4-487938-4	4-487937-4
50	**1.200** [30.48]	**1.297** [39.94]	5-487938-0	5-487937-0
60	**1.450** [36.83]	**1.547** [39.29]	6-487938-0	6-487937-0
72	**1.750** [44.45]	**1.847** [46.91]	7-487938-2	7-487937-2
80	**1.950** [49.53]	**2.047** [51.99]	8-487938-0	8-487937-0
100	**2.450** [62.23]	**2.547** [64.69]	487938-1	487937-1

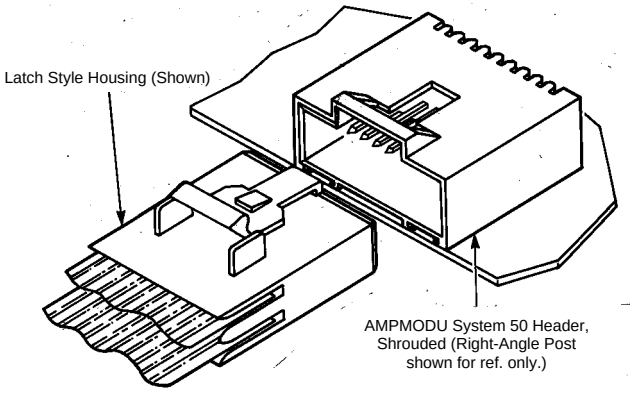
Note: Other sizes of receptacle housings, up to 120 positions, can be made available, consult Tyco Electronics.



Notes: 1. Plain housings are end-to-end stackable on either straight or right-angle posted, unshrouded AMPMODU System 50 headers.

2. For end-to-end stacking, the two posts located between the adjoining housings must be removed to provide housing end clearance.

Typical Cable-to-Board Application of Plain Receptacle Housing



Typical Cable-to-Board Application of Latch Style Receptacle Housing

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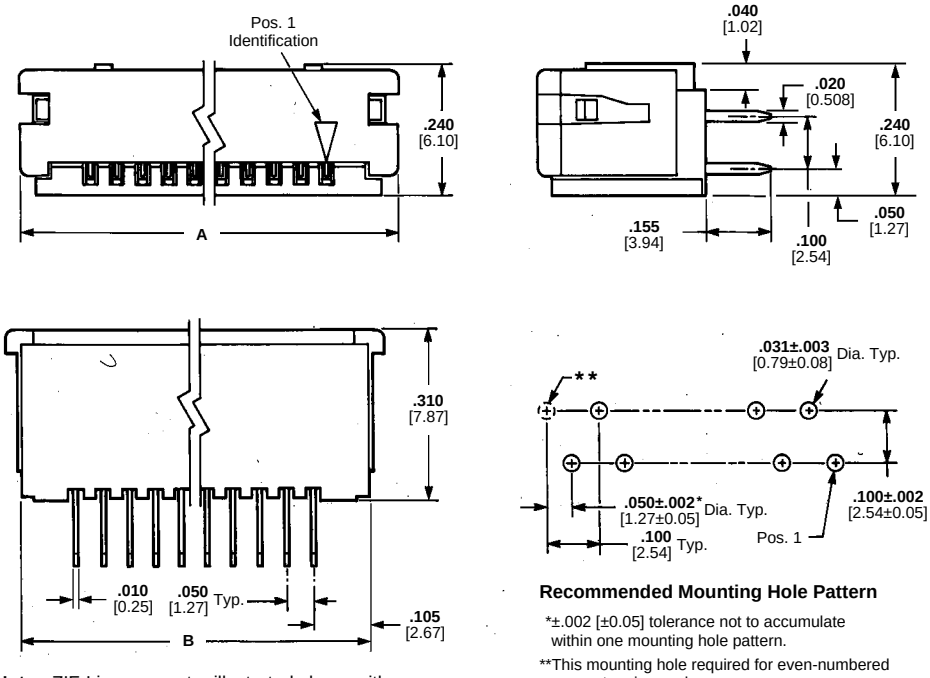
ZIF-Line Connectors, .050 x .100 [1.27 x 2.54] Centerline, Cable-to-Board

Vertical Cable Entry



Note: ZIF-Line connector illustrated above with cover in closed position.

Recommended Mounting Hole Pattern

*±.002 [±0.05] tolerance not to accumulate within one mounting hole pattern.

**This mounting hole required for even-numbered connector sizes only.

Material and Finish:

Housing and Cover—Black thermoplastic, flame retardant, 94V-0 rated

Contacts—Phosphor bronze, plated .000150 [0.00381] min. bright tin over .000050 [0.00127] min. nickel on entire contact

Performance Characteristic:

Contact Current Rating—1 ampere†

†1 ampere rating is for single circuit. Multiple circuits, ambient temperature and conductor size affect current carrying capacity.

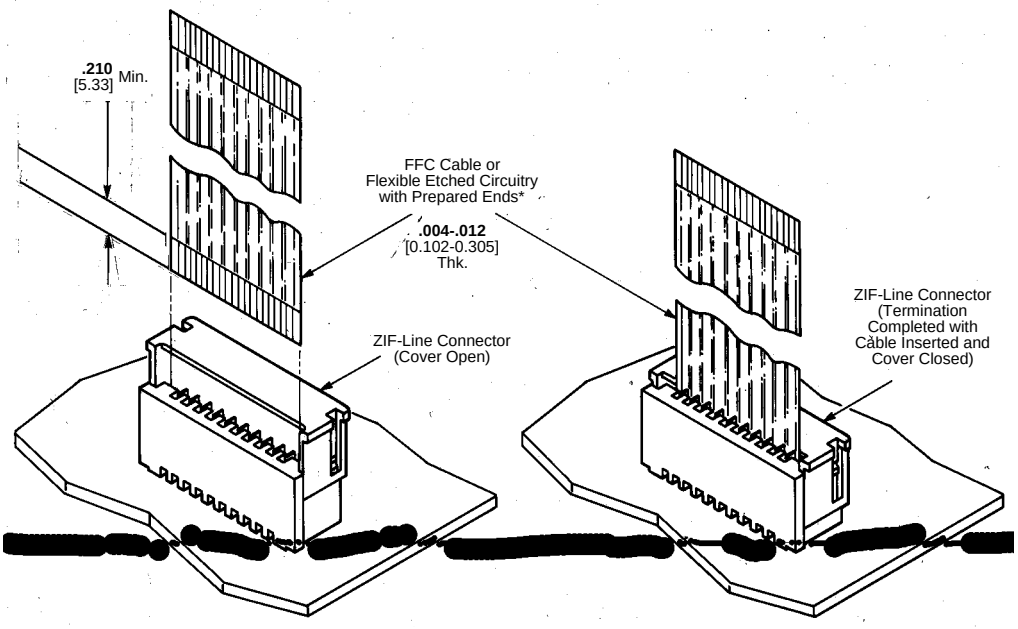
Related Product Data:

FFC Cable (with Tin-Plated Prepared Ends)—Consult Tyco Electronics.

Technical Documents (page 64):

Product Specification 108-16025

Application Specification 114-16014



*FFC cable with tin-plated prepared ends can be made available, consult Tyco Electronics.

Note: Special preparation of cable is required, refer to Tyco Electronics Application Specification No. 114-16014.

