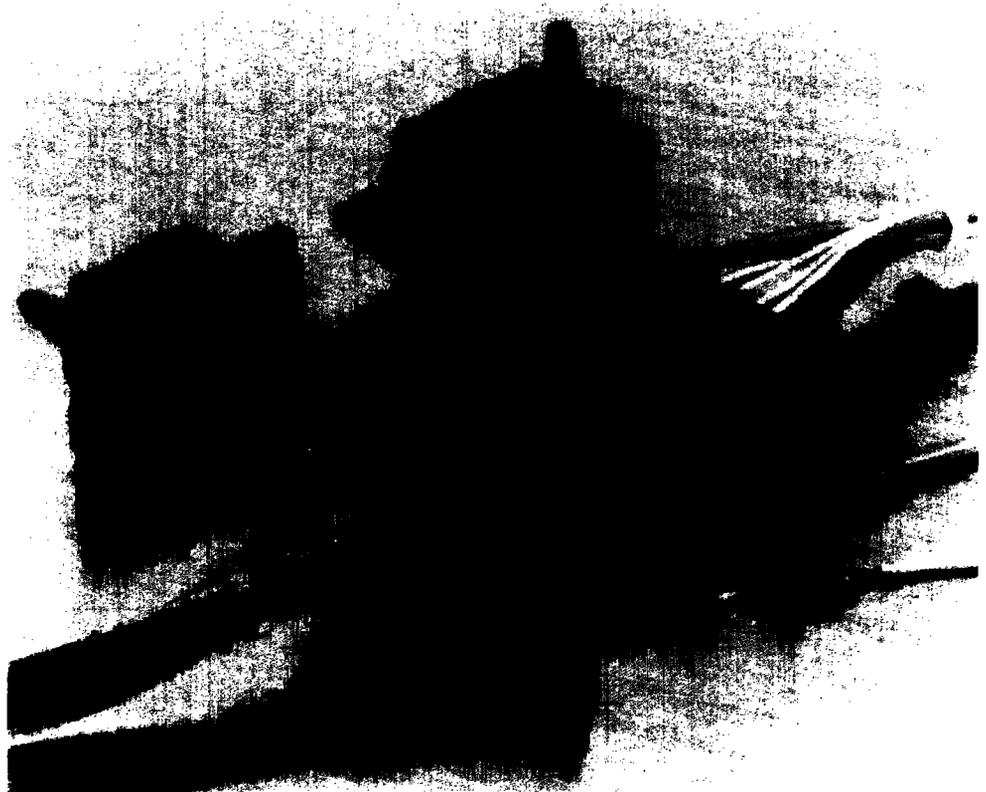


Standard Blindmate Drawer Connectors

Product Facts

- Designed for rack and panel applications
- Durable—withstands multiple mating/unmating
- Low insertion and withdrawal force
- Hermaphroditic contacts
- Accepts signal and power contacts
- Provides excellent creep distance
- Mated connectors dust-proof
- Configurations available in 8, 12, 16, 20 and 24 positions
- Contacts accept wire sizes 24-14 AWG [0.2-2.0mm²]
- Accept wire insulation diameter—.059-.154 [1.5-3.9]
- Recognized under the Component Program of the Underwriters Laboratories Inc. 



Drawer Connectors

AMP Standard Drawer Connectors are designed as an economical rack and panel connector. They are used in copying machines, control panels, power distribution boards, industrial equipment, power supplies and other electronic equipment.

Standard drawer connectors feature excellent durability and feature low insertion and withdrawal force. Leaf-type hermaphroditic contacts ensure reliable, positive contact.

Contacts are on .197 [5.00] centerlines for signal circuits, and .260 [6.60] centerlines for power circuits (2-circuits at each end of the double row of contacts) for a total of 4. Row-to-row spacing is .390 [9.90].

Housings are made of UL 94V-0 rated thermoplastic

and feature molded-in guide pins and sockets for positive connector mating.

Other features include wire outlets which provide for sufficient creep distance, plus mated assemblies are completely dust-proof.

Additional economies are achieved through the use of strip-form contacts suitable for high-speed automatic machine terminations. For prototype, maintenance and repair applications, contacts are available in loose piece for easy termination with AMP hand crimping tools.

