WPI® Connectors Accessories and Cable Assemblies

...featuring connector lines formerly manufactured by AMPHENOL

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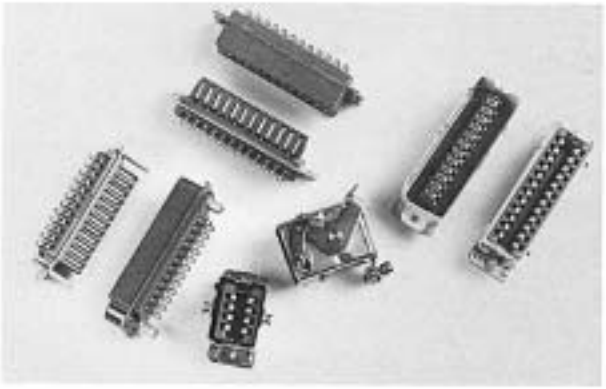
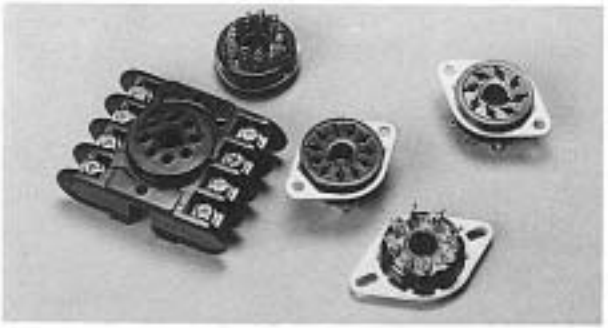
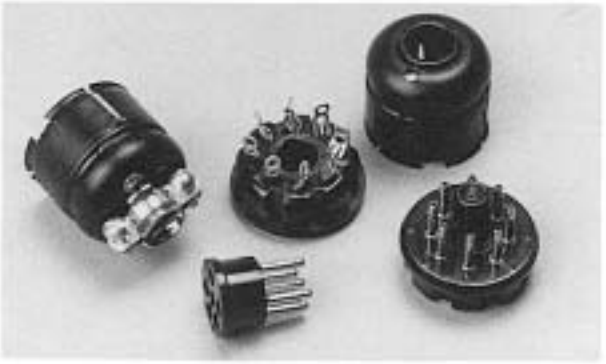
d-subminiature connectors
rear-release & poke home®
17 / 117 / 177 / 777 series
formerly Amphenol
section 1



Blue Ribbon
rack & panel / cable to panel
heavy duty connectors
26 series
formerly Amphenol
section 2



tube / relay sockets
77 / 78 & 146 series
formerly Amphenol
section 3



commercial plugs & accessories
78 & 86 series
formerly Amphenol
section 4

DISTRIBUTORS . . . WPI® connectors are distributed internationally.
For distributors in your area, contact WPI Marketing & Sales.

"Reg. U.S. Patent Off."

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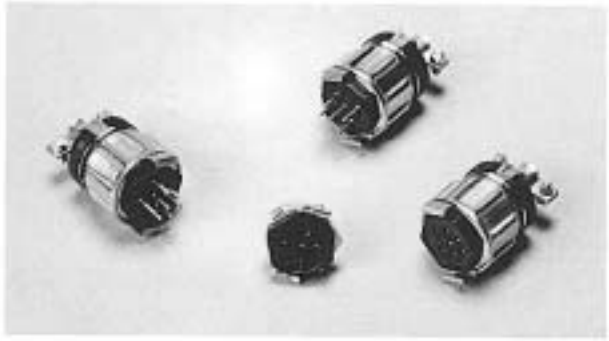
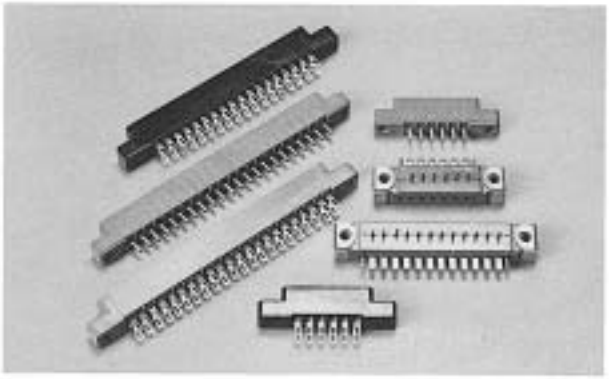
microphone connectors
80 / 91 & 91Q series
formerly Amphenol
section 5



hexagonal connectors
126 series
formerly Amphenol
section 6



printed circuit connectors
133 / 143 & 225 series
formerly Amphenol
section 7

125 volt plugs & receptacles
160 series
formerly Amphenol
section 8

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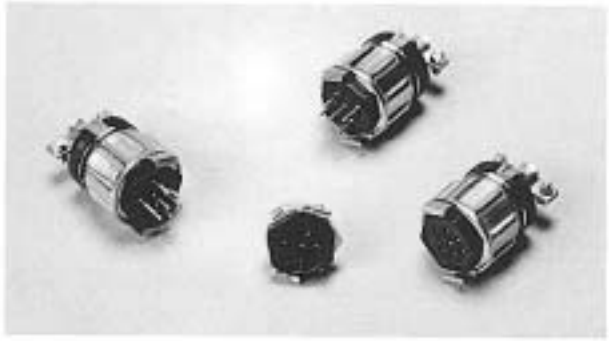
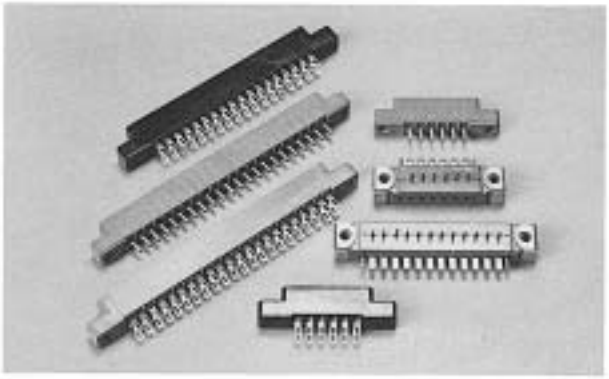
microphone connectors
80 / 91 & 91Q series
formerly Amphenol
section 5



hexagonal connectors
126 series
formerly Amphenol
section 6



printed circuit connectors
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125 volt plugs & receptacles
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formerly Amphenol
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military audio connectors
section 10

military u-type connectors
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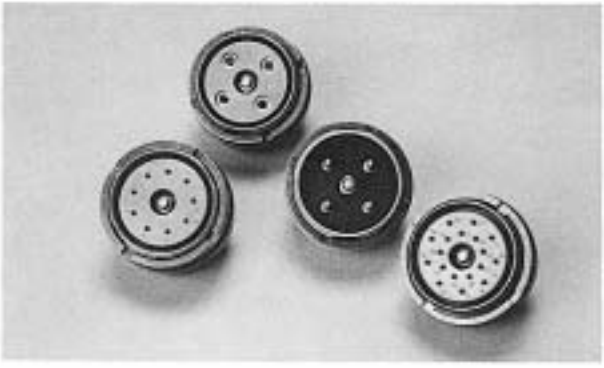

military mw power connectors
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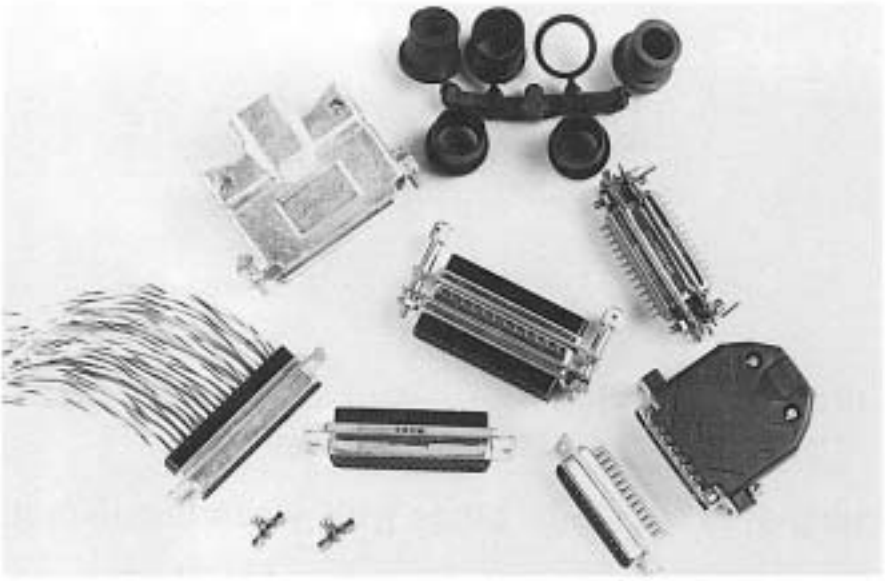
WPI®
d-subminiature connectors



interchangeable and intermateable connectors for commercial, industrial and military applications

d-subminiature connectors have many advantages:

- lightweight / low profile
- economical
- "D" shape assures proper mating / polarization
- meet EIA standards RS 232C & RS 449 for data input/output
- high contact density
- rugged construction
- removable contacts for field repair
- high-speed crimp termination
- rack & panel / cable to cable / cable to panel applications
- intermateable / intermountable with competitive d-subs
- EMI / RFI shielding applications available

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fax (609) 935-0102 twx (510) 680-4750
country code 1

rear-release d-sub

17RR series

economical crimp connector • high volume production
conforms EIA standard RS 232 C - RS 449

rear-release d-sub connectors

Reliable, high density rear-release connectors offer superior features and low installation cost over other popular crimp and solder "D" types. Contacts are stamped and formed, and provide an insulation crimp feature which provides strain relief and insures the integrity of the crimp. The contacts are loaded with fingertip pressure and removed with a simple tool from the wired side (the rear of the connector). The contact and crimp are surrounded by the dielectric which eliminates the need for potting or sleeving to protect against shorting.

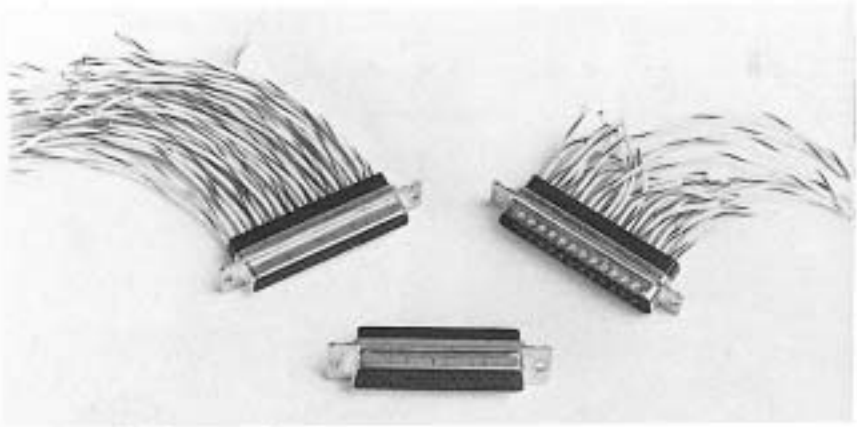
- Economical crimp contact (High speed stripper crimp tool and manual hand crimp tool available).
- Crimp contacts with insulation support feature.
- Shrouded contact and crimp protect against shorting or arcing.
- Removable contact.
- 2 pieces black thermoplastic UL 94 VO rated insulator.
- 5 shell sizes E, A, B, C, D.
- 5 configurations 9, 15, 25, 37, 50.
- Polarization by "D" shape.
- Hoods and locking accessories are available (see section 1 page 6-7)
- UL recognized (file #E115487)

specifications

Shell: EMI/ESD configuration. Bright tin plating and grounding indents on plug front shells.
Dielectric: Two piece black thermoplastic UL 94 VO rated
Contacts: stamped and formed
Plating: .000020 inches gold over nickel