Typical Flexible Flat Conductor Cable-to-Board Application

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ZIF-Line Connectors, .050 x .100 [1.27 x 2.54] Centerline, Cable-to-Board (Continued)

No. of Pos.	Dimensions		Connector Part Numbers
	A	B	
5	**.470** [11.94]	**.410** [10.41]	5-487576-0
6	**.520** [13.21]	**.460** [11.68]	5-487576-1
7	**.570** [14.48]	**.510** [12.95]	4-487576-8
8	**.620** [15.75]	**.560** [14.22]	4-487576-9
9	**.670** [17.02]	**.610** [15.49]	487576-1
10	**.720** [18.29]	**.660** [16.76]	487576-2
11	**.770** [19.56]	**.710** [18.03]	487576-3
12	**.820** [20.83]	**.760** [19.30]	487576-4
13	**.870** [22.10]	**.810** [20.57]	487576-5
14	**.920** [23.37]	**.860** [21.84]	487576-6
15	**.970** [24.64]	**.910** [23.11]	487576-7
16	**1.020** [25.91]	**.960** [24.38]	487576-8
17	**1.070** [27.18]	**1.010** [25.65]	487576-9
18	**1.120** [28.45]	**1.060** [26.92]	1-487576-0
19	**1.170** [29.72]	**1.110** [28.19]	1-487576-1
20	**1.220** [30.99]	**1.160** [29.46]	1-487576-2
21	**1.270** [32.26]	**1.210** [30.73]	1-487576-3
22	**1.320** [33.53]	**1.260** [32.00]	1-487576-4
23	**1.370** [34.80]	**1.310** [33.27]	1-487576-5
24	**1.420** [36.07]	**1.360** [34.54]	1-487576-6
25	**1.470** [37.34]	**1.410** [35.81]	1-487576-7
26	**1.520** [38.61]	**1.460** [37.08]	1-487576-8
27	**1.570** [39.88]	**1.510** [38.35]	1-487576-9
28	**1.620** [41.15]	**1.560** [39.62]	2-487576-0
29	**1.670** [42.42]	**1.610** [40.89]	2-487576-1
30	**1.720** [43.69]	**1.660** [42.16]	2-487576-2

No. of Pos.	Dimensions		Connector Part Numbers
	A	B	
31	**1.770** [44.96]	**1.710** [43.43]	2-487576-3
32	**1.820** [46.23]	**1.760** [44.70]	2-487576-4
33	**1.870** [47.50]	**1.810** [45.97]	2-487576-5
34	**1.920** [48.77]	**1.860** [47.24]	2-487576-6
35	**1.970** [50.04]	**1.910** [48.51]	2-487576-7
36	**2.020** [51.31]	**1.960** [49.78]	2-487576-8
37	**2.070** [52.58]	**2.010** [51.05]	2-487576-9
38	**2.120** [53.85]	**2.060** [52.32]	3-487576-0
39	**2.170** [55.12]	**2.110** [53.59]	3-487576-1
40	**2.220** [56.39]	**2.160** [54.86]	3-487576-2
41	**2.270** [57.66]	**2.210** [56.13]	3-487576-3
42	**2.320** [58.93]	**2.260** [57.40]	3-487576-4
43	**2.370** [60.20]	**2.310** [58.67]	3-487576-5
44	**2.420** [61.47]	**2.360** [59.94]	3-487576-6
45	**2.470** [62.74]	**2.410** [61.21]	3-487576-7
46	**2.520** [64.01]	**2.460** [62.48]	3-487576-8
47	**2.570** [65.28]	**2.510** [63.75]	3-487576-9
48	**2.620** [66.55]	**2.560** [65.02]	4-487576-0
49	**2.670** [67.82]	**2.610** [66.29]	4-487576-1
50	**2.720** [69.09]	**2.660** [67.56]	4-487576-2
51	**2.770** [70.36]	**2.710** [68.83]	4-487576-3
52	**2.820** [71.63]	**2.760** [70.10]	4-487576-4
53	**2.870** [72.90]	**2.810** [71.37]	4-487576-5
54	**2.920** [74.17]	**2.860** [72.64]	4-487576-6
55	**2.970** [75.44]	**2.910** [73.91]	4-487576-7

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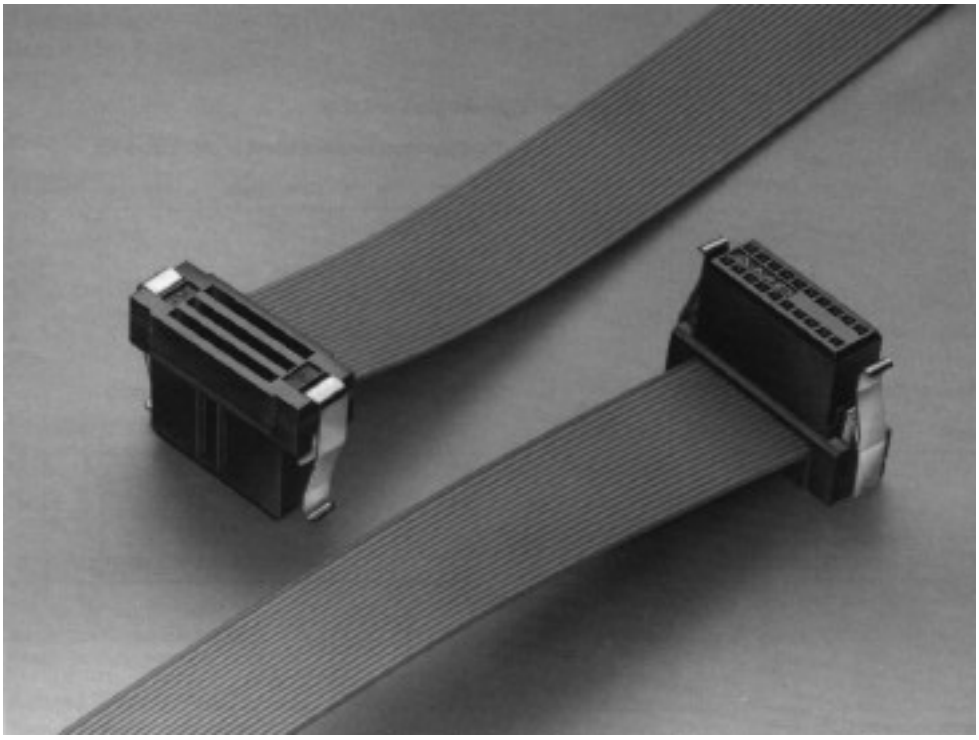
UK: 44-141-810-8967

Cable-to-Board Connectors, .050 x .100 [1.27 x 2.54] Centerline, Ribbon Cable, System 50

Product Facts

- Preassembled housing and cover
- One step termination
- End and daisy chain termination
- Positive end latching of connector to shrouded headers
- Terminates 30 AWG [0.05 mm²] solid or stranded and 32 AWG [0.03 mm²]* stranded .025 [0.64] centerline ribbon cable
- 0.5 ampere current rating (limited by cable)



The AMP-LATCH System 50 Ribbon Cable connector is a receptacle connector that will terminate ribbon cable on .025 [0.64] centerlines. It is available in select sizes from 10 to 100 positions and will accommodate 30 AWG [0.05 mm²] solid or stranded and 32 AWG [0.03 mm²] stranded conductors, and PVC cable insulation.

The housing and cover (black) have a 94V-0 rating. A copper alloy single mating beam contact provides the interconnect between the conductor and the .015 [0.38] square posts on the .050 x .100 [1.27 x 2.54] grid. The contacts are plated with 30 gold duplex plating. The latching feature is located on the receptacle, not the header, and saves board space and eliminates future problems of “latch height compatibility.”