Performance Specifications

Voltage Rating: 250 VAC

Current Rating:

- 4 amperes—24 AWG [0.2mm²] Wire
- 5 amperes—22 AWG [0.3-0.4mm²] Wire
- 7 amperes—20 AWG [0.5-0.6mm²] Wire
- 8 amperes—18 AWG [0.8-0.9mm²] Wire
- 12 amperes—16 AWG [1.25-1.4mm²] Wire
- 15 amperes—14 AWG [2.0mm²] Wire

Contact Resistance:

- 10 milliohms max. (Initial)
- 20 milliohms max. (Final)

Insulation Resistance:

- 5000 milliohms min. (Initial)
- 2000 milliohms min. (Final)

Dielectric Withstanding Voltage:

2000 VAC/1 minute

Operating Temperature:

-20°C to +120°C (Includes T-Rise)

Insertion/Extraction Force:

- Insertion—4 kg max. (Initial)—16-position
- Extraction—0.7 kg min. (Initial)—16-position

Durability:

Tested to 1000 Mate/Unmate cycles

Standard Blindmate Drawer Connectors (Continued)

Plug Connectors, PC Board Mount

Material and Finish:

Housing—Glass-filled polybutylene terephthalate (PBT), blue, 94V-0 rated

Contacts—Phosphor bronze, plated gold in contact area over nickel underplating; board mount tails are brass, plated tin over steel underplating

Related Product Data:

Performance Specifications—

page 146

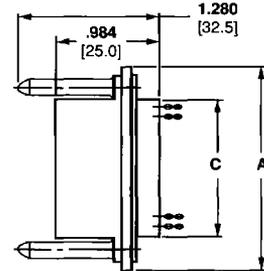
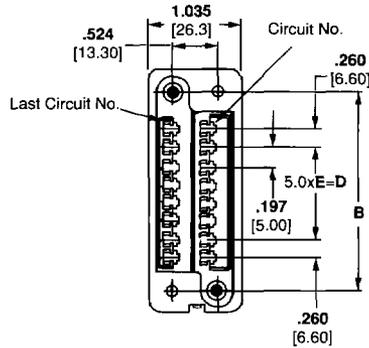
Mating Receptacles—page 148

Technical Documents

(pages 172, 173):

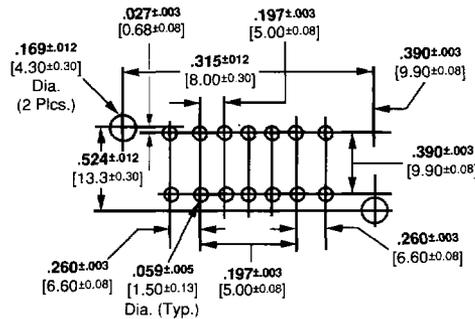
AMP Product Specification
108-5125

AMP Application Specification
114-5044



No. of Pos.	Dimensions					Plug Connector Part Numbers
	A	B	C	D	E	
8	2.016 51.2	1.500 38.0	1.055 26.8	.197 5.00	1	172653-2
12	2.409 61.2	1.890 48.0	1.449 36.8	.591 15.0	3	172653-3
16	2.803 71.2	2.283 58.0	1.843 46.8	.984 25.0	5	172653-1

Note: To ensure proper contact alignment, connectors must be mated during the soldering process.



Recommended PC Board Layout

Drawer Connectors

Standard Blindmate Drawer Connectors (Continued)

Housings for Crimp Snap-In Contacts

Material:

Polybutylene terephthalate (PBT), blue, 94V-0 rated

Related Product Data:

Performance Specifications—page 146

Crimp Snap-In Contacts—page 149

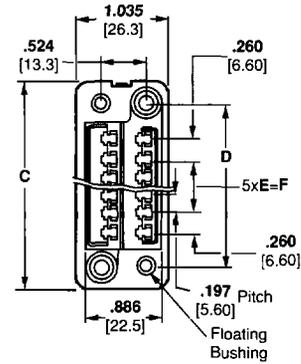
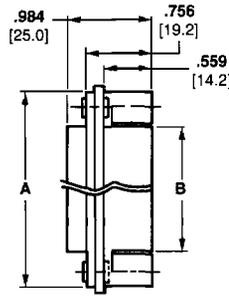
Panel Cutout—page 149

Technical Documents

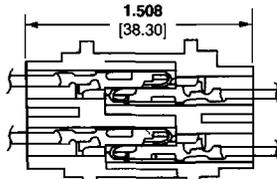
(pages 172, 173):