Crimp tensile strength:
20 AWG = 18 lb
22 AWG = 15 lb
24 AWG = 10 lb
26 AWG = 7 lb
30 AWG = 3 lb

Wire types: 20 to 30 AWG max. insulator over diameter .050(1.27)
Temperature: -67ºF (-55ºC) to +257ºF (+125ºC)
Voltage rating: 500 VAC (sea level)
Current rating: 5A



order information

Connector housings and contacts to be ordered separately

tin plated housings, plugs with grounding indents

Contacts	WPI Receptacle	AMP Equivalent	WPI Plug	AMP Equivalent
9	177-RRE-9S	205203-3	777-RRE-9P	205204-4
15	177-RRA-15S	205205-2	777-RRA-15P	205206-3
25	177-RRB-25S	207463-1	777-RRB-25P	207464-2
37	177-RRC-37S	205209-2	777-RRC-37P	205210-3
50	177-RRD-50S	205211-2	777-RRD-50P	205212-3

zinc plated housings with gold iridite

Contacts	WPI Receptacle	AMP Equivalent	WPI Plug	AMP Equivalent
9	117-RRE-9S	205203-1	117-RRE-9P	205204-1
15	117-RRA-15S	205205-1	117-RRA-15P	205206-1
25	117-RRB-25S	205207-1	117-RRB-25P	205208-1
37	117-RRC-37S	205209-1	117-RRC-37P	205210-1
50	117-RRD-50S	205211-1	117-RRD-50P	205212-1

contacts

Wire Size	Description	WPI Part Number Bag of 100	WPI Part Number Reel of 10,000
20-24	Female	17-RRD1-F02-100	17-RRD1-F02-10K
20-24	Male	17-RRD1-M02-100	17-RRD1-M02-10K
24-30	Female	17-RRD2-F02-100	17-RRD2-F02-10K
24-30	Male	17-RRD2-M02-100	17-RRD2-M02-10K

NOTES:
1. FOR LEFT FEED REEL — 17 - RRDX - X02 - 10KG
2. CONSULT FACTORY FOR ALTERNATE PLATING REQUIREMENTS

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rear-release d-sub

order information

*Contacts packaged with connector housings

tin plated housings, plugs with grounding indents

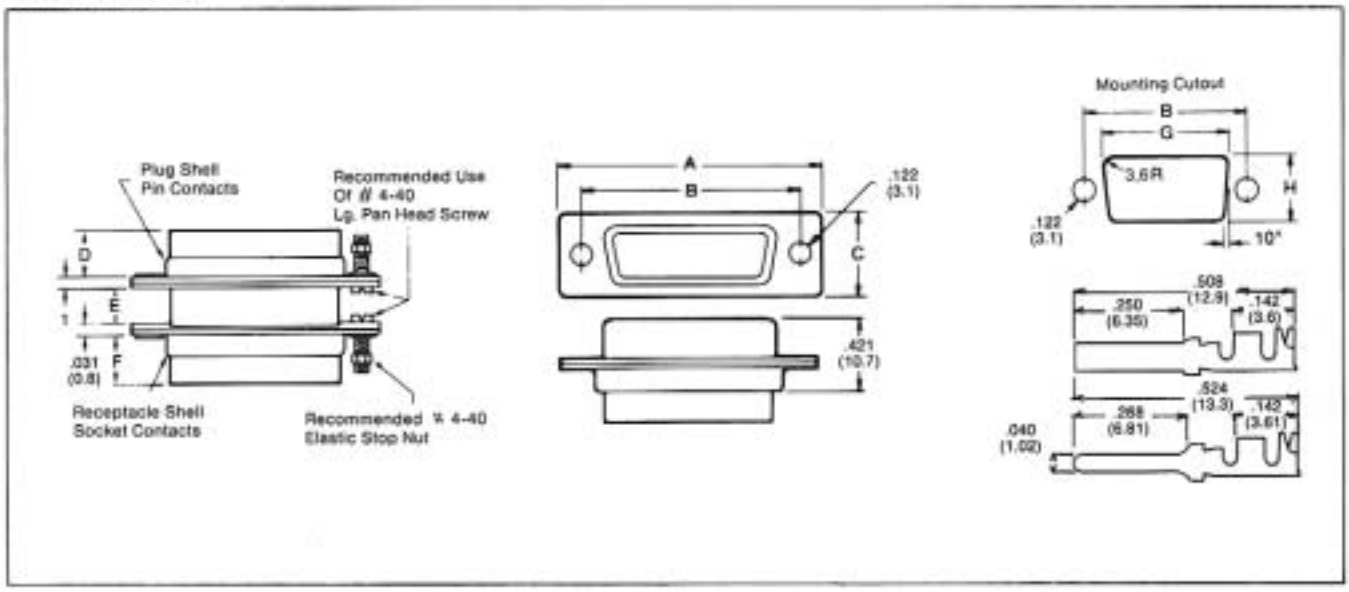
Contacts	WPI Receptable	WPI Plug
9	177-RRE-9S-CTF	777-RRE-9P-CTF
15	177-RRA-15S-CTF	777-RRA-15P-CTF
25	177-RRB-25S-CTF	777-RRB-25P-CTF
37	177-RRC-37S-CTF	777-RRC-37P-CTF
50	177-RRD-50S-CTF	777-RRD-50P-CTF

zinc plated housings with gold iridite

Contacts	WPI Receptable	WPI Plug
9	117-RRE-9S-CTF	117-RRE-9P-CTF
15	117-RRA-15S-CTF	117-RRA-15P-CTF
25	117-RRB-25S-CTF	117-RRB-25P-CTF
37	117-RRC-37S-CTF	117-RRC-37P-CTF
50	117-RRD-50S-CTF	117-RRD-50P-CTF

*Gold flashed contacts included with housings
Consult factory for alternate plating requirements

dimensions



contact arrangements

9 contacts | 15 contacts | 25 contacts | 37 contacts | 50 contacts

	A max.	B	C max.	D	E	F	G (Min)		H (Min)	
							Back Mtg	Front Mtg	Back Mtg	Front Mtg
E	1.240 (31.5)	.984 (25)	.516 (13.1)	.358 (9.1)	.232 (5.9)	.358 (9.1)	.799 (20.3)	.831 (21.1)	.449 (11.4)	.504 (12.8)
A	1.567 (39.8)	1.312 (33.3)	.516 (13.1)	.358 (9.1)	.232 (5.9)	.358 (9.1)	1.118 (28.4)	1.161 (29.5)	.449 (11.4)	.504 (12.8)
B	2.110 (53.6)	1.852 (47.05)	.516 (13.1)	.358 (9.1)	.232 (5.9)	.358 (9.1)	1.654 (42)	1.701 (43.2)	.449 (11.4)	.504 (12.8)
C	2.756 (70)	2.500 (63.5)	.516 (13.1)	.358 (9.1)	.232 (5.9)	.358 (9.1)	2.303 (58.5)	2.346 (59.6)	.449 (11.4)	.504 (12.8)
D	2.661 (67.6)	2.406 (61.1)	.626 (15.9)	.358 (9.1)	.232 (5.9)	.358 (9.1)	2.209 (56.1)	2.283 (58)	.559 (14.2)	.618 (15.7)

All dimensions: inches (millimeters)

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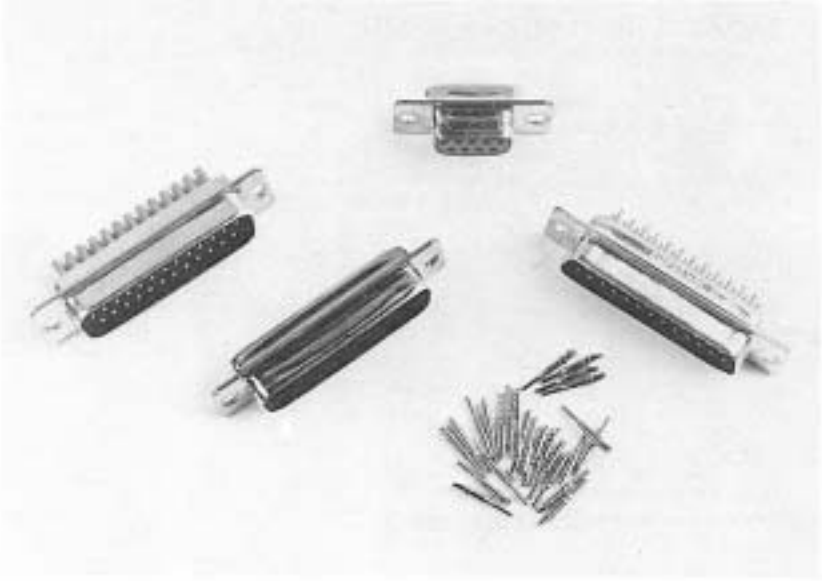
original Poke-Home® d-sub
17 series

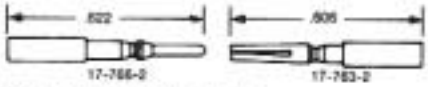
WPI original poke-home blocks can accept the wide range of contact types described on this page.



Poke Home® d-sub connectors

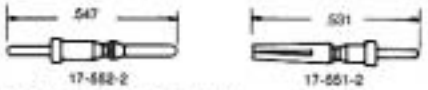
A removable contact type connector that meets most commercial requirements. The connector is available with crimp type contacts, solder type, and printed circuit types in both .023 and .040 inch diameter pintails. The .040 pintail is available in two lengths or with right angles.

Standard crimp type contacts

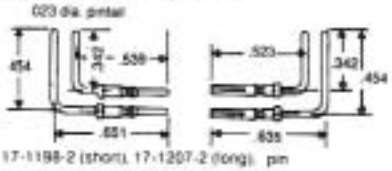


Standard solder type contacts

Pintail contacts for P.C. mounting



Right angle .040 dia. pintails.



17-1198-2 (short), 17-1207-2 (long): pin
17-1208-2 (short), 17-1209-2 (long): socket

Optional contacts

Over-size crimp barrel contacts for 16 ga. wire

specifications

Temperature ranges:
-67°F (-55°C) to
+257°F (+125°C)
Current rating: 7.5 A
Voltage rating:
500 VAC (RMS) at sea level
150 VAC (RMS) at 90,000 feet
Dielectric: Zytel 101
nylon per Mil M-20693

Shells: Steel clear chromated over zinc.
Gold iridite finish available on request per QQP416A Type II
Contacts: Crimp - gold over nickel plated copper alloy
Solder - gold over nickel plated copper alloy
Wire size: Solder: up to #20
Crimp #20, #22, and #24AWG

contact arrangements

Number of Contacts	Receptacle	Receptacle with Float Bushings	Plug
9	17-300-1	17-785	17-301-1
15	17-302-1	17-793	17-303-1
25	17-304-1	17-789	17-305-1
37	17-306-1	17-797	17-307-1
50	17-308-1	17-1001	17-309-1

Connectors above have zinc plated clear chromate steel shells. For gold-iridite finish, add one number to suffix. Examples: 17-300-2, 17-789. See page 5 for optional bright tin.