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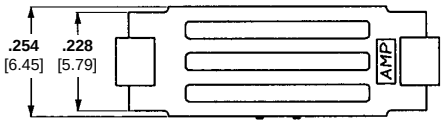
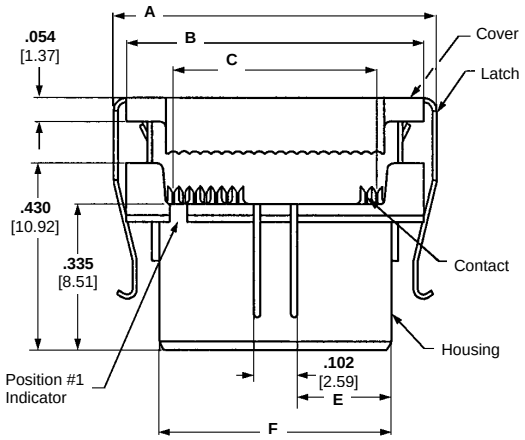
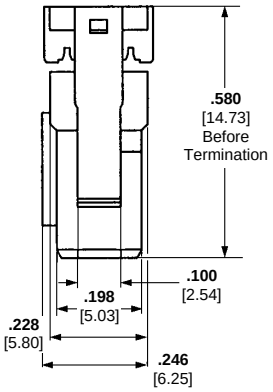
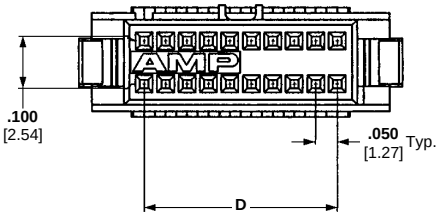
Double Row Receptacles, .050 x .100 [1.27 x 2.54] Centerline, Cable-to-Board, Ribbon Cable, System 50









Material and Finish:

Housing—Black thermoplastic, 94V-0 rated

Latches—Stainless steel

Contacts—Copper alloy, plated gold over nickel with tin-lead in termination area

Related Product Data:

Performance Characteristics—page 63

Mateable Headers—pages 27, 28, 32, 33 & 42

Application Tooling—pages 61 & 62

Mates with Posts—.015 [0.38] square, .125 [3.18] long, on .050 x .100 [1.27 x 2.54] grid

Technical Documents (page 64):

Product Specification 108-1109

Application Specification 114-25029

No. of Pos.	Dimensions						Part Numbers
	A	B	C	D	E	F	
10	**.510** [12.95]	**.445** [11.30]	**.225** [5.72]	**.200** [5.08]	**.096** [2.44]	**.294** [7.47]	111196-1
14	**.610** [15.49]	**.545** [13.84]	**.325** [8.26]	**.300** [7.62]	**.146** [3.71]	**.394** [10.01]	111196-2
16	**.660** [16.76]	**.595** [15.11]	**.375** [9.52]	**.350** [8.89]	**.171** [4.34]	**.444** [11.28]	111196-3
20	**.760** [19.30]	**.695** [17.65]	**.475** [12.07]	**.450** [11.43]	**.221** [5.61]	**.544** [13.82]	111196-4
24	**.860** [20.32]	**.795** [20.19]	**.575** [14.61]	**.550** [13.97]	**.271** [6.88]	**.644** [16.36]	111196-5
26	**.910** [23.11]	**.845** [21.46]	**.625** [15.88]	**.600** [15.24]	**.296** [7.52]	**.694** [17.63]	111196-6
30	**1.010** [25.65]	**.945** [24.00]	**.725** [18.42]	**.700** [17.78]	**.346** [8.79]	**.794** [20.17]	111196-7
34	**1.110** [28.19]	**1.045** [26.54]	**.825** [20.96]	**.800** [20.32]	**.396** [10.06]	**.894** [22.71]	111196-8
40	**1.260** [32.00]	**1.195** [30.35]	**.975** [34.54]	**.950** [24.13]	**.471** [11.96]	**1.044** [26.52]	111196-9
44	**1.360** [34.54]	**1.295** [32.89]	**1.075** [27.31]	**1.050** [26.67]	**.521** [13.23]	**1.144** [29.06]	1-111196-0
50	**1.510** [38.35]	**1.445** [36.70]	**1.225** [31.12]	**1.200** [30.48]	**.596** [15.14]	**1.294** [32.87]	1-111196-1
60	**1.760** [44.70]	**1.695** [43.05]	**1.475** [37.47]	**1.450** [36.83]	**.721** [18.31]	**1.544** [39.22]	1-111196-2
64	**1.860** [47.24]	**1.795** [45.59]	**1.575** [40.00]	**1.550** [39.37]	**.771** [19.58]	**1.644** [41.76]	1-111196-3
68	**1.960** [49.78]	**1.895** [48.13]	**1.675** [42.55]	**1.650** [41.91]	**.821** [20.85]	**1.744** [44.30]	1-111196-7
72	**2.060** [52.32]	**1.995** [50.67]	**1.775** [45.08]	**1.750** [44.45]	**.871** [22.12]	**1.844** [46.84]	1-111196-4
80	**2.260** [57.40]	**2.195** [55.75]	**1.975** [50.17]	**1.950** [49.53]	**.971** [24.66]	**2.044** [51.92]	1-111196-5
100	**2.760** [70.10]	**2.695** [68.45]	**2.475** [62.87]	**2.450** [62.23]	**1.221** [31.01]	**2.544** [64.62]	1-111196-6

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Paddleboard Receptacles, .050 x .100 [1.27 x 2.54] Centerline, Cable-to-Board, Ribbon Cable, System 50

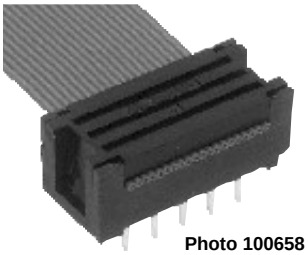
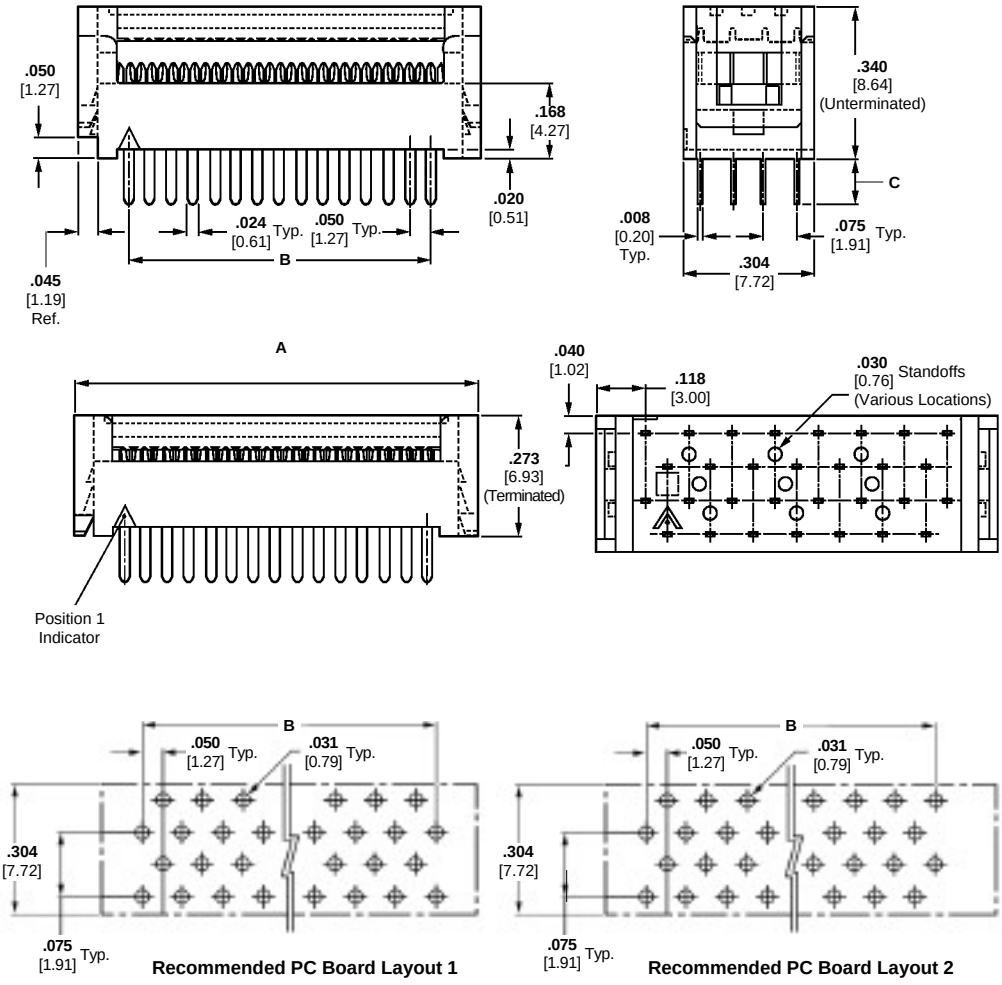