AMP Product Specification
108-5125

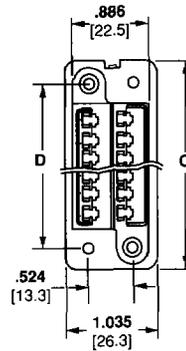
AMP Application Specification
114-5044



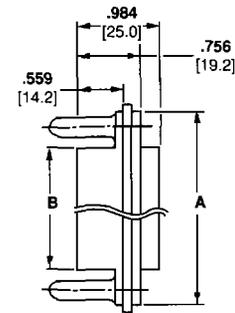
Receptacle



Mated Pair



Plug



No. of Pos.	Dimensions						Receptacle		Plug	
	A	B	C	D	E	F	Floating Bushing Size	Part Numbers	Panel Mount Hole Diameter	Part Numbers
8	1.858	1.055	2.016	1.500	1	.197	.118	172070-1	.130	172063-1
	47.20	26.80	51.20	38.00			3.00		3.30	
12	2.252	1.449	2.410	1.890	3	.591	.157	172069-1	.169	172061-1
	57.20	36.80	61.20	48.00			4.00		4.30	
16	2.657	1.843	2.803	2.283	5	.984	.118	172068-1	.130	172059-1
	67.20	46.80	71.20	58.00			3.00		3.30	
20	3.039	2.236	3.197	2.677	7	1.378	.157	172068-3	.169	172059-3
	77.20	56.80	81.20	68.00			4.00		4.30	
24	3.433	2.630	3.591	3.071	9	1.772	.118	172033-3	.169	172032-3
	87.20	66.80	91.20	78.00			3.00		3.30	
24	3.433	2.630	3.591	3.071	9	1.772	.157	172625-1	.130	172624-1
	87.20	66.80	91.20	78.00			4.00		4.30	

Drawer Connectors

Standard Blindmate Drawer Connectors (Continued)

Crimp Snap-In Contacts (Hermaphroditic)

Material and Finish:

Phosphor bronze, plated gold in contact area (for length of .236 [6.0] from tip), with entire contact underplated nickel

Related Product Data:

Performance Specifications—

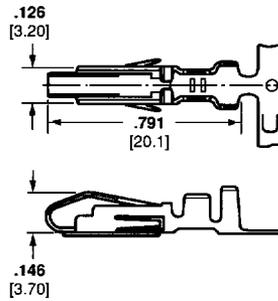
page 146

Housings—page 148

Technical Documents

(pages 172, 173):

AMP Instruction Sheets
408-097J, 408-098J, 408-151J



Wire Size Range		Insulation Dia. Range	Contact Part Numbers		Applicator for AMP-O-LECTRIC Machine*	Hand Tool Numbers
AWG	mm ²		Strip Form	Loose Piece		
24-20	0.2-0.6	.059-.077 1.50-1.95	170311-1	170313-1	567324-2	724632-1
20-16	0.5-1.4	.071-.130 1.80-3.30	170484-1	170485-1	567241-2	724787-1
18-14	0.8-2.0	.091-.154 2.30-3.90	170312-1	170314-1	567325-2	724639-1

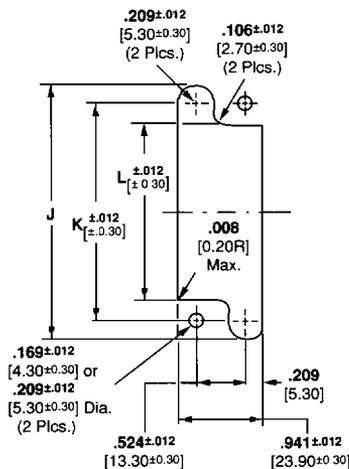
*Applicators are for Model "K" machines. Consult AMP for applicators for other bench machines and lead-making machines.

Notes: 1. For applicable wire, use wire specified in UL 1015 or 1007.

2. Contacts for 18-14 AWG [0.8-2.0mm²] wire are used at the four corners of the connector as power contacts (8 required per assembly).