	Crimp Type Includes specified number of standard crimp contacts		Solder Type Includes specified number of standard solder contacts	
Number of Contacts	Receptacle Socket Contacts	Plug Pin Contacts	Receptacle Socket Contacts	Plug Pin Contacts
9	17-10090-1	17-20090-1	17-10090	17-20090
15	17-10150-1	17-20150-1	17-10150	17-20150
25	17-10250-1	17-20250-1	17-10250	17-20250
37	17-10370-1	17-20370-1	17-10370	17-20370
50	17-10500-1	17-20500-1	17-10500	17-20500

	PC Board Type Includes specified number of pintail contacts inserted in place			
Number of Contacts	Receptacle With 17-551-02 Socket Contacts	Plug With 17-552-02 Pin Contacts	Receptacle With 17-556-XX Socket Contacts	Plug With 17-553-XX Pin Contacts
9	17-10090-11	17-20090-11	17-10090-13-XX	17-20090-13-XX
15	17-10150-11	17-20150-11	17-10150-13-XX	17-20150-13-XX
25	17-10250-11	17-20250-11	17-10250-13-XX	17-20250-13-XX
37	17-10370-11	17-20370-11	17-10370-13-XX	17-20370-13-XX
50	17-10500-11	17-20500-11	17-10500-13-XX	17-20500-13-XX

Connectors can also be ordered without contacts for use with bulk packed contacts in semi-automatic crimping machines. Contact sales office nearest you.

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EMI/ESD accommodation

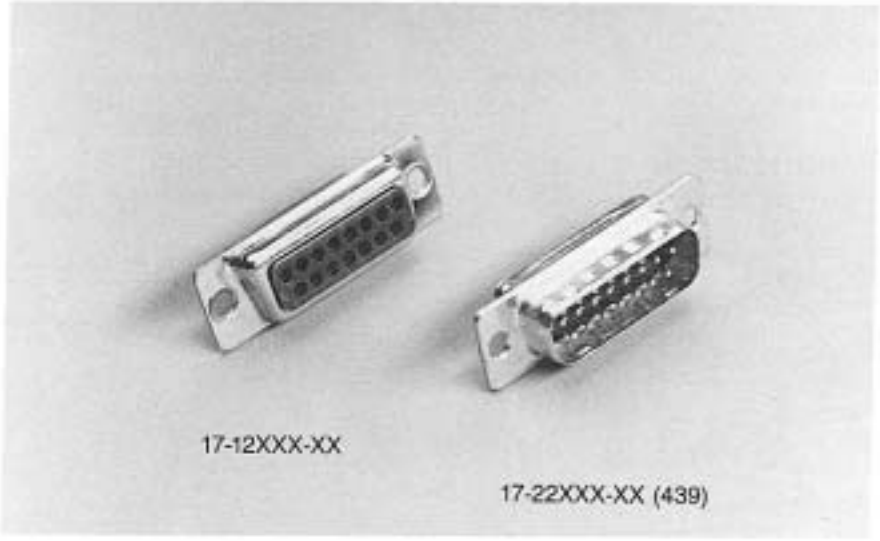
All shells on housings can be supplied with bright tin finish and grounding indents on plug front shells to accommodate grounding.
Metal and plated plastic hoods and clamps are also available in many sizes to shield exposed terminations.

order information housings

17-30X-3 for bright tin - receptables only
17-30X-3 (439) for bright tin and grounding indents - plugs only

assembled connectors

17-12XXX-XX (receptacle) for bright tin
17-22XXX-XX (439) (plugs) for bright tin with grounding indents



order information

17 - 1 1 090 - 1

Series Number 17

Connector Type

1 Receptacle (Zytel) Socket Contacts
2 Plug (Zytel) Pin Contacts

Finish

0 Zinc w/clear chromate
1 Zinc w/gold iridite
2 Bright tin

Number of Signal Contacts

9 - 9 contacts
15 - 15 contacts
25 - 25 contacts
37 - 37 contacts
50 - 50 contacts

deviations

CONNECTOR TYPE 1 and 2 USED WITH DEVIATIONS
17-1XXXX-X; 17-2XXXX-X
0 Solder Contacts (Zytel Nylon insert)
1 Crimp Contacts, Male or Female (Zytel Nylon insert)
1 (390) Encapsulated Contact Line (Zytel Nylon insert)
5 Solder Contact and Float Mounted (Female only) (Zytel Nylon insert)
6 Crimp Contact and Float Mounted (Female only) (Zytel Nylon insert)
11 .023" (.58) Dia. .138" (3.50) Pin Tail Contacts (Zytel Nylon inserts)
13-1 .040" (1.02) pin tail contacts with .225" usable tail length (Zytel Nylon insert)
13-2 .040" (1.02) pin tail contacts with .140" usable tail length (Zytel Nylon insert)

(439) Grounding indents, plugs only, bright tin (25 pc min.)
(390) Encapsulated contact line

All dimensions: inches (millimeters)

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WPI® d-subminiature accessories quick reference chart

Accessories	Page	Shell size Configuration		E 9	A 15	B 25	C 37	D 50
	8	Metallic straight cable housing with cable clamp	clear finish	17-310-1	17-311-1	17-312-1	17-313-1	17-314-1
			Gold iridite	17-310-2	17-311-2	17-312-2	17-313-2	17-314-2
	8	2 piece screw lock back shells with cable clamp (side or top cable entry)		17-1370	17-1371	17-1372	17-1373	17-1374
	9	Two piece plastic (UL) housing with cable clamp. (side or top cable entry)	with standard screw	17-1587-6	17-1588-6	17-1589-6	17-1590-6	17-1591-6
			with long jack screw	17-1587-9	17-1588-9	17-1589-9	17-1590-9	17-1591-9
	9	Die cast metal two-piece back shells - screw lock with internal cable clamp - top entry		17-1657-9	17-1657-15	17-1657-25	17-1657-37	17-1657-50
	10	Plastic two piece back shells - screw lock with internal cable clamp - top entry		17-1724-1	17-1725-1	17-1726-1	17-1727-1	17-1728-1
	10	Metalized plastic two piece back shells - screw lock with internal cable clamp - top entry		17-1724-2	17-1725-2	17-1726-2	17-1727-2	17-1728-2

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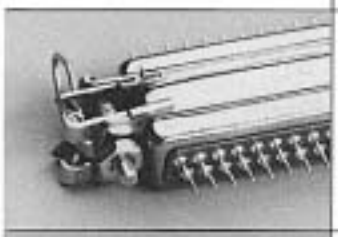
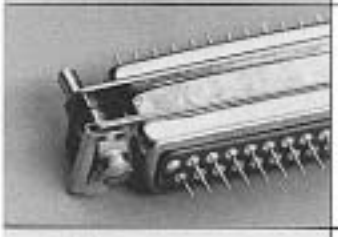
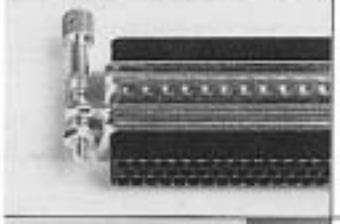
Accessories	Page	Shell size Configuration		E 9	A 15	B 25	C 37	D 50
	11	Spring Latch	clear finish	17-529	17-529	17-529	17-529	17-770
			Gold iridite	17-847	17-847	17-847	17-847	17-850
	11	Screw Lock Assembly		17-768	17-768	17-768	17-768	17-769
	11	Jack Socket		17-893	17-893	17-893	17-893	17-893
		Jack Screw		17-894	17-894	17-894	17-894	17-894
		Jack Assembly		17-895	17-895	17-895	17-895	17-895
	Sec. 15 Pg. 2	D-type RS232 connector field service kit		17RR-232K				

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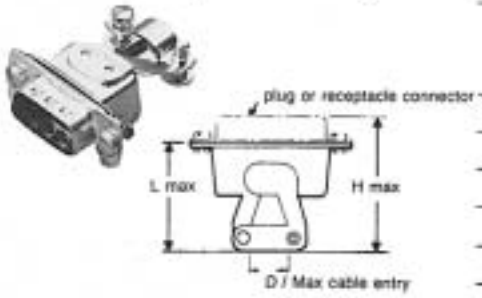
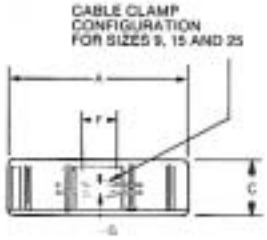
d-subminiature accessories

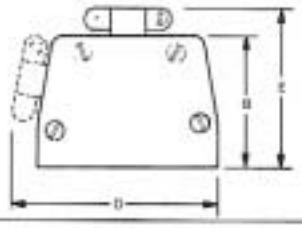
cable clamp assembly

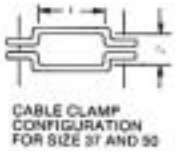


Shell size	Order No. clear chromate finish	Order No. gold iridite finish	D	H	L
E	17-310-1	17-310-2	.406(10.30)	1.358(34.50)	1.094(27.80)
A	17-311-1	17-311-2	.406(10.30)	1.358(34.50)	1.094(27.80)
B	17-312-1	17-312-2	.594(15.10)	1.390(35.30)	1.126(28.60)
C	17-313-1	17-313-2	.720(18.30)	1.390(35.30)	1.126(28.60)
D	17-314-1	17-314-2	.720(18.30)	1.390(35.30)	1.126(28.60)

hoods with external clamps







Shell Size	Order No.	Dimensions A Max.	B	C Max.	D Max.	E Max.	F Max.	G Max.
E	17-1370	1.240(31.50)	1.291(32.80)	.661(16.80)	1.559(39.60)	1.638(41.60)	.252(6.40)	.181(4.60)
A	17-1371	1.567(39.80)	1.500(38.10)	.661(16.80)	1.886(47.90)	1.846(46.90)	.374(9.50)	.220(5.60)
B	17-1372	2.110(53.60)	1.500(38.10)	.661(16.80)	2.433(61.80)	1.350(47.00)	.449(11.40)	.299(7.60)
C	17-1373	2.756(70.00)	1.594(40.50)	.661(16.80)	3.272(83.10)	2.134(54.20)	.650(16.50)	.358(9.10)
D	17-1374	2.634(50.00)	1.594(40.50)	.780(19.80)	3.177(80.70)	2.134(54.20)	.650(16.50)	.461(11.70)

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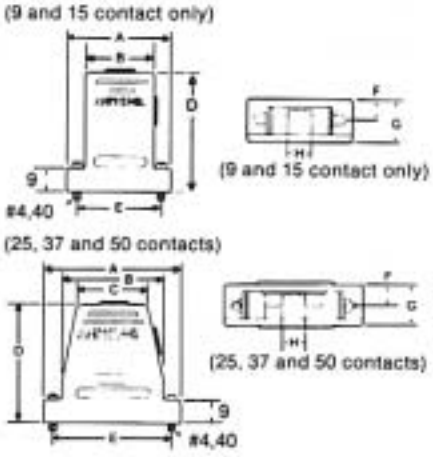
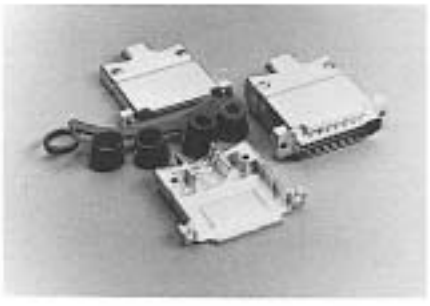
hoods with internal cable clamps