Photo 100658



Material and Finish:

Housing—Black LCP thermoplastic, 94V-0 rated

Cover—Black polyester, 94V-0 rated

Contacts—Copper alloy, plated .000100-.000200 [0.00245-0.00508] bright tin-lead over .000050-.000100 [0.00127-0.00254] nickel

Related Product Data:

Performance Characteristics—page 63

Application Tooling—page 62

Technical Documents (page 64):

Product Specification 108-1109

Application Specification 114-25040

Recommended PC Board Layout 1

Recommended PC Board Layout 2

No. of Pos.	PCB Hole Layout	Dimensions A	Dimensions B	Dimensions C	Part Numbers
10	1	**.436** [11.07]	**.200** [5.08]	**.100** [2.54]	111595-1
14	1	**.536** [13.61]	**.300** [7.62]	**.100** [2.54]	111595-2
16	2	**.586** [14.88]	**.350** [8.89]	**.100** [2.54]	111595-3
20	2	**.686** [17.42]	**.450** [11.43]	**.100** [2.54]	111595-4
24	2	**.786** [19.96]	**.550** [13.97]	**.100** [2.54]	111595-5
26	1	**.836** [21.23]	**.600** [15.24]	**.100** [2.54]	111595-6
28	2	**.886** [22.50]	**.650** [16.51]	**.100** [2.54]	2-111595-0
30	1	**.936** [23.77]	**.700** [17.78]	**.100** [2.54]	111595-7
34	1	**1.036** [26.31]	**.800** [20.32]	**.100** [2.54]	111595-8
40	2	**1.186** [30.12]	**.950** [24.13]	**.100** [2.54]	111595-9

No. of Pos.	PCB Hole Layout	Dimensions A	Dimensions B	Dimensions C	Part Numbers
44	2	**1.286** [32.66]	**1.050** [26.67]	**.100** [2.54]	1-111595-0
46	1	**1.336** [33.93]	**1.100** [27.94]	**.100** [2.54]	1-111595-7
50	1	**1.436** [36.47]	**1.200** [30.48]	**.100** [2.54]	1-111595-1
60	2	**1.686** [42.82]	**1.450** [36.83]	**.100** [2.54]	1-111595-2
64	2	**1.786** [45.36]	**1.550** [39.37]	**.100** [2.54]	1-111595-3
68	2	**1.886** [47.90]	**1.650** [41.91]	**.100** [2.54]	1-111595-9
72	2	**1.986** [50.44]	**1.750** [44.45]	**.100** [2.54]	1-111595-4
80	2	**2.186** [55.52]	**1.950** [49.53]	**.100** [2.54]	1-111595-5
100	2	**2.686** [68.22]	**2.450** [62.23]	**.100** [2.54]	1-111595-6

Catalog 1307819
Revised 6-04

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Japan: 81-44-844-8013
UK: 44-141-810-8967

Flat Ribbon Cable, PVC Insulation

30 AWG [0.05 mm²], Solid Bare Copper

Product Specifications:

Voltage —150 Volts

Impedance—80 Ohms Nominal (GND,SIG, GND, applies to 30AWG Solid Bare Copper)

Capacitance—19.2 pf/ft at 1 MHz nom.

Propagation Delay—1.51 ns/ft nom.

Insulation Resistance—
10 ft sample 5 ns rise time:

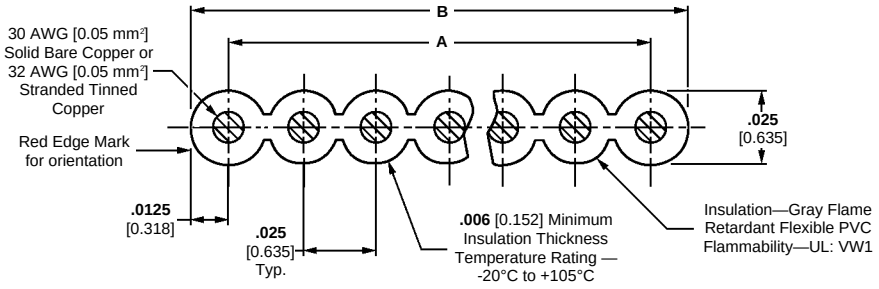
Near End - 4.0% max.

Far End - 6.0% max.

UL Listing: STYLE 2678

Recognized under the Component Program of Underwriters Laboratories Inc., File No. E53793

Certified by Canadian Standards Association, (CSA File No. LL83498)



No. of Conductors	Dimensions		Part Numbers	
	A	B	Length Per Reel*	
			100 ft. [30.48 m]	500 ft. [152.4 m]
16	**.375** [9.52]	**.400** [10.16]	5-57013-1	5-57013-2
20	**.475** [12.07]	**.500** [12.70]	1-57013-3	57013-1
24	**.575** [14.61]	**.600** [15.24]	1-57013-4	57013-8
26	**.625** [15.88]	**.650** [16.51]	2-57013-5	2-57013-6
28	**.675** [17.14]	**.700** [17.78]	4-57013-6	4-57013-7
30	**.725** [18.42]	**.750** [19.05]	1-57013-5	57013-6
34	**.825** [20.95]	**.850** [21.59]	4-57013-9	5-57013-0
36	**.875** [22.23]	**.900** [22.86]	1-57013-6	57013-7
40	**.975** [24.77]	**1.000** [25.40]	1-57013-7	57013-2
44	**1.075** [27.31]	**1.100** [27.94]	1-57013-8	57013-9
50	**1.225** [27.94]	**1.250** [31.75]	1-57013-9	1-57013-0
60	**1.475** [37.47]	**1.500** [38.10]	2-57013-0	57013-3
68	**1.675** [42.55]	**1.700** [43.18]	2-57013-1	1-57013-1
72	**1.775** [45.09]	**1.800** [45.72]	2-57013-2	1-57013-2
80	**1.975** [50.17]	**2.000** [50.80]	2-57013-3	57013-4
100	**2.475** [62.87]	**2.500** [63.50]	2-57013-4	57013-5

*Reel may contain separate lengths, 20 ft. [6.1 m] min. per length.

Electrical Characteristics of .025 [0.64] Centerline IDC Ribbon Cable

Base Part No.	Insulation	AWG	Voltage	Impedance Single Ended G-S-G	Capacitance Nominal G-S-G	Inductance Nominal	Nominal Prop. Delay	NEXT 10 Ft 5ns Rise Time	FEXT 10 Ft 5ns Rise Time
57013	PVC	30 Solid	150 Vac	80 Ohms Nom	19.2 pf/ft	.160 mh/ft	1.51 ns/ft	4.0% Max	6.0% Max
219054, 219137	TPE	30 Solid	150 Vac	90+/- 6 Ohms	15.3 pf/ft	.124 mh/ft	1.382 ns/ft	2.39% Nom	2.99% Nom
57119, 57139, 57145	FEP	30 Solid	300 Vac	93 Ohms Nom	13.6 pf/ft	.120 mn/ft	1.34 ns/ft	2.6% Nom	2.8% Nom
57131	PVC	30 Stranded	150 VAC	66 Ohms Nom	23.0 pf/ft	.100 mh/ft	1.55 ns/ft	2.8% Max	4.5% Max
219055	TPE	30 Stranded	150 VAC	78 Ohms Nom	19.4 pf/ft	.118 mh/ft	1.510 ns/fr	1.37% Nom	2.37% Nom
57288, 57289, 57290	FEP	30 Stranded	300 Vac	85 Ohms Nom	15.4 pf/ft	.110 mh/ft	1.36 ns/ft	2.5% Nom	2.8% Nom
219253	TPE	31 Stranded	150 Vac	90+/- 6 Ohms	15.4 pf/ft	.125 mh/ft	1.527 ns/ft	1.97% Nom	2.51% Nom
57038	PVC	32 Stranded	150 Vac	80 Ohms Nom	19.2 pf/ft	.147 mh/ft	1.51 ns/ft	4.0% Max	6.0% Max
219138	TPE	32 Stranded	150 Vac	104 Ohms Nom	12.8 pf/ft	.138 mh/ft	1.664 ns/ft	2.10% Nom	2.57% Nom
57118, 57138, 57144	FEP	32 Stranded	300 Vac	105 Ohms Nom	13.0 pf/ft	.120 mh/ft	1.36 ns/ft	2.6% Nom	2.8% Nom