Extraction Tool Part Number 723986-1

Recommended Panel Cutout



Rear Panel Mount

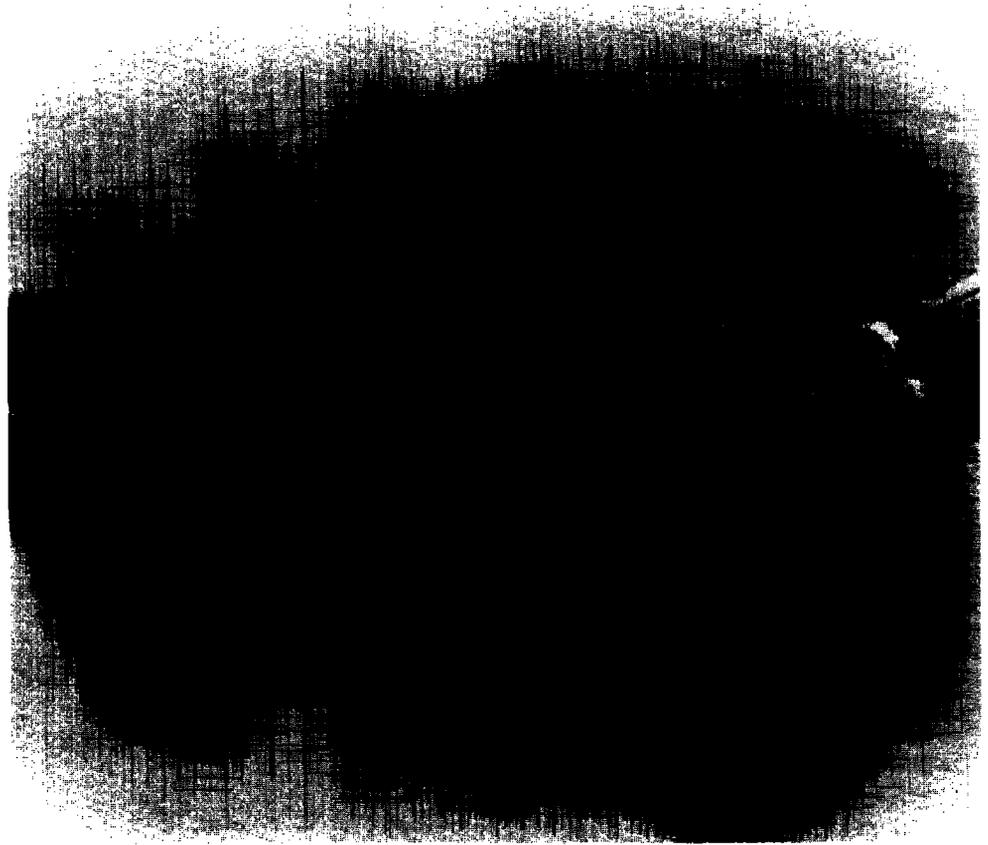
No. of Pos.	Rear Panel Mount Dimensions		
	J	K	L
8	1.913 48.60	1.500 38.00	1.110 28.20
12	2.307 58.60	1.890 48.00	1.504 38.20
16	2.701 68.60	2.283 58.00	1.898 48.20
20	3.094 78.60	2.677 68.00	2.291 58.20
24	3.488 88.60	3.071 78.00	2.685 68.20

Note: Mounting holes of .209 [5.30] dia. are used when mounting receptacle housings with .157 [4.0] long floating bushings and the mating plug housings. Panel thickness is .063 [1.60]. Panel cutout shown above is for use with plug housings. For receptacle housings, use the mirror-image cutout.

High Current Blindmate Drawer Connectors

Product Facts

- High current circuits and signal circuits can be mixed in the same connector
- High current circuits use MIC connector contacts located at four corners of the housing
- Signal circuits use Standard Drawer Connector contacts
- 24 positions
- Hermaphroditic housing can be mated with top and bottom turned while maintaining polarity



AMP High Current Drawer Connectors offer high current and signal circuits mixed in the same connector system.

High current circuits use MIC connector contacts which are located at the four corners of the housing.

Signal circuits use the same hermaphroditic crimp snap-

in contacts that are used in the Standard Drawer Connector.

The hermaphroditic housings are available in a popular 24-position size. These housings can be mated with top and bottom turned while maintaining polarity.

Performance Specifications

Voltage Rating: 250 VAC

Current Rating (Max.):

Signal Circuit (Drawer);
4 amperes—24 AWG [0.2mm²] Wire
5 amperes—22 AWG [0.3-0.4mm²] Wire
7 amperes—20 AWG [0.5-0.6mm²] Wire
Power Circuit (MIC);
10 amperes

Low Level Resistance:

Signal Circuit (Drawer);
10 milliohms max. (Initial)
20 milliohms max. (Final)
Power Circuit (MIC);
3 milliohms (Initial)
6 milliohms (Final)

Dielectric Withstanding Voltage:

5000 milliohms (Initial)
2000 milliohms (Final)

Operating Temperature:

-20°C to +120°C

High Current Blindmate Drawer Connectors (Continued)

Housings (Hermaphroditic), 24-positions

Material:

Housing—Glass-filled polybutylene terephthalate (PBT), blue

Related Product Data:

Performance Specifications—page 150

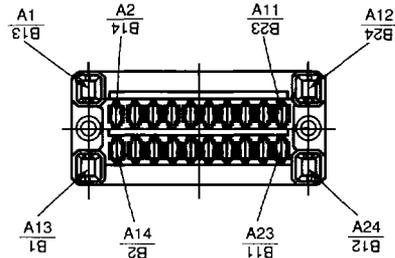
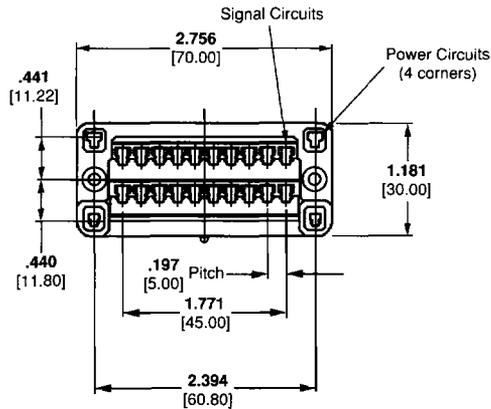
MIC Contacts—page 152