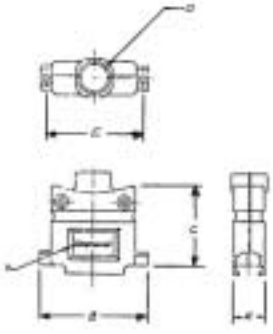


Shell Size	Order No. Standard Screw	Order No. Long Jack Screw	A	B	C	D	E	F	G	H
E	17-1587-6	17-1587-9	1.358(34.5)	.760(19.3)	—	1.610(40.9)	.984(25.0)	.321(8.15)	.642(16.3)	.374(6.4)
A	17-1588-6	17-1588-9	1.689(42.9)	1.087(27.6)	—	1.890(48.0)	1.311(33.3)	.321(8.15)	.642(16.3)	.374(9.5)
B	17-1589-6	17-1589-9	2.228(56.6)	1.626(41.3)	1.230(32.5)	1.890(48.0)	1.850(47.0)	.312(8.15)	.252(16.3)	.374(9.5)
C	17-1590-6	17-1590-9	2.874(73.0)	2.222(57.7)	1.402(35.6)	2.091(53.1)	2.500(63.5)	.321(8.15)	.252(16.3)	.531(13.5)
D	17-1591-6	17-1591-9	2.280(70.6)	2.181(55.4)	1.567(39.8)	2.091(53.1)	2.406(61.1)	.380(9.65)	.760(19.3)	.531(13.5)

die cast two piece backshell



screw lock with
internal cable clamp
- top entry



Shell Size	Order No.	A	B	C	D	E	Cable Dia. Min/Max
E	17-1657-9	.620(15.75)	1.225(31.12)	1.465(37.21)	.400(10.16)	.984(25.00)	.190/.350(4.83/8.89)
A	17-1657-15	.620(15.75)	1.540(39.12)	1.600(40.64)	.400(10.16)	1.312(33.32)	.190/.350(4.83/8.89)
B	16-1657-25	.620(15.75)	2.090(53.09)	1.550(39.37)	.525(13.34)	1.857(47.17)	.190/.460(4.83/11.68)
C	17-1657-37	.620(15.75)	2.750(69.85)	1.800(45.72)	.725(18.42)	2.500(63.50)	.300/.680(7.62/17.27)
D	17-1657-50	.730(18.54)	2.645(67.18)	1.800(45.72)	.725(18.42)	2.406(61.11)	.300/.680(7.62/17.27)

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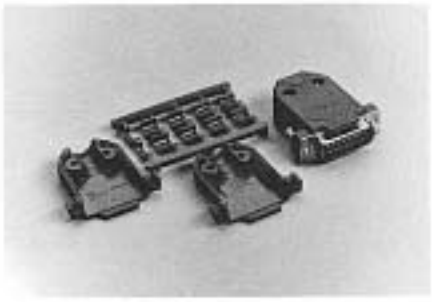
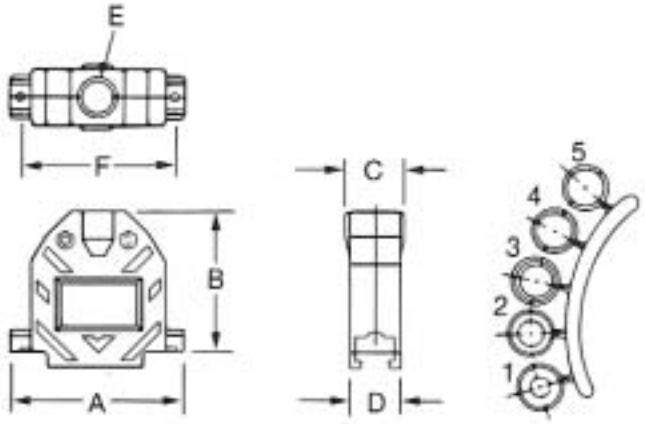
plastic two piece backshell

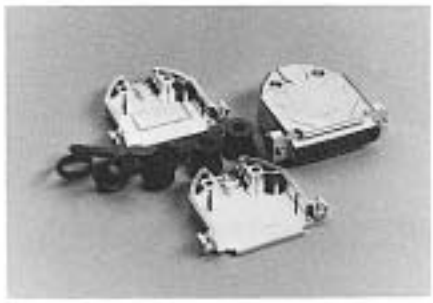


screw lock with
internal cable clamp
- top entry

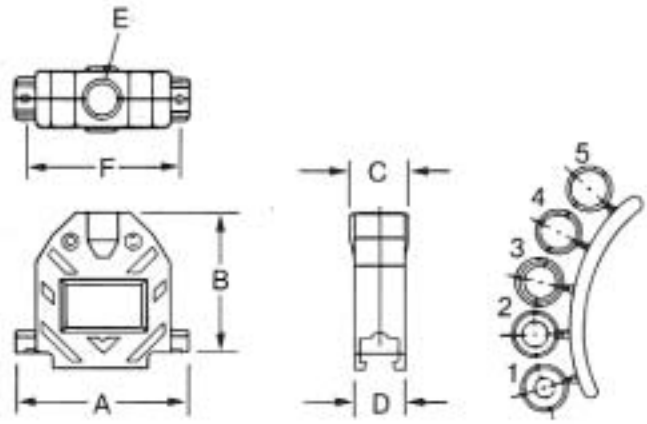


Shell Size	Order No.	A	B	C	D	E	F	Cable Dia. Min/Max
E	17-1724-1	1.225(31.12)	1.397(35.48)	.640(16.26)	.640(16.26)	.400(10.16)	.984(25.00)	.190/.350(4.83/8.89)
A	17-1725-1	1.540(39.12)	1.526(38.76)	.640(16.26)	.640(16.26)	.400(10.16)	1.312(33.32)	.190/.350(4.83/8.89)
B	17-1726-1	2.090(53.09)	1.655(42.04)	.710(18.03)	.640(16.26)	.522(13.26)	1.857(47.17)	.190/.460(4.83/11.68)
C	17-1727-1	2.730(69.34)	1.850(47.00)	.920(23.37)	.640(16.26)	.725(18.42)	2.500(63.50)	.300/.680(7.62/17.27)
D	17-1728-1	2.645(67.18)	1.717(43.61)	.882(22.40)	.750(19.05)	.725(18.42)	2.406(61.11)	.300/.680(7.62/17.27)

metalized plastic two piece backshell



screw lock with
internal cable clamp
- top entry



Shell Size	Order No.	A	B	C	D	E	F	Cable Dia. Min/Max
E	17-1724-2	1.225(31.12)	1.397(35.48)	.640(16.26)	.640(16.26)	.400(10.16)	.984(25.00)	.190/.350(4.83/8.89)
A	17-1725-2	1.540(39.12)	1.526(38.76)	.640(16.26)	.640(16.26)	.400(10.16)	1.312(33.32)	.190/.350(4.83/8.89)
B	17-1726-2	2.090(53.09)	1.655(42.04)	.710(18.03)	.640(16.26)	.522(13.26)	1.857(47.17)	.190/.460(4.83/11.68)
C	17-1727-2	2.730(69.34)	1.850(47.00)	.920(23.37)	.640(16.26)	.725(18.42)	2.500(63.50)	.300/.680(7.62/17.27)
D	17-1728-2	2.645(67.18)	1.717(43.61)	.882(22.40)	.750(19.05)	.725(18.42)	2.406(61.11)	.300/.680(7.62/17.27)

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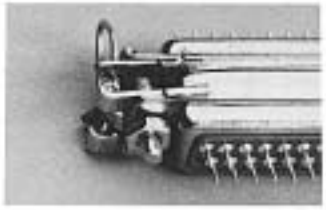
spring latch

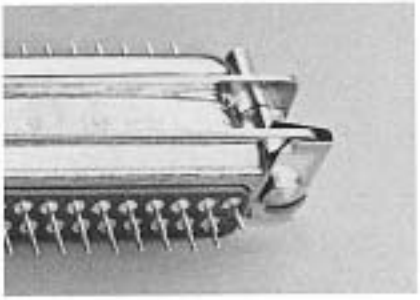
Material:
Steel clear chromate finish or gold iridite finish each order no. includes 2 of each style



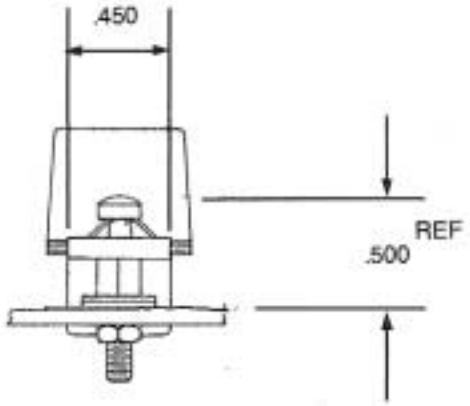
Size	Order No.: clear	Order No.: gold	A	B	C	D	E	F
E,A,B,C	17-529	17-847	.567(14.4)	.614(15.6)	.484(12.3)	.614(15.6)	.484(12.3)	.567(14.4)
D	17-770	17-850	.681(17.3)	.614(15.6)	.610(15.5)	.614(15.6)	.610(15.5)	.681(17.3)

All dimensions: inches (millimeters)

screw lock assembly - provides positive locking

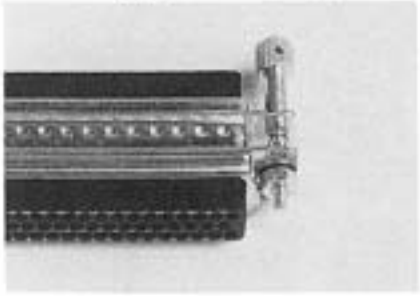


Stainless steel passivated

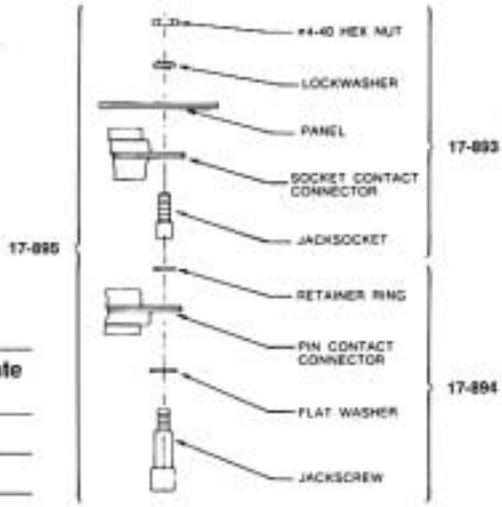


Shell Size	Order No.
E, A, B C & D	17-768

screw type locking assemblies to WPI design



	Clear Chromate Finish
Jack Socket (includes 2 sockets, lock washers & nuts	17-893
Jack Screw (includes 2 screws, washers & retaining rings)	17-894
Complete Assembly (includes both of above)	17-895



Jack Screw & Jack Socket Assembly
(for front mounting only)