Centerline IDC Ribbon Cable, PVC Insulation

32 AWG 7/40 Stranded Tinned Copper

For use with:
AMP-LATCH System 50, AMPLIMITE .050 Series and AMPMODU System 50 Connectors

Compatible with:
AMP R-CAM Ribbon Cable Assembly Machine

Product Specifications

Voltage — 150 Volts

Impedance — 80 Ohms nom. (GND, SIG, GND, applies to 30AWG Solid Bare Copper)

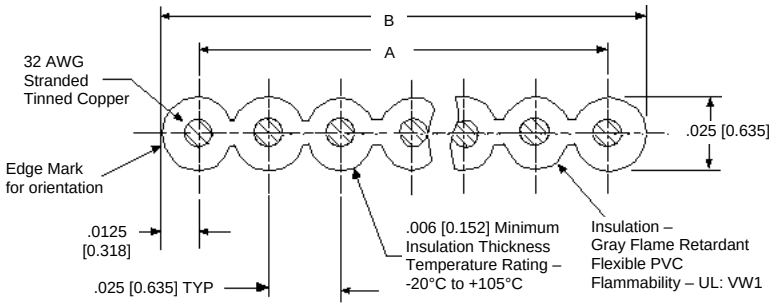
Capacitance — 19.2 pf/ft at 1 MHz nom.

Propagation Delay — 1.51 ns/ft nom.

Crosstalk — 10 ft sample 5 ns rise time:
Near End - 4.0% max.
Far End - 6.0% max.

UL AWM Style 2678

Certified



No. of Conductors	Dimensions		Part Numbers	
	A	B	Length Per Reel	
			100 ft. [30.5 m]	500 ft. [152.4 m]
20	**.475** [12.07]	**.500** [12.70]	1-57038-3	57038-1
40	**.975** [24.77]	**1.000** [25.40]	1-57038-7	57038-2
50	**1.225** [31.12]	**1.250** [31.75]	1-57038-9	1-57038-0
68	**1.675** [42.55]	**1.700** [43.18]	2-57038-1	1-57038-1
80	**1.975** [50.17]	**2.000** [50.80]	2-57038-3	57038-4
100	**2.475** [62.87]	**2.500** [63.50]	2-57038-4	57038-5

Note: 32 AWG cable is not recommended for use in some AMP connectors. Contact Tyco Electronics Engineering for more information.

30 AWG 7/38 Stranded Tinned Copper

For use with:
AMP-LATCH System 50, AMPLIMITE .050 Series and AMPMODU System 50 Connectors

Compatible with:
AMP R-CAM Ribbon Cable Assembly Machine

Product Specifications

Voltage Rating — 150 Volts

Impedance — 66 ohms (GND, SIG, GND)

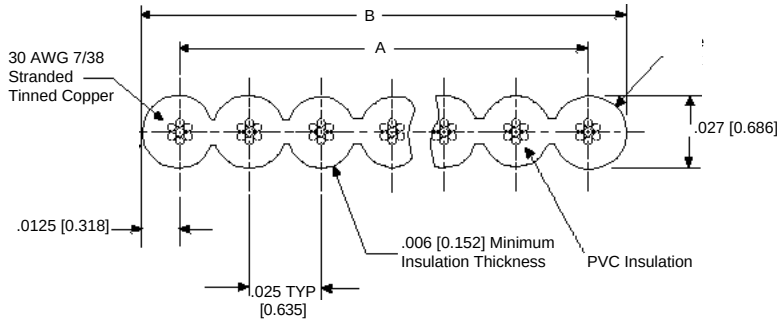
Capacitance — 23 pf/ft. at 1 KHz

Propagation Delay — 1.55 ns/ft. [5.6 ns/m]

Crosstalk — 10 Ft. sample 5 ns rise time
Near End – 2.8% max
Near End – 4.5% max

UL AWM Style 2678

Certified



No. of Conductors	Dimensions		Part Numbers	
	A	B	Length Per Reel	
			100 ft. [30.5 m]	500 ft. [152.4 m]
20	**.475** [12.07]	**.500** [12.70]	1-57131-3	57131-1
40	**.975** [24.77]	**1.000** [25.40]	1-57131-7	57131-2
50	**1.225** [31.12]	**1.250** [31.75]	1-57131-9	1-57131-0
68	**1.675** [42.55]	**1.700** [43.18]	2-57131-1	1-57131-1
80	**1.975** [50.17]	**2.000** [50.80]	2-57131-3	57131-4
100	**2.475** [62.87]	**2.500** [63.50]	2-57131-4	57131-5

Catalog 1307819
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UK: 44-141-810-8967

Centerline IDC Ribbon Cable, TPE Insulation

30 AWG Solid Tinned Copper and Solid Bare Copper

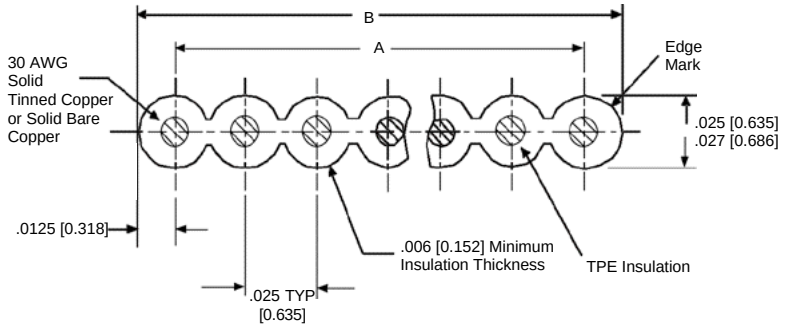
For use with:
AMPLIMITE .050 Series and AMPMODU System 50 Connectors

Compatible with:
AMP R-CAM Ribbon Cable Assembly Machine

Product Specifications

Voltage Rating — 150 Volts
Impedance —
Single Ended - 90 Ohms ± 6
Differential - 120 Ohms, nom.
Capacitance — 15.3 pf/ft Nominal
Propogation Delay —
1.382 NS/ft
Crosstalk —
10 ft sample 5ns rise time:
Near End - 2.4% max
Near End - 3.0% max
UL AWM Style 20297

Certified



30 AWG Solid Tinned Copper

No. of Conductors	Dimensions A	Dimensions B	Part Numbers Length Per Reel 100 ft. [30.5 m]	Part Numbers Length Per Reel 300 ft. [91.4 m]
68	**1.675** [42.55]	**1.700** [43.18]	2-219137-1	1-219137-1
30 AWG Solid Bare Copper				
68	**1.675** [42.55]	**1.700** [43.18]	2-219054-1	1-219054-1

30 AWG 7/38 Stranded Tinned Copper

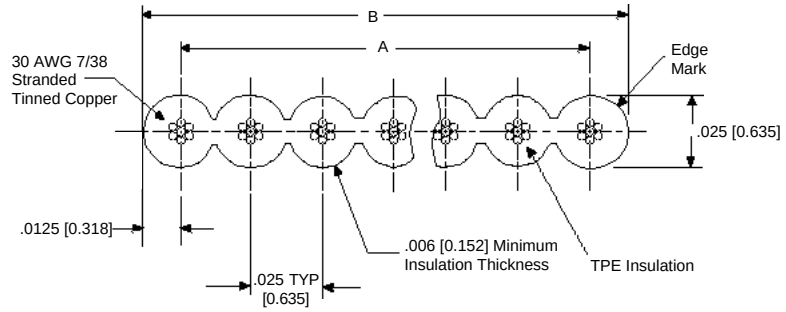
For use with:
AMPLIMITE .050 Series and AMPMODU System 50 Connectors

Compatible with:
AMP R-CAM Ribbon Cable Assembly Machine

Product Specifications

Voltage Rating — 150 Volts
Impedance — 78 Ohms
Capacitance —
19.4 pf/ft Nominal
Propagation Delay —
1.510 ns/ft
Crosstalk —
10 ft sample 5ns rise time:
Near End - 1.4% max
Near End - 2.4% max
UL AWM Style 20297

Certified



No. of Conductors	Dimensions A	Dimensions B	Part Numbers Length Per Reel 100 ft. [30.5 m]	Part Numbers Length Per Reel 300 ft. [91.4 m]
68	**1.675** [42.55]	**1.700** [43.18]	2-219055-1	1-219055-1

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Revised 6-04

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UK: 44-141-810-8967

Centerline IDC Ribbon Cable, TPE Insulation (Continued)

31 AWG 7/39 Stranded Tinned Copper

For use with:
AMPLIMITE .050 Series and AMPMODU System 50 Connectors

Compatible with:
AMP R-CAM Ribbon Cable Assembly Machine

Product Specifications

Voltage Rating — 150 Volts

Impedance —
Single Ended - 90 Ohms ± 6
Differential - 120 Ohms, nom.