Crimp Snap-in Contacts—page 152

Technical Documents

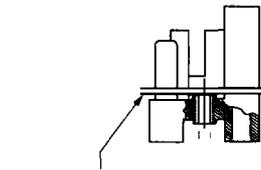
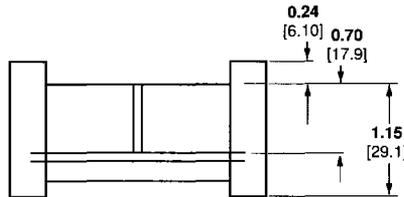
(pages 172, 173):

AMP Product Specification
108-5371



Note: Reverse figures show circuit numbers.

(Example = $\frac{A1}{B13}$ The hole used for No. 1 circuit is used for No. 13 on the reverse side.)

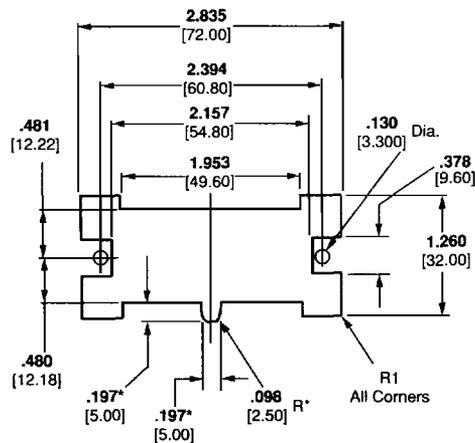


Panel Mounting Position
(Front Mounting)

Floating of Bushing	Housing Part Numbers
Up- and downward = 0.05 [.002] Circumferential = 0.14 [.006]	176916-1
Up- and downward = 0.30 [.012] Circumferential = 0.80 [.031]	176916-2

Upward and downward = Axial clearance
Circumferential = Floating

Recommended Panel Cutout



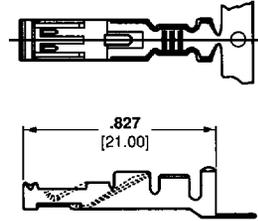
*Dimensions applicable for rear mounting.

High Current Blindmate Drawer Connectors (Continued)

MIC Contacts (Used for Power Circuits)

Material and Finish:

Phosphor bronze, plated .000030 [0.00076] gold in contact area, remainder of contact gold flash, with entire contact underplated nickel



Related Product Data:

Performance Specifications—
page 150

Housings—page 151

Wire Size Range		Insulation Diameter	Receptacle Contact Part Numbers		Hand Tool Part Numbers*
AWG	mm ²		Strip Form	Loose Piece	
20-14	0.5-2.0	.087-.134 2.20-3.40	170286-4	170289-3	755338-1 755339-1

*Part Number 755338-1 is used on wire for automotive application; Part Number 755339-1 is used on other types of wire.
Extraction Tool Part Number 723735-1

Technical Documents

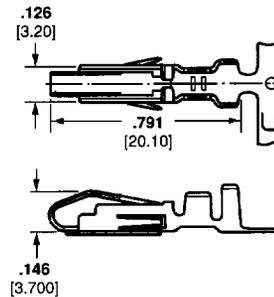
(pages 172, 173):

AMP Instruction Sheets
408-089J, 408-369J, 408-370J

Crimp Snap-In Contacts (Hermaphroditic, Used for Signal Circuits)

Material and Finish:

Phosphor bronze, plated gold in contact area (for length of .236 [6.0] from tip), with entire contact underplated nickel



Related Product Data:

Performance Specifications—
page 150

Housings—page 151

Wire Size Range		Insulation Dia. Range	Contact Part Numbers		Applicator for AMP-O-LECTRIC Machine*	Hand Tool Numbers
AWG	mm ²		Strip Form	Loose Piece		
24-20	0.2-0.6	.060-.077 1.50-1.95	170311-1	170313-1	567324-2	724632-1
20-16	0.5-1.4	.071-.130 1.80-3.30	170484-1	170485-1	567241-2	724787-1

*Applicators are for Model "K" machines. Consult AMP for applicators for other bench machines and lead-making machines.

Notes: For applicable wire, use wire specified in UL 1015 or 1007.