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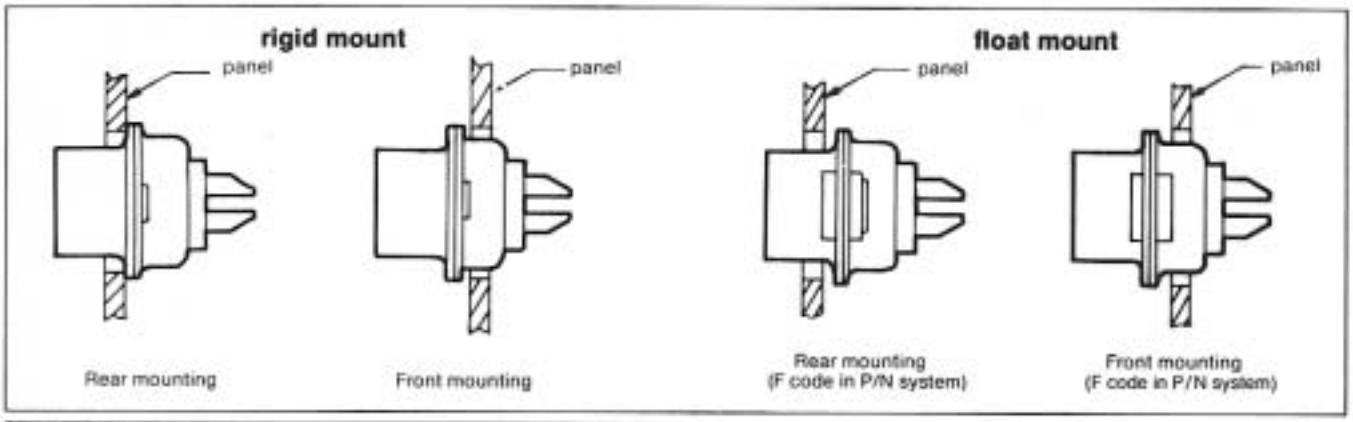
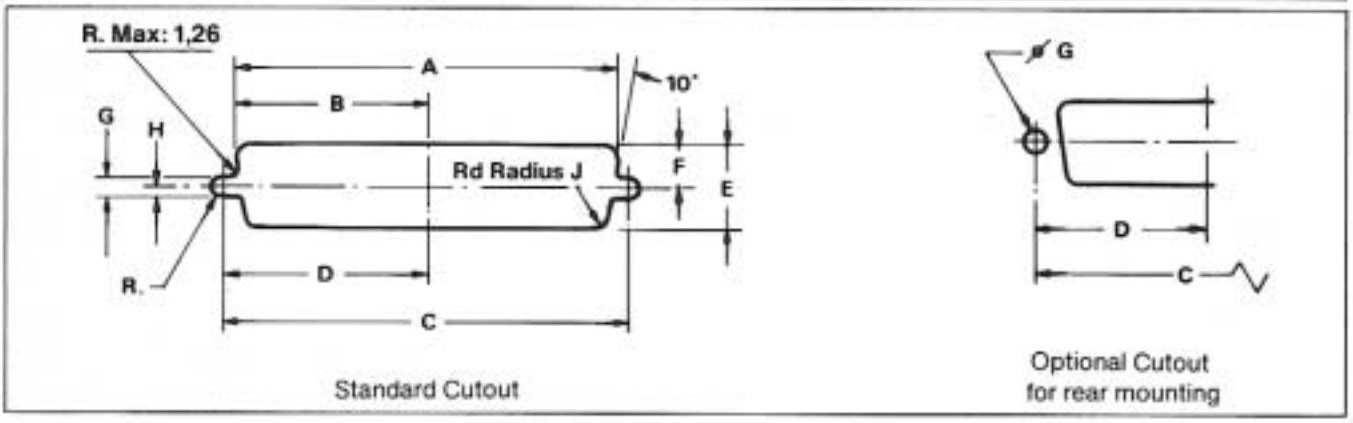
d-subminiature panel cutouts





Config-uration	Mount type	Mounting Methode	A ± .008 (± 0.2)	B ± .008 (± 0.2)	C ± .008 (± 0.2)	D ± .008 (± 0.2)	E ± .008 (± 0.2)	F ± .008 (± 0.2)	G ± .004 (± 0.1)	H ± .004 (± 0.1)	J ± .008 (± 0.2)
9	rigid	Front	.874(22.2)	.437(11.1)	.984(25.0)	.492(12.5)	.512(13.0)	.256(6.5)	.118(3)	.059(1.5)	.083(2.1)
		Rear	.807(20.5)	.402(10.2)	.984(25.0)	.492(12.5)	.449(11.4)	.224(5.7)	.118(3)	.059(1.5)	.134(3.4)
	float	Front	.906(23.0)	.453(11.5)	.984(25.0)	.492(12.5)	.543(13.8)	.272(6.9)	.087(2.2)	.043(1.1)	.083(2.1)
		Rear	.839(21.3)	.417(10.6)	.984(25.0)	.492(12.5)	.441(11.2)	.240(6.1)	.087(2.2)	.043(1.1)	.134(3.4)
15	rigid	Front	1.201(30.5)	.602(15.3)	1.311(33.3)	.657(16.7)	.572(13.0)	.256(6.5)	.118(3)	.059(1.5)	.083(2.1)
		Rear	1.134(28.8)	.567(14.4)	1.311(33.3)	.657(16.7)	.449(11.4)	.224(5.7)	.118(3)	.059(1.5)	.134(3.4)
	float	Front	1.222(31.3)	.618(15.7)	1.311(33.3)	.657(16.7)	.543(13.8)	.272(6.9)	.087(2.2)	.043(1.1)	.083(2.1)
		Rear	1.165(29.6)	.583(14.8)	1.311(33.3)	.657(16.7)	.480(12.2)	.240(6.1)	.087(2.2)	.043(1.1)	.134(3.4)
25	rigid	Front	1.744(44.3)	.870(22.1)	1.850(47)	.925(23.5)	.512(13.0)	.256(6.5)	.118(3)	.059(1.5)	.083(2.1)
		Rear	1.673(42.5)	.839(21.3)	1.850(47)	.925(23.5)	.449(11.4)	.224(5.7)	.118(3)	.059(1.5)	.134(3.4)
	float	Front	1.776(45.1)	.890(22.6)	1.850(47)	.925(23.5)	.543(13.8)	.272(6.9)	.087(2.2)	.043(1.1)	.083(2.1)
		Rear	1.705(43.3)	.854(21.7)	1.850(47)	.925(23.5)	.480(12.2)	.240(6.1)	.087(2.2)	.043(1.1)	.134(3.4)
37	rigid	Front	2.890(60.7)	1.197(30.4)	2.500(63.5)	1.248(31.7)	.512(13.0)	.256(6.5)	.118(3)	.059(1.5)	.083(2.1)
		Rear	2.327(59.1)	1.161(29.5)	2.500(63.5)	1.248(31.7)	.449(11.4)	.224(5.7)	.118(3)	.059(1.5)	.134(3.4)
	float	Front	2.421(61.5)	1.213(30.8)	2.500(63.5)	1.248(31.7)	.543(13.8)	.272(6.9)	.087(2.2)	.043(1.1)	.083(2.1)
		Rear	2.354(59.8)	1.177(29.9)	2.500(63.5)	1.248(31.7)	.480(12.2)	.240(6.1)	.087(2.2)	.043(1.1)	.134(3.4)
50	rigid	Front	2.295(58.3)	1.150(29.2)	2.406(61.1)	1.205(30.6)	.622(15.8)	.311(7.9)	.118(3)	.059(1.5)	.083(2.1)
		Rear	2.217(56.3)	1.110(28.2)	2.406(61.1)	1.205(30.6)	.555(14.1)	.280(7.1)	.118(3)	.059(1.5)	.134(3.4)
	float	Front	2.331(59.2)	1.165(29.6)	2.406(61.1)	1.205(30.6)	.654(16.6)	.327(8.3)	.087(2.2)	.043(1.1)	.083(2.1)
		Rear	2.248(57.1)	1.126(28.6)	2.406(61.1)	1.205(30.6)	.587(14.9)	.295(7.5)	.087(2.2)	.043(1.1)	.134(3.4)

All dimensions: inches (millimeters)

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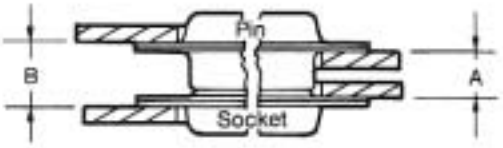
d-subminiature panel mounting

A, B, C and H are dimensions between panels and represent the recommended limit to be used in the design of the connector mounting method. It is recommended that only one assembly either pin or socket, be float mounted.

Pin
front mounting

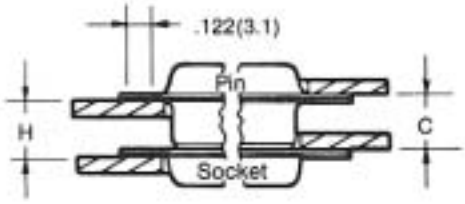


Socket
front mounting

Pin
rear mounting

Socket
rear mounting

Pin
rear mounting



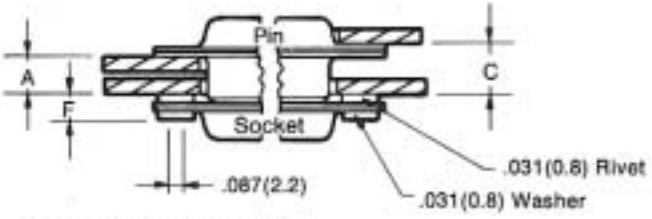
Socket
front mounting

Pin
front mounting

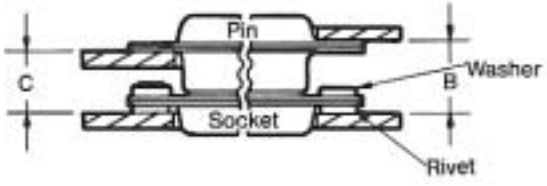
Socket
rear mounting

Pin
rear mounting

Pin
front mounting



Socket float rear mounting
(F code in P/N system)



Socket reverse float mounting
(F code in P/N system)

Note:
Plugs have pin contacts.
Receptacles have socket contacts

combination of mated connectors

Size	Pin	Socket	A +.030 0 (+0.76) 0	B +.030 0 (+0.76) 0	C +.030 0 (+0.76) 0	F 0 -.012 0 (-0.3)	H +.030 0 (+0.76) 0
E,A,B,C,D	Rigid	Rigid	.250(6.35)	.352(8.95)	.301(7.65)	—	.301(7.65)
E,A,B,C,D	Rigid	Float F	.219(5.55)	—	.270(6.85)	.130(3.3)	—
E,A,B,C,D	Float F	Rigid	.219(5.55)	—	.270(6.85)	.130(3.3)	—
E,A,B,C,D	Rigid	Float F	—	.360(9.15)	.321(8.15)	.130(3.3)	—
E,A,B,C,D	Float F	Rigid	—	.360(9.15)	.321(8.15)	.130(3.3)	—

Note: Dimensions are the same if socket or plug connectors are float mounted.