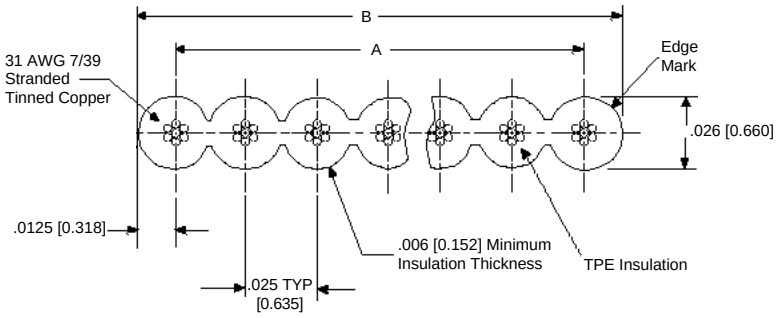
Capacitance —
15.4 pf/ft Nominal

Propagation Delay —
1.527 ns/ft

Crosstalk —
10 ft sample 5ns rise time:
Near End - 2.0% max
Near End - 2.5% max

UL AWM Style 20297

Certified



No. of Conductors	Dimensions		Part Numbers	
	A	B	Length Per Reel	
			100 ft. [30.5 m]	300 ft. [91.4 m]
68	**1.675** [42.55]	**1.700** [43.18]	2-219253-1	1-219253-1
80	**1.975** [50.17]	**2.000** [50.80]	2-219253-4	219253-4

32 AWG 7/40 Stranded Tinned Copper

For use with:
AMPLIMITE .050 Series and AMPMODU System 50 Connectors

Compatible with:
AMP R-CAM Ribbon Cable Assembly Machine

Product Specifications

Voltage Rating: 150 Volts

Impedance: 104 Ohms

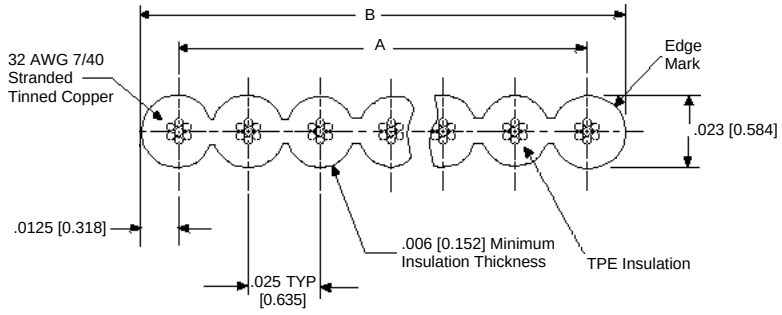
Capacitance:
12.8 pf/ft Nominal

Propagation Delay:
1.664 ns/ft

Crosstalk:
10 ft sample 5ns rise time:
Near End - 2.1% max
Near End - 2.6% max

UL AWM Style 20297

Certified



No. of Conductors	Dimensions		Part Numbers	
	A	B	Length Per Reel	
			100 ft. [30.5 m]	300 ft. [91.4 m]
68	**1.675** [42.55]	**1.700** [43.18]	2-219138-1	1-219138-1

Note: 32 AWG cable is not recommended for use in some Tyco Electronics connectors. Contact Tyco Electronics Engineering for more information.

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Application Tooling for Flexible Film Contacts

Hand Crimping Tool Assemblies (for repair purposes)

Part No. 90273-5—for .100 ℄ Multi-Crimp Contacts (408-9564)

Extraction Tools for .100 ℄ Contacts

Tool No. 91200-□*—for Receptacle Housings with **Side Locking Lance Slot** (408-7916)

Tool No. 91047-□*—for Receptacle and Pin Housings with **End Locking Lance Slot** (408-7384)

*Consult Tyco Electronics for specific dash nos.

For tooling information, contact the Technical Support Center: **1-800-522-6752.**

The flexible film semiautomatic bench machine for terminating .050 [1.27] and .100 [2.54] centerline flexible flat conductor cable (FFC), flexible etched circuitry (FEC), and flexible printed wiring (FPW) with AMP FFC reel-mounted contacts. For each cable or circuitry, the contacts are automatically applied one-at-a-time in a straight sequence. To skip positions, an optional programmer control box is available. Crimp height is easily adjustable in .0002 [.0051] increments. Termination rates up to 200 contacts per minute.

Specifications:

Width—20.5 [520]
Depth—27.5 [700]
Height—18 [460] (with reel support)
Reel Size—24 [610] (max.)
Weight—100 lb. [45.4 kg]
Electrical Source—
120 VAC, 50/60 Hz, 7.0 A;
240 VAC, 50/60 Hz, 3.5 A

Flexible Film Termination Machine (Terminates Continuous Strip Contacts Sequentially)

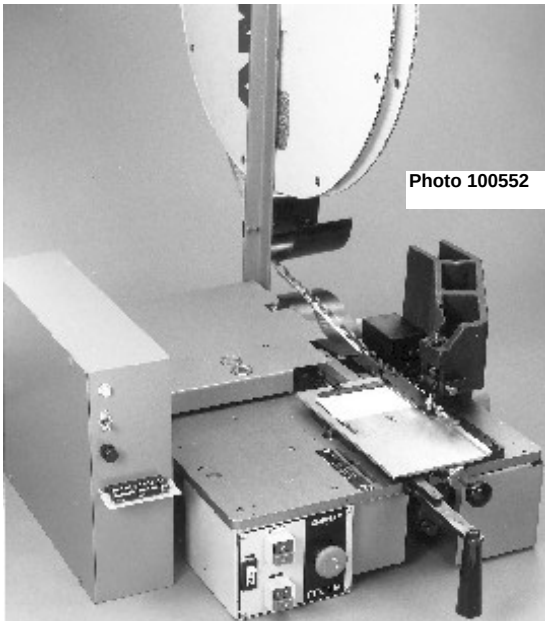


Photo 100552

Description	Machine Part Numbers	
	Machine	Machine With Programmer*
.100 [2.54] ℄, Multi-Crimp, 120 V	224910-1	318619-1
.100 [2.54] ℄, Multi-Crimp, 240 V	224910-2	318619-2
.100 [2.54] ℄, ARINC, 120 V	224910-3	318619-3
.050 [1.27] ℄, Multi-Crimp, 120 V	224910-4	318619-4
.050 [1.27] ℄, Multi-Crimp, 240 V	224910-6	318619-6

*The Programmer Kit (**Part No. 356484-1**) may be purchased with a new machine, or separately for adding onto an existing machine.