Extraction Tool Part Number 723986-1

Technical Documents

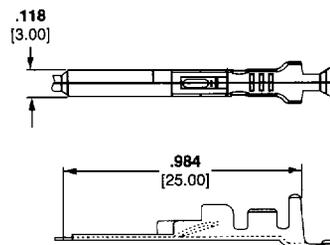
(pages 172, 173):

AMP Instruction Sheets
408-097J, 408-151J

Tab Contacts

Material and Finish:

Brass, plated .000030 [0.00076] gold in contact area, with entire contact underplated nickel



Related Product Data:

Performance Specifications—
page 150

Housings—page 151

Wire Size Range		Insulation Diameter	Tab Contact Part Numbers		Hand Tool Part Numbers*
AWG	mm ²		Strip Form	Loose Piece	
20-14	0.5-2.0	.087-.134 2.20-3.40	170221-4	170222-3	755338-1 755339-1

*Part Number 755338-1 is used on wire for automotive application; Part Number 755339-1 is used on other types of wire.
Extraction Tool Part Number 724763-1

Technical Documents

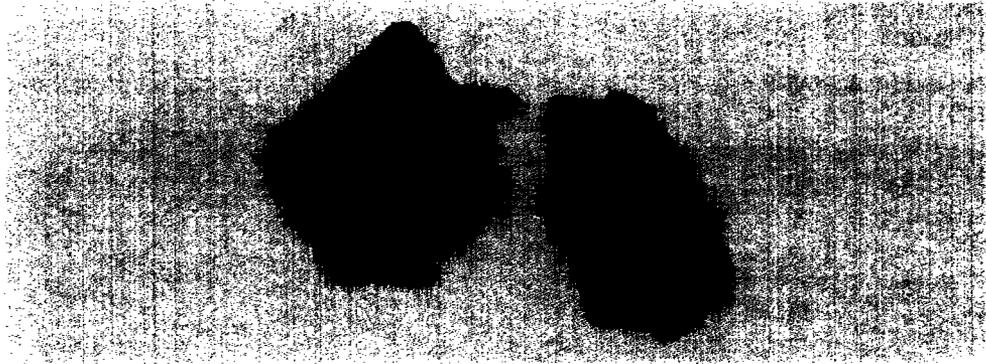
(pages 172, 173):

AMP Instruction Sheets
408-144J, 408-369J, 408-370J

Special Blindmate Drawer Connectors

Product Facts

- Blindmate connectors accept AMP-LEAF crimp snap-in and solder dip contacts
- Contacts are phosphor bronze, gold-over-nickel plated
- 6 and 10 positions
- Housings made of polybutylene terephthalate (PBT)



Special Blindmate Drawer Connectors are available in 6- and 10-position configurations and provide wire-to-board and wire-to-wire connection capabilities. These connectors offer the integrity of AMP-LEAF contacts with maximum travel wiping action.

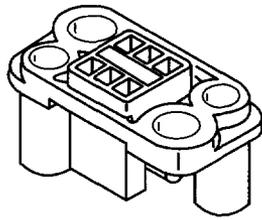
Housings feature molded-in guide pins and diagonally aligned sockets for correct polarization and to facilitate blindmating. The PC header guide pins extend through the PC board to secure the header to the board prior to soldering.

Performance Specifications

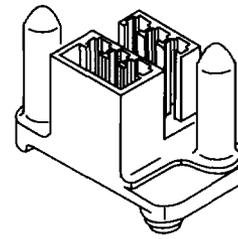
Current Rating:
4 amperes (max.)—26-22 AWG
[0.12-0.4mm²] wire

Voltage Rating: 50 VDC

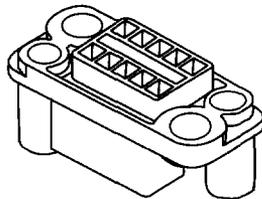
Temperature Rating:
-10°C to +80°C



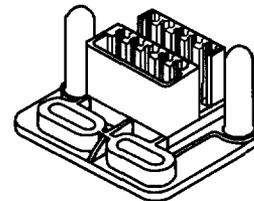
6-Position Socket Housing
(Accepts AMP-LEAF
Crimp Snap-In Contacts)



6-Position PC Board Header Housing
(Fully loaded with AMP-LEAF
Solder Dip Contacts)



10-Position Socket Housing
(Accepts AMP-LEAF
Crimp Snap-In Contacts)



10-Position Header Housing
(Accepts AMP-LEAF
Crimp Snap-In and
Solder Dip Contacts)

Drawer
Connectors

Special Blindmate Drawer Connectors (Continued)

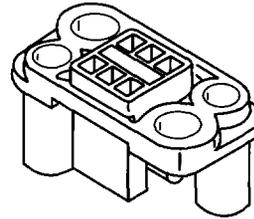
Socket Housing, 6 Positions

Part Number 343886-1

Accepts the following AMP-LEAF
Crimp Snap-In Contacts:

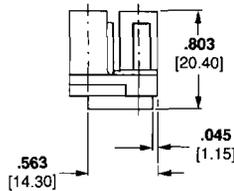
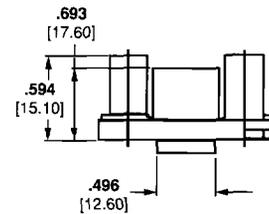
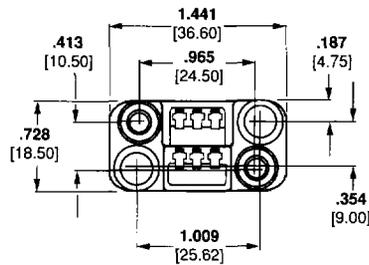
583990-3 (loose piece)
583204-2 (strip form)

Contacts must be ordered
separately; refer to page 134
for details.