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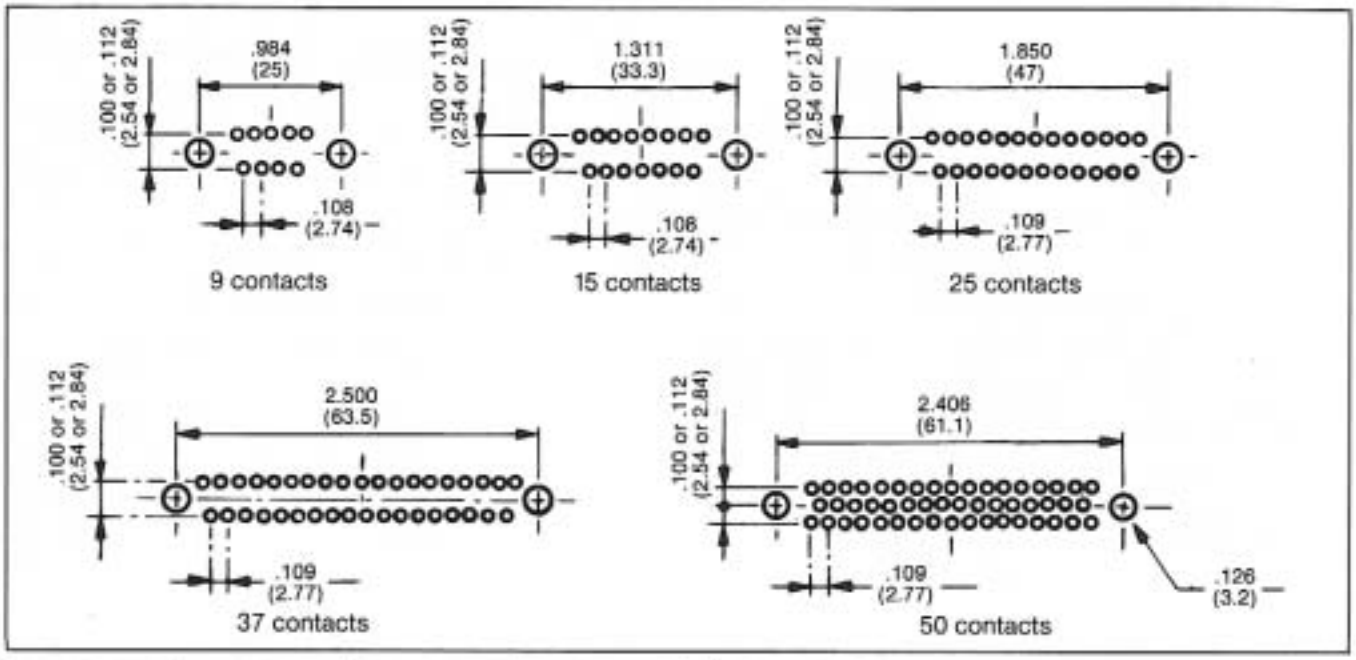
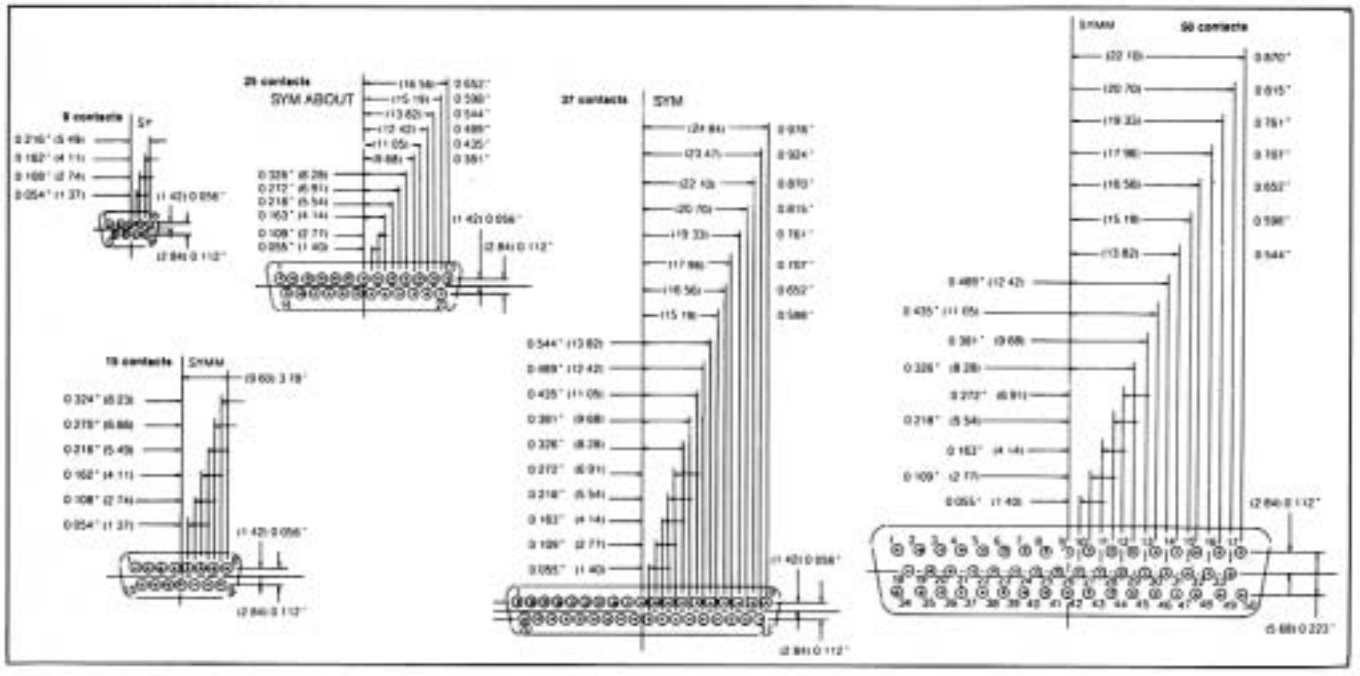
d-subminiature contact arrangements

printed circuit board cutouts



Solder pin diameter	.024(0.6)	.030(0.76)	.040(1.02)
P/C board hole diameter	.030(0.75) min	.035(0.9) min	.047(1.20) min

contact spacing



All dimensions: inches (millimeters)

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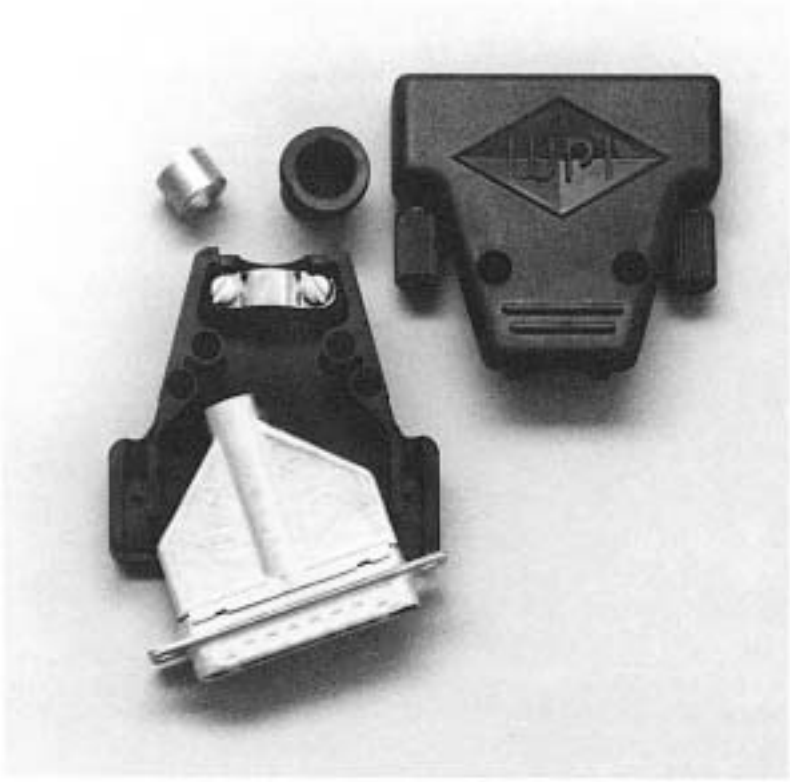
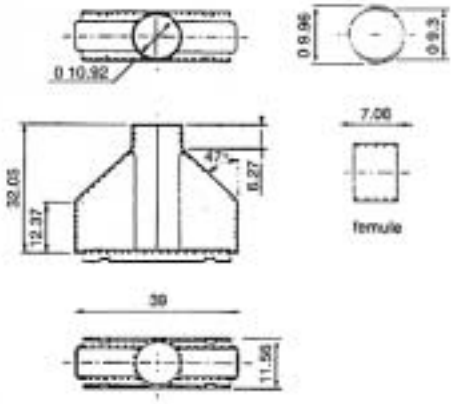
WPI® d-subminiature overmold can

. . .superior EMI shielding & ESD protection



. . .for use with WPI® d-subminiature rear-release connectors (117 / 177 / 777 series)

dimensions



description

This one piece design offers improved shielding characteristics over competitive designs, as well as providing lower installed cost. The WPI® overmold can is available in the popular 25 contact size, and incorporates a single ferrule for a variety of cable diameters, eliminating the need for inner / outer crimp typical of other offerings. The overmold can offers up to 40 dB shielding at one gHz.

specifications

hood: tin-plated cold rolled steel
ferrule: stainless steel
backshell: 94v0 thermoplastic.
hood and ferrule plating: bright tin/lead over nickel

ordering information

WPI® part number	contents	size
17-1826 (plug)	d-sub overmold can kit*	25
17-1827 (receptacle)	d-sub overmold can kit*	25
* WPI® overmold can kit is comprised of one overmold can with basic ferrule, a rear-release connector, 25 gold flash contacts, a backshell, a grommet, and thumb screws.		
17-9433-25	overmold can with ferrule**	25
** must be used in conjunction with WPI® d-sub connectors		

termination tooling

See Section 16 Page 2 for overmold can termination tools.

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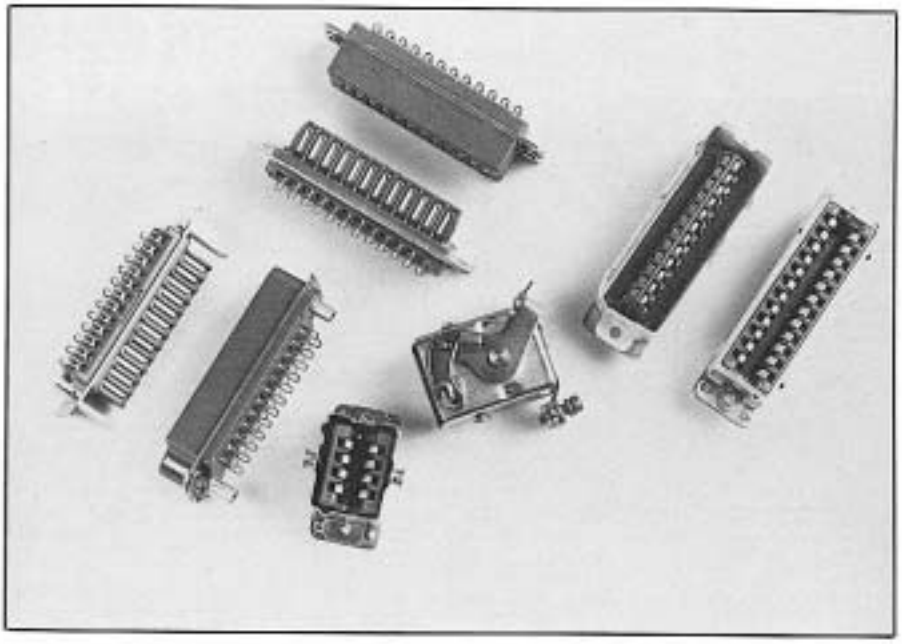
26 series® connectors



This connector provides rugged, heavy duty interconnections where larger gauge wires must be used and size is not a limiting factor.

Millions of Blue Ribbon Connectors are now used in industrial controls, mobile radios, instruments and test equipment, oscilloscopes, video tape recorders, computer control equipment, TV cameras, data displays, communications equipment, and many other applications requiring high reliability.

specifications

Current Capacity	5 amps per contact
Voltage Rating	750 volts D.C. at sea level 300 volts D.C. at 60,000 ft.
Operating Temperature	−55°C to +125°C −67°F to +257°F
Contact Plating	.00003" gold over nickel
Maximum Wire Size	16 gauge

Plugs and receptacles are molded of high-impact diallyl phthalate dielectric with molded-in mounting plates of corrosion-resistant passivated stainless steel. Receptacles have float mount bushings which provide .028" radial movement for perfect alignment. Contacts are gold-plated over nickel with solder eyelet tails.

features

Contact Mating: The 26 series® connectors mate easily, with no danger of misalignment or bent pins. Two wide, positive pressure contact points produce a self-cleaning and wiping action to keep surfaces clean and clear for low-resistance and continuity.

Longer Life: Estimated service life of 25 years in a mated condition for high reliability.

Versatility: Choose from: 3 rack and panel configurations; 2 cable-to-panel types, 8 to 42 contacts; barrier polarization, pin polarization, barrier polarization with keyed shells,with a large number of alternate positions (available on special order).

Lower Cost: Considering all the superior durability features of design and construction, these connectors offer you lower initial and life-cycle cost over any comparable competitive connector. Immediate off-the-shelf availability from local distributors can be a cost-saving factor also.

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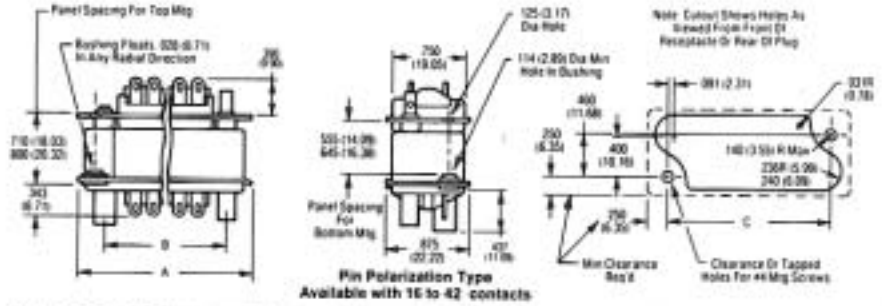
26 series® rack-and-panel connectors

pin polarization

For blind mating situations...pins mate before contacts for perfect alignment.