Technical Documents

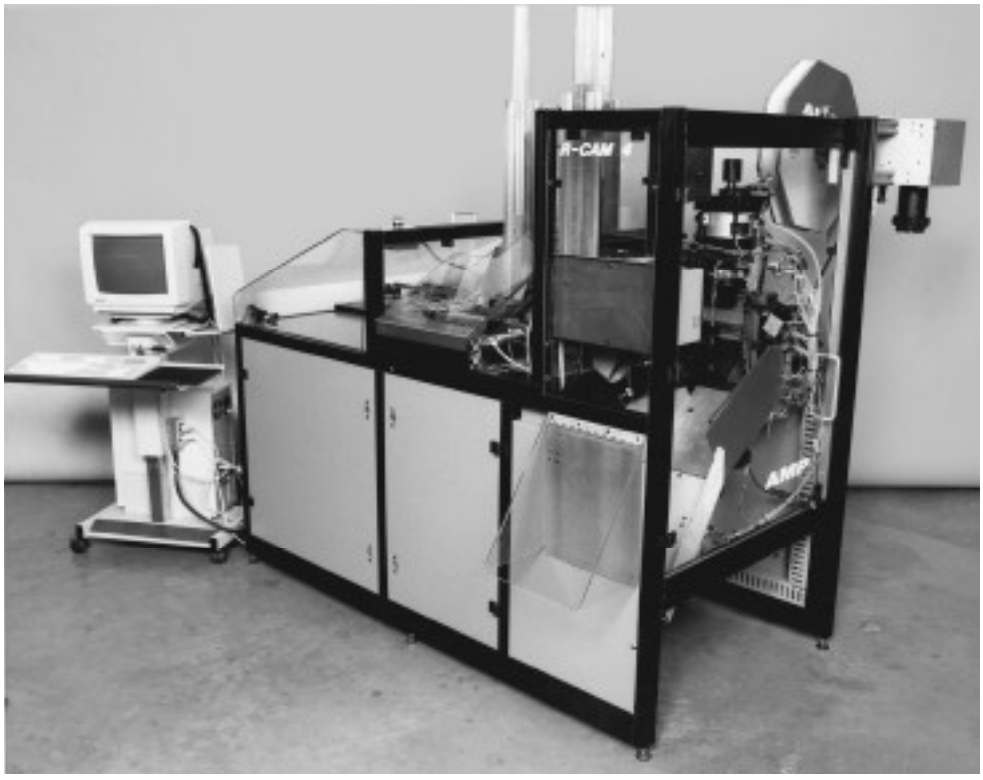
Customer Manuals
409-5835 (Part Numbers 224910 and 318619)
409-5880 Programmer Kit (Part Number 356484-1)

Application Tooling for Ribbon Cable Connectors

Product Facts

- **Production Rate—Depending on cable lengths, can apply and test up to 1,050 connectors per hour**
- **Processes slit-and-twist cable for disk drive operations**
- **Automatic in-process electrical testing—tests all circuits for opens, shorts and high-voltage breakdown (up to 1,000 volts for receptacles, 800 volts for card edge connectors and 300 volts for .025 [0.64] centerline connectors); rejects cable assemblies failing any of these tests**
- **Operated and programmed by a touchscreen or keyboard**
- **Self-Diagnostics—designed to shut the machine down when a malfunction occurs, pinpoint the malfunction and identify it on the screen**
- **Average applicator change-over time—20 minutes to 1 hour, depending on assembly size and type**

R-CAM 4 Cable Assembly Machine



The AMP R-CAM 4 Ribbon Cable Assembly Machine is fully automatic and produces and tests daisy-chained ribbon cable assemblies with up to ten connectors in the chain. It processes 28 AWG [0.08 mm²], .050 [1.27] centerline cable with a variety of AMPMODU System 50 connectors. Depending on cable lengths, the machine is capable of applying and testing assemblies up to 100 [2 540] with connectors on opposite ends or on the leading end only. Additionally, it can produce assemblies with up to 24 [610] unterminated tails, and the trailing connectors can be applied either in the up or down orientation.

The R-CAM 4 machine automatically feeds cables and connectors, terminates, tests for shorts, opens, and high voltage breakdown, separates defective assemblies, and provides batch performance data. Machine self-diagnostics designed to shut down the machine if a malfunction occurs, pinpoint the malfunction, and conveniently identify it on the touchscreen.

A lead station and three trail stations allow for four connector selection. The trail stations remove the cover from the connector and slide it sideways over the cable. This permits a station to be used many times on the same assembly.

The R-CAM 4 machine is operated through an interactive touchscreen or keyboard. The various operations are accessible through easy-to-follow, menu-driven prompts. Included is a menu to program the specifications of up to 1,000 cable assemblies for storage in the computer memory.

Depending on cable lengths, the R-CAM 4 machine can apply and test up to 1,050 connectors per hour. It is also capable of processing slit-and-twist cable for use in disk drive operations. The average applicator changeover time is 20 minutes to 1 hour. (Request Catalog 296060.)

Catalog 1307819
Revised 6-04

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UK: 44-141-810-8967

Application Tooling for Ribbon Cable Connectors (Continued)

R-CAM 3A Ribbon Cable Assembly Machine

The R-CAM 3A machine is fully automatic and capable of producing and testing ribbon cable assemblies with one or two connectors. It processes 28 AWG [0.08 mm^2] .050 [1.27] centerline cable. Depending on cable length, the machine can apply and test up to 2,000 connectors per hour. (Request Catalog 296060.)

R-CAM 2A Ribbon Cable Assembly Machine

The R-CAM 2A machine is fully automatic and capable of producing and testing ribbon cable assemblies with up to four connectors. It processes 28 AWG [0.08 mm^2] .050 [1.27] centerline cable. Depending upon cable length, the machine can apply and test up to 1,670 connectors per hour. (Request Catalog 296060.)

Manual Arbor Tool Part No. 91085-2

Pneumatic Auto-Cycle Tool Part No. 91112-3

These application tools are designed for one-step termination of ribbon cable connectors to planar, ground plane and shielded/jacketed ribbon cable on .025 [0.64] centers. A complete set of tooling consists of an Arbor Tool (manual, Part No. 91085-2 or pneumatic, Part No. 91112-3), a Base Assembly, Part No. 768338-4 and a Connector Specific Kit, Part No. 679167-1 (receptacle).

Note: Tooling is available for other manufacturers' manual arbor tools. For information contact the Tyco Electronics Technical Support Center: **1-800-522-6752**

Technical Documents

Instruction Sheets

408-7777—Manual Arbor Frame Assembly

408-6732—Pneumatic Auto-Cycle Assembly

408-9827—Universal Base Assembly, Arbor Tool

408-9872—Connector Specific Kit for Receptacle Connectors (.025 [0.64] Centerline Cable)

408-9928—Connector Specific Kit for Paddleboard Connectors (.025 [0.64] Centerline Cable)

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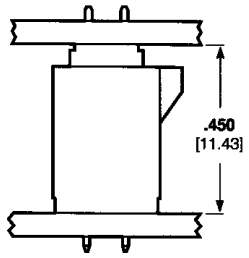
Performance Specifications

Board-to-Board Spacing for Thru-Hole and Surface-Mount Connector Combinations

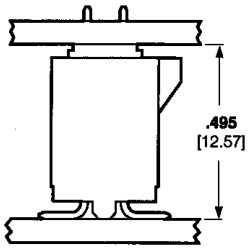
Thru-Hole Receptacle–Thru-Hole Header

(Single and Double Row, Shrouded and Unshrouded)



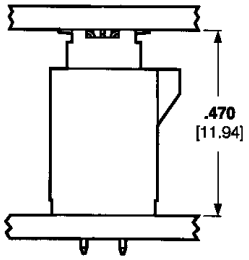
Thru-Hole Receptacle–Surface-Mount Header

(Double Row, Shrouded)



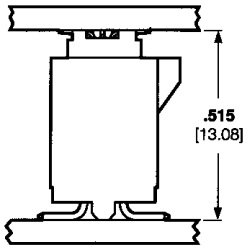
Surface-Mount Receptacle–Thru-Hole Header

(Double Row, Shrouded and Unshrouded)



Surface-Mount Receptacle–Surface-Mount Header

(Double Row, Shrouded)



Need more information?