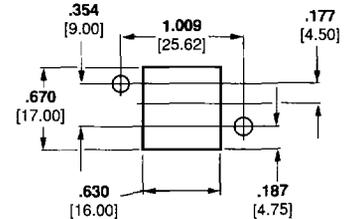


Material:

Glass-filled polybutylene terephthalate
(PBT), black



End View



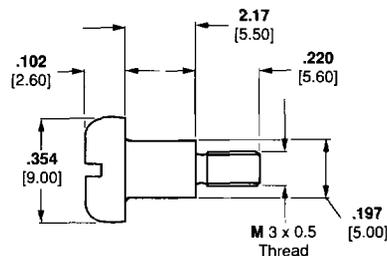
Recommended Panel Cutout

Mounting Screw (2 Required per Socket Housing)

Part Number 343404-1

Material and Finish:

Steel, plated bright zinc chromate



Special Blindmate Drawer Connectors (Continued)

PC Board Header Housing, 6 Positions with Board Retention

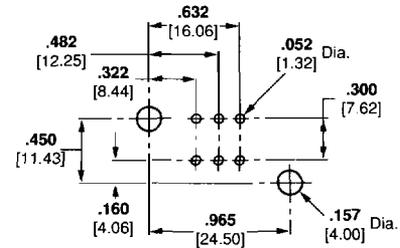
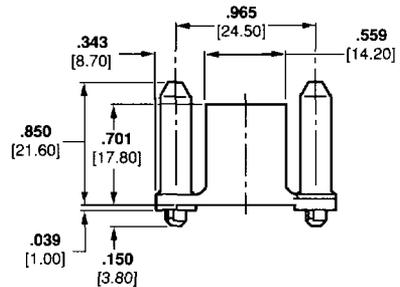
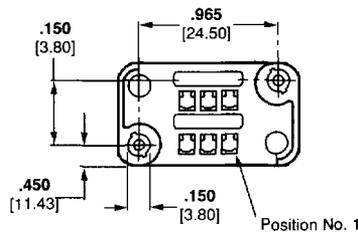
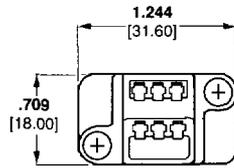
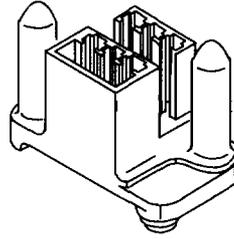
Part Number 343887-1

Accepts AMP-LEAF Crimp Snap-In Contact 343371-1 (page 134) and Solder Dip Contact 583294-2 (page 135)

Contacts must be ordered separately; refer to contact specification pages for details.

Material:

Glass-filled polybutylene terephthalate (PBT), black



Recommended PC Board Layout

PC Board Header Housing, 6 Positions (fully loaded with AMP-LEAF Solder Dip Contacts 583294-2)

Part Number 343888-2

Material and Finish:

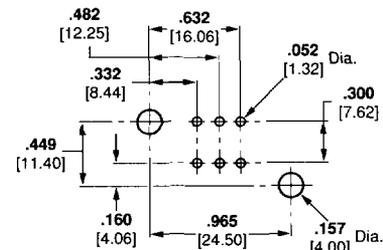
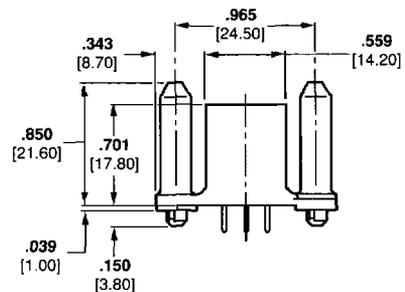
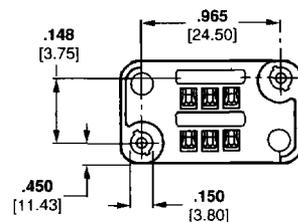
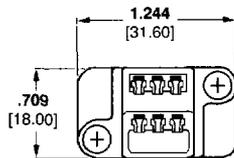
Housing—Glass-filled polybutylene terephthalate (PBT), black