Pin Polarization Type
Available with 16 to 42 contacts

26-190-XX Receptacle 26-159-XX Plug

dimensions (plug and receptacle mated)

Contacts	A in.	A mm	B in.	B mm	C in.	C mm
16	2.449	(62.20)	1.842	(46.78)	2.024	(51.40)
24	3.125	(79.37)	2.522	(64.05)	2.704	(68.68)
32	3.805	(96.64)	3.202	(81.33)	3.384	(85.95)
42	4.648	(118.05)	4.052	(102.92)	4.234	(107.54)

For reference only, subject to change without notice.

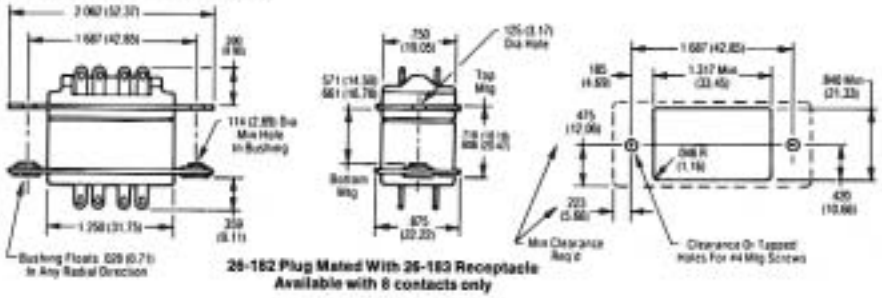
ordering information

contacts	plug	receptacle
16	26-159-16	26-190-16
24	26-159-24	26-190-24
32	26-159-32	26-190-32
42	26-159-42	26-190-42**

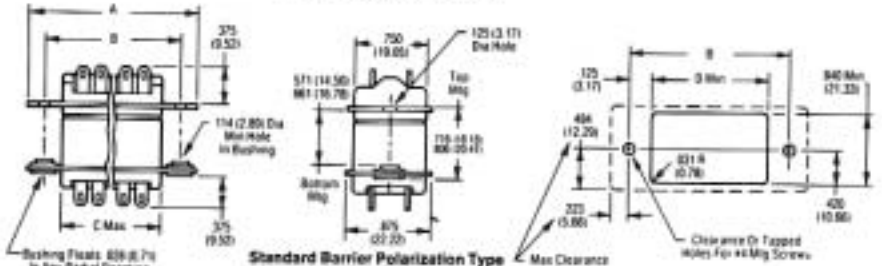
** Not normally stocked by distributors.

barrier polarization

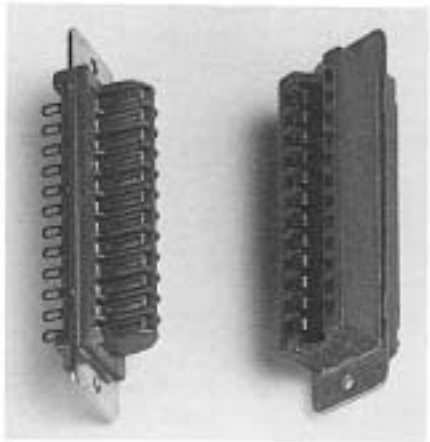
Dielectric barrier prevents mismating...used in most rack-and-panel or module interconnections.



26-182 Plug Mated With 26-183 Receptacle
Available with 8 contacts only



Standard Barrier Polarization Type
Available with 8 to 32 contacts



26-4100-XXP Plug 26-4200-XXS Receptacle

dimensions (plug and receptacle mated)

Contacts	A in.	A mm	B in.	B mm	C Max. in.	C Max. mm	D Min. in.	D Min. mm
8	1.726	(43.84)	1.375	(34.92)	1.042	(26.46)	1.120	(28.44)
16	2.475	(62.86)	2.125	(53.97)	1.790	(45.46)	1.868	(47.44)
24	3.225	(81.91)	2.875	(73.02)	2.542	(64.41)	2.620	(66.54)
32	3.975	(100.96)	3.625	(92.07)	3.292	(83.61)	3.370	(85.59)

For reference only, subject to change without notice.

ordering information

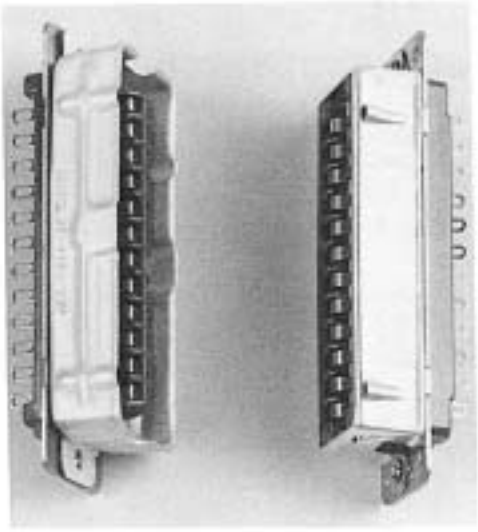
contacts	plug	receptacle
8	26-182	26-183
8	26-4100-8P	26-4200-8S
16	26-4100-16P	26-4200-16S
24	26-4100-24P	26-4200-24S
32	26-4100-32P	26-4200-32S

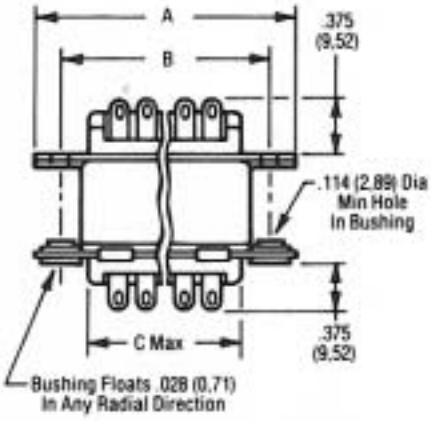
26 series® rack-and-panel connectors (cont.)

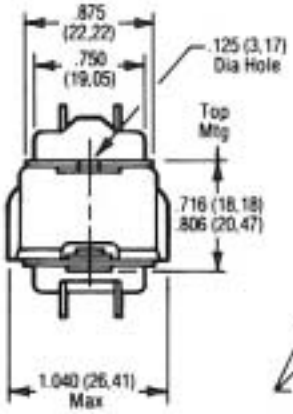
barrier polarization with keyed shells

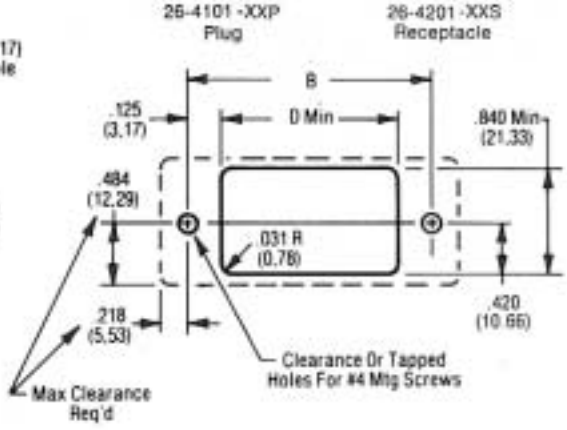
Similar to barrier type with addition of aluminum shell on both plug and receptacle. Shell is keyed to prevent accidental mis-mating of several connectors mounted on the same panel.

26-41XX connectors have plug (male) insert in receptacle shell. 26-42XX connectors have receptacle (female) inserts in plug shell.







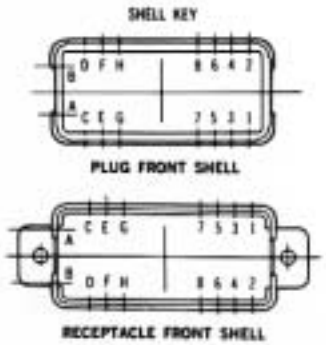


dimensions (plug and receptacle mated)

Contacts	A		B		C Max.		D Min.	
	in.	mm	in.	mm	in.	mm	in.	mm
8	1.726	(43.84)	1.375	(34.92)	1.042	(26.46)	1.120	(28.44)
16	2.475	(62.86)	2.125	(53.97)	1.790	(45.46)	1.868	(47.44)
24	3.225	(81.91)	2.875	(73.02)	2.542	(64.41)	2.620	(66.54)
32	3.975	(100.96)	3.625	(92.07)	3.292	(83.61)	3.370	(85.59)

For reference only, subject to change without notice.

Barrier Polarization Type With Keyed Shells Available with 8 to 32 contacts



ordering information

CONTACTS	PLUGS	RECEPTACLES	SHELL KEYS* NUMBERS	LETTER
8	26-4101-8P	26-4201-8S	1	A
8	26-4102-8P	26-4202-8S	2	A
16	26-4101-16P	26-4201-16S	3-6	A-C
16	26-4102-16P	26-4202-16S	2-5	A-D
24	26-4101-24P	26-4201-24S	3-6	A-C
24	26-4102-24P	26-4202-24S	4-7	A-D
32	26-4101-32P	26-4201-32S	3-6	A-C
32	26-4102-32P	26-4202-32S	4-7	A-D

*Consult factory for available alternate key positions.

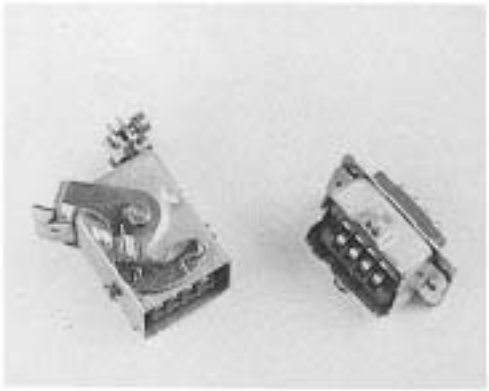
26 series® cable-to-panel connectors

top cable entry

Available in cable-to-panel configurations. This type features positive latching to keep connectors securely mated despite gravity, shock, vibration or tension. Latching arm can also be wire-locked for greater safety.

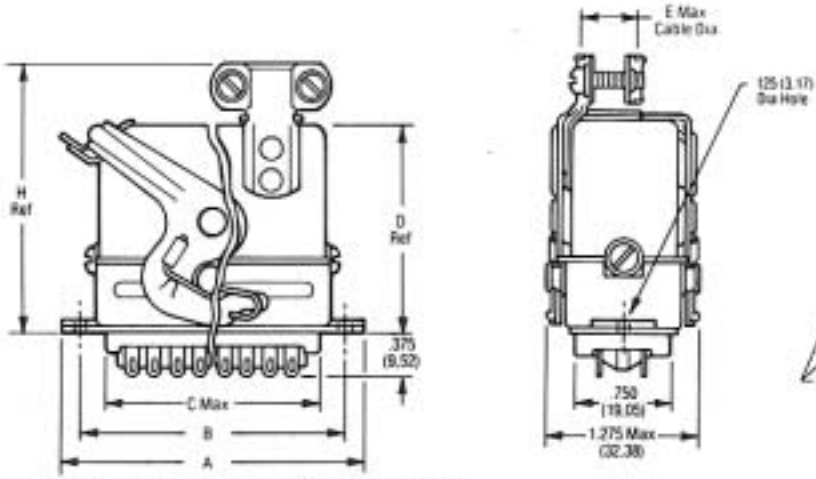
Shells are keyed for polarization and to prevent mismating of multiple connectors. A wide choice of key positions is available. Shells can be provided with either plug (male) insert or receptacle (socket) insert as desired. Please specify P for plug or S for socket in part number.