Call the Technical Support Center: **1-800-522-6752.** The Technical Support Center is staffed with specialists well versed in all Tyco Electronics products. The Center can provide you with:

- Technical Support
- Catalogs
- Technical Documents
- Product Samples
- Tyco Electronics Authorized Distributor Locations

Performance Specifications

Description	Board-to-Board, Thru-Hole Headers and Receptacles	Board-to-Board, Surface-Mount, Headers and Receptacles	Cable-to-Board, .050 [1.27] Centerline FFC Cable Receptacles	Cable-to-Board, .025 [0.64] Centerline Ribbon Cable Receptacles
Size Range-Single Row Double Row	4 thru 50 10 thru 100	— 10 thru 100	4 thru 50 8 thru 100	— 10 thru 100
Current Rating (per contact)	1.0 amperes	1.0 amperes	1.5 amperes	0.5 amperes
Dielectric Withstanding Voltage	500 VAC	500 VAC	300 VAC	200 VAC
Insulation Resistance	5,000 Megohms	5,000 Megohms	5,000 Megohms	5,000 Megohms
Durability (tested to)	200 Cycles	200 Cycles	200 Cycles	150 Cycles
Mating Force (per contact)	5 oz. [1.38 N] Max.	5 oz. [1.38 N] Max.	8 oz. [2.22 N] Max.	4 oz. [1.11 N] Max.
Unmating Force (per contact)	0.8 oz. [0.22 N] Min.	0.8 oz. [0.22 N] Min.	1.0 oz. [0.27 N] Min.	*0.5 oz. [0.13 N] Min.
Operating Temperature	-65°C to +105°C	-65°C to +105°C	-55°C to +105°C	-65°C to +105°C

*With latches depressed.

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Technical Documents

The following is a list of technical documents covering the application, performance and maintenance of AMPMODU System 50 connectors.

Product Specifications describe technical performance characteristics and verification tests. They are intended for the Design, Component and Quality Engineer.

108-1093—AMPMODU System 50 Interconnection System, Board-to-Board

108-1109—AMPLATCH System 50 Receptacle and Paddleboard Connector

108-16022—Connector System, .050 [1.27] Centerline FFC Cable

108-16025—Connector, ZIF-Line 50

108-16029—Shielded Flexible Flat Conductor Cable

108-40002—Flexible Flat Conductor Cable

Application Specifications describe requirements for using the product in its intended application and/or crimping information. They are intended for the Packaging and Design Engineer and the Machine Setup Person.

114-16008—Multiple Crimp Contact for .050 [1.27] Centerline FFC and FEC Cable

114-16014—AMP ZIF-Line 50 & 100 PCB Connectors

114-25029—AMPMODU System 50 Ribbon Cable Connectors

114-25031—AMPMODU System 50 Thru-Hole Connectors

114-25035—AMPMODU Surface-Mount Connectors

114-25040—AMPMODU System 50 Paddleboard Connectors

Instruction Sheets provide instructions for assembling or applying the product. They are intended for the Manufacturing Assembler or Operator.

408-6732—Pneumatic Arbor Tool, Part Number 91112-3 (Auto-Cycle)

408-7384—Extraction Tool, Part Number 91047

408-7763—Pneumatic Arbor Tool, Part Number 91112-2

408-7777—Manual Arbor Tool, Part Number 91085-2

408-7916—Extraction Tool, Part Number 91200

408-9827—Universal Base Assembly, Arbor Tool, Part Number 768338-1

408-9872—Connector Specific Kit, Part Number 679167-1, AMPMODU System 50 Receptacle Connectors (.025 [0.64] Centerline Cable)

408-9928—Connector Specific Kit, Part Number 679176-1, AMPMODU System 50 Paddleboard Connectors (.025 [0.64] Centerline Cable)

408-9564—Hand Crimping Tool Assembly, Part Number 90273-5

408-9719—FFC Contact Positioning Hand Tool Kit, Part Number 91292-1

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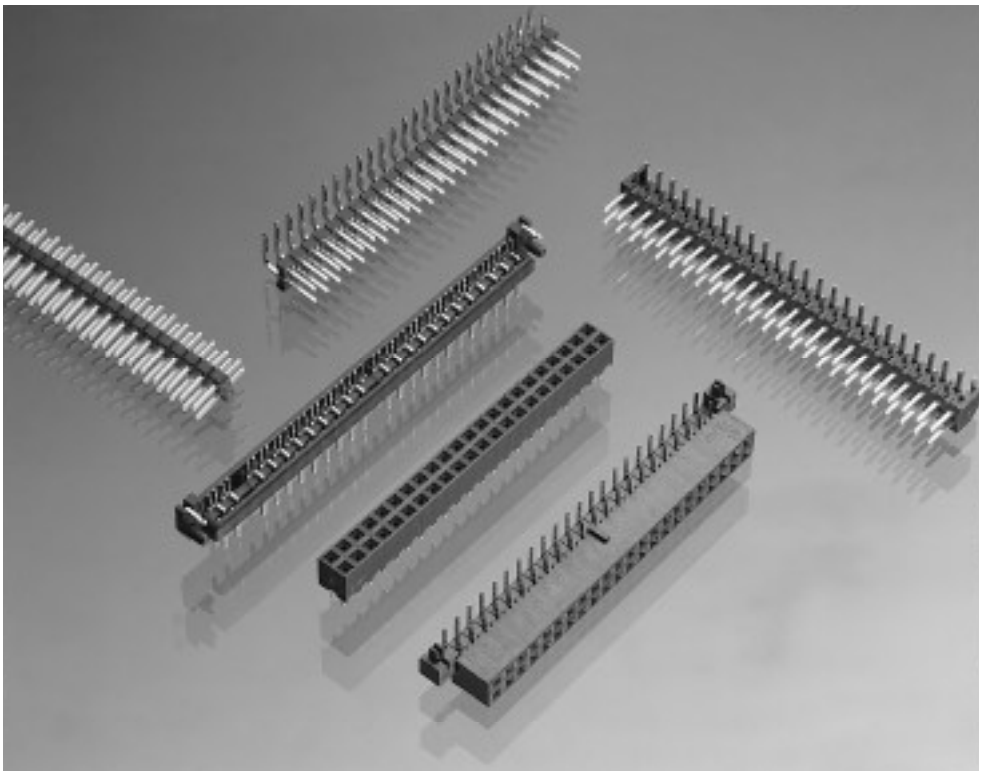
AMPMODU 2mm Connectors (Board to Board)

Product Facts

- 2.0 x 2.0 [.08 x .08] centerline spacing
- Two-piece, double-row connector system
- Unshrouded header styles include; breakaway and surface-mount
- All headers with 0.5 [.02] square posted contacts
- Surface-mount connectors compatible with standard surface-mount processing (VPR, IR)
- Closed top-entry receptacle assemblies include; vertical mount and right-angle
- Receptacle contacts employ dual cantilever beams for two-point electrical stability
- Duplex (gold/tin-lead) plated posted contacts and receptacle contacts
- Thermoplastic housing material, UL 94V-0 rated
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189
- Produced under a Quality Management System certified to ISO 9001

A copy of the certificate is available upon request.



AMPMODU 2mm connectors reliably and economically meet the packaging and inter-connection requirements of today's miniature sophisticated electronics. They are ideal for mobile and portable personal computers and disk drive applications. In today's marketplace, 2mm is expanding over many other industry segments due to space constraints.

This versatile double-row connector system is comprised of various straight and right-angle posted headers for thru-hole and surface mounting and several closed top-entry receptacle assemblies for vertical and horizontal mounting. Headers and receptacle assemblies are available in selected sizes ranging from 4 through 80 positions.

Thru-hole breakaway headers feature brass straight or right-angle posts with a post length of 4.0 [.16] and a lead length of 2.6 [.10].

The receptacle assemblies employ phosphor bronze contacts with dual cantilever beams and built-in anti-overstress. This feature, coupled with duplex (gold/tin-lead) plating of the header posts and receptacle contacts, provide superior electrical performance as well as excellent solderability.

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