Contacts—Phosphor bronze, plated .000015 [0.00038] min. gold in contact area, tin on post, with entire contact underplated .000050 [0.00127] min. nickel

Technical Documents

(pages 172, 173):

AMP Product Specification 108-3080



Recommended PC Board Layout

Special Blindmate Drawer Connectors (Continued)

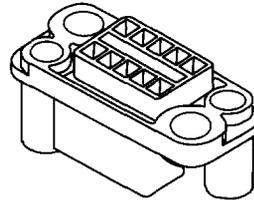
Socket Housing, 10 Positions

Part Number 343348-1

Accepts the following AMP-LEAF
Crimp Snap-In Contacts:

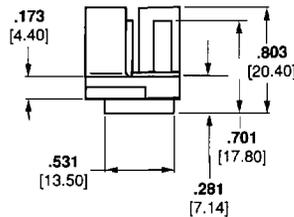
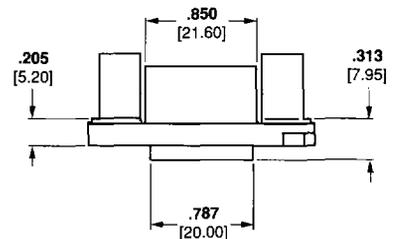
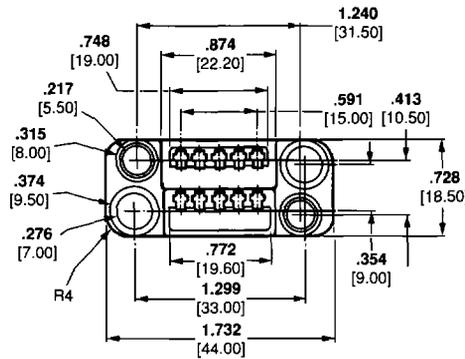
343371-1 (strip form)
583204-2 (strip form)

Contacts must be ordered
separately; refer to page 134
for details.

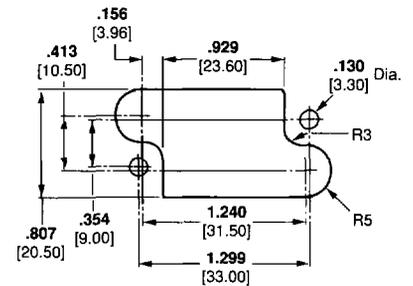


Material:

Glass-filled polybutylene terephthalate
(PBT), black



End View



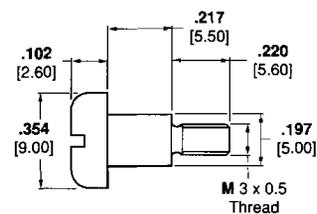
Recommended Panel Cutout

Mounting Screw (2 Required per Socket Housing)

Part Number 343404-1

Material and Finish:

Steel, plated bright zinc chromate



Special Blindmate Drawer Connectors (Continued)

Header Housing, 10 Positions

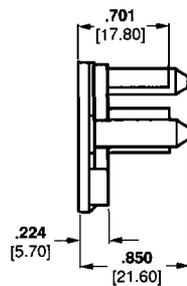
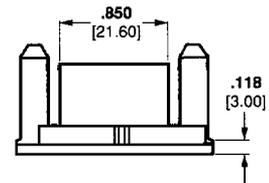
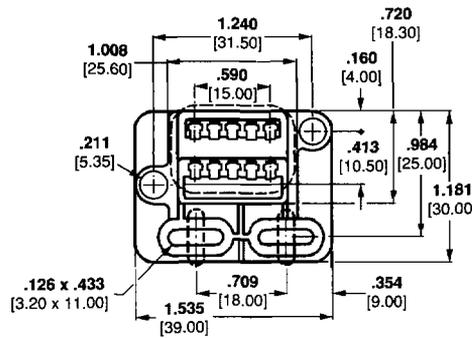
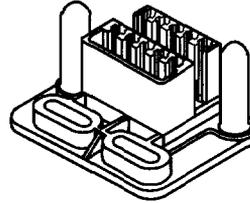
Part Number 343347-1

Accepts AMP-LEAF Crimp Snap-In Contact 343371-1 (page 134) and Solder Dip Contact 583294-2 (page 135)

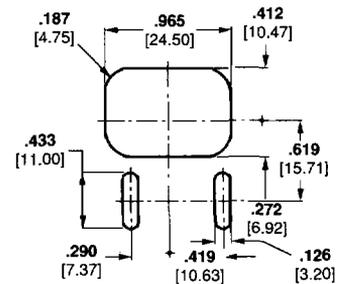
Contacts must be ordered separately: refer to contact specification pages for details.

Material:

Glass-filled polybutylene terephthalate (PBT), black



End View



Recommended Panel Cutout

Drawer
Connectors