This style provides cable entry at top of nickle-plated brass back shell. Cable opening has strain relief clamp with 2 screws.



26-4301-XXS or 26-4301-XXP Plug

26-4401-XXP or 26-4401-XXS Receptacle

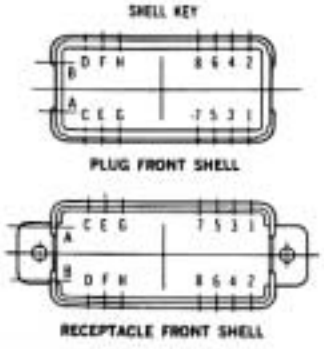


dimensions (plug and receptacle mated)

	A		B		C Max.		D Ref.		E Max.		G Min.		H Ref.	
Contacts	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
8	1.726	(43.84)	1.375	(34.92)	1.100	(27.94)	1.620	(41.14)	0.312	(7.92)	1.120	(28.44)	2.065	(52.45)
16	2.475	(62.86)	2.125	(53.97)	1.845	(46.86)	1.745	(44.32)	0.625	(15.87)	1.868	(47.44)	2.252	(57.20)
24	3.225	(81.91)	2.875	(73.02)	2.600	(66.04)	1.870	(47.49)	0.625	(15.87)	2.620	(66.54)	2.377	(60.37)
32	3.975	(100.96)	3.625	(92.07)	3.350	(85.09)	1.933	(49.09)	0.625	(15.87)	3.370	(85.59)	2.440	(61.97)

For reference only. subject to change without notice.

Cable-To-Panel—Top Entry Available with 8 to 32 contacts



ordering information

CONTACTS	PLUGS	RECEPTACLES	SHELL KEYS* NUMBERS	LETTER
8	26-4301-8P or S	26-4401-8S or P	1	A
8	26-4302-8P or S	26-4402-8S or P	2	A
16	26-4301-16P or S	26-4401-16S or P	3-6	A-C
16	26-4302-16P or S	26-4402-16S or P	2-5	A-D
24	26-4301-24P or S	26-4401-24S or P	3-6	A-C
24	26-4302-24P or S	26-4402-24S or P	4-7	A-D
32	26-4301-32P or S	26-4401-32S or P	3-6	A-C
32	26-4302-32P or S	26-4402-32S or P	4-7	A-D

*Contact factory for alternate key positions.

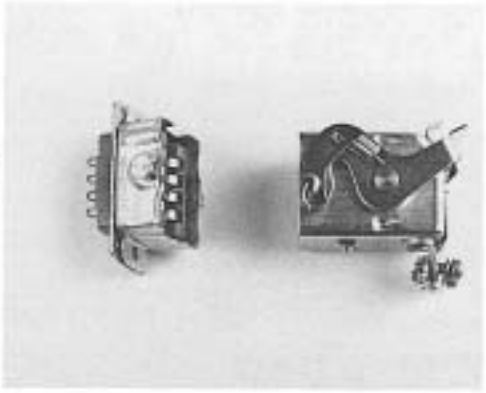
26 series® cable-to-panel connectors (cont.)

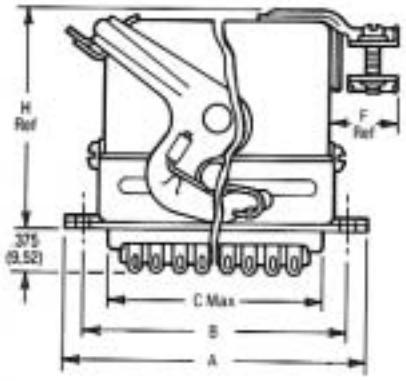
side cable entry

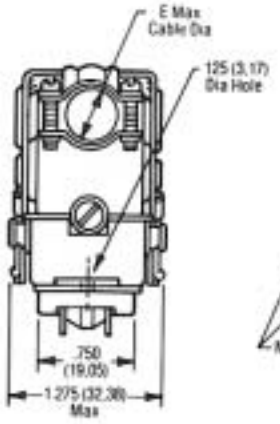
Available in cable-to-panel configurations. This type features positive latching to keep connectors securely mated despite gravity, shock, vibration or tension. Latching arm can also be wire-locked for greater safety.

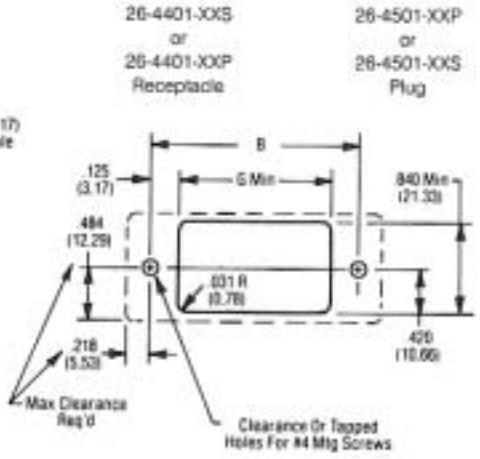
Shells are keyed for polarization and to prevent mismating of multiple connectors. A wide choice of key positions is available. Shells can be provided with either plug (male) insert or receptacle (socket) insert as desired. Please specify P for plug or S for socket in part number.

This style provides cable entry at side of nickle-plated brass back shell. Cable opening has strain relief clamp with 2 screws.







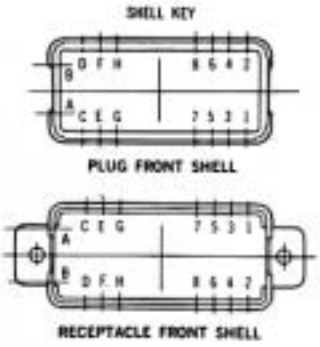


dimensions (plug and receptacle mated)

Contacts	A in.	A mm	B in.	B mm	C Max. in.	C Max. mm	E Max. in.	E Max. mm	F Ref. in.	F Ref. mm	G Min. in.	G Min. mm	H Ref. in.	H Ref. mm
8	1.726	(43.84)	1.375	(34.92)	1.100	(29.74)	0.312	(7.92)	0.438	(11.12)	1.120	(28.44)	1.703	(43.25)
16	2.475	(62.86)	2.125	(53.97)	1.845	(46.86)	0.625	(15.87)	0.500	(12.70)	1.868	(47.44)	1.828	(46.43)
24	3.225	(81.91)	2.875	(73.02)	2.600	(66.04)	0.625	(15.87)	0.500	(12.70)	2.620	(66.54)	1.953	(49.60)
32	3.975	(100.96)	3.625	(92.07)	3.350	(85.09)	0.625	(15.87)	0.500	(12.70)	3.370	(85.59)	2.031	(51.58)

For reference only, subject to change without notice.

Cable-To-Panel—Side Entry Available with 8 to 32 contacts



CONTACTS	PLUGS	RECEPTACLES	SHELL KEYS* NUMBERS	LETTER
8	26-4501-8P or S	26-4401-8S or P	1	A
8	26-4502-8P or S	26-4402-8S or P	2	A
16	26-4501-16P or S	26-4401-16S or P	3-6	A-C
16	26-4502-16P or S	26-4402-16S or P	2-5	A-D
24	26-4501-24P or S	26-4401-24S or P	3-6	A-C
24	26-4502-24P or S	26-4402-24S or P	4-7	A-D
32	26-4501-32P or S	26-4401-32S or P	3-6	A-C
32	26-4502-32P or S	26-4402-32S or P	4-7	A-D

*Contact factory for alternate key positions

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tube/relay sockets

Type S With Retainer Ring Mounting

Black phenolic quick mounting sockets use no screws or rivets. Retainer ring holds socket securely in place. Sockets are notched around circumference for rotation to convenient wiring position.

78-S8
socket and retainer ring

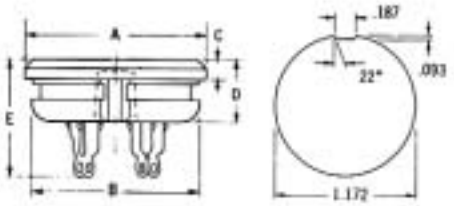
TYPE S SOCKETS

Contacts	Contacts	WPI Number
4	Brass	78-S4
5	Brass	78-S5
6	Brass	78-S6
8 Octal	Lubalioy	78-S8
11	Lubalioy	78-S11

Contact factory for P.C. tail version.

DIMENSIONS

Sockets	A	B	C	D	E
78-S4,-S5, -S6	1 1/4	1 9/32	.135	.420	27/32 Approx.
78-S8, -S11	1 1/4	1 9/32	.145	.490	7/8 Approx.



Replacement Type S

Black phenolic type S sockets assembled with retainer ring holding a sturdy nickel-plated steel mounting plate. Mounting plate centers: 1 1/2" (38.1) to 1 55/64" (47.22). Other dimensions same as S type sockets shown above.

78-RS8
socket

REPLACEMENT TYPE S

Contacts	WPI Number
4	78-RS4
8 Octal	78-RS8

Miniature Type S With Retainer Ring Mounting

Sockets are mounted without screws or rivets in 5/8" (15.88) dia. hole. Black phenolic body. Rated 3 amps @ 500 VRMS.

78-S6S
socket and retainer ring

MINIATURE TYPE S

Contacts	Pin Circle Diameter	WPI Number	Mating Plugs	
			Unshielded	Shielded
3	.344	78-S3S	86-71-3S	91-MPM3S
6	.406	78-S6S	86-71-6S	91-MPM6S

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country code 1

Molded-in-plate Type

Steel mounting plate molded directly into solid phenolic body. Two holes in each contact provides easy wiring or connection of components.

77-MIP-8
MIP socket

MIP SOCKETS

Contacts	WPI Number
4	77-MIP-4
8 Octal	77-MIP-8
11	77-MIP-11

Compact MIP Sockets

Octal style socket with phosphor bronze cadmium plated finish contacts. Mounts in 1 1/8" diameter hole, mounting plate holes on 1 5/16" (33,32) centers.

78-88-8
compact MIP socket

COMPACT MIP SOCKET

Contacts	WPI Number
8 Octal	78-88-8

Printed Circuit MIP Socket

Mounts on PC boards up to 1/8" (3.18) thick. Current rating: 3 amps. Contacts are copper alloy (luballoy) with cadmium plated finish. Contact tails 1/8" (3.18) long, 1/16" (1.57) wide, and .016 (.041) thick. Mount through 1/16" (1.57) diameter hole.

77-MIP8W-012S
PCB MIP socket

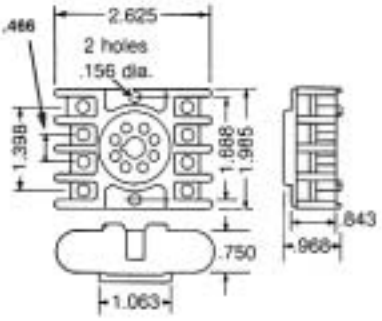
PCB MIP SOCKET

No. Contacts	Pin Circle Dia.	WPI Number
8	.687	77-MIP8W-0125
11	.750	77-MIP11W-0125

8 Contact Type With Termination Screws

Phenolic body withstands 300° F continuous without melting or breakdown. Features longer termination screws with captivated pressure plates. 5 amps @ 1,250 VRMS.

- UL recognized (file #E56473)



146-103

TERMINATION SCREW TYPE

Description	WPI Number
8 Contact Socket Without Tie Point Inserts — Top Mounted	146-103
Socket with 4 Molded-in Threaded Inserts for Tie Points-Bottom Mounted	146-204

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country code 1

commercial plugs and accessories

CP Type Plugs

Black phenolic plugs for use as chassis connectors, with plug-in units or as cable connectors. 4, 5, and 6 contact plugs do not have center guide post but are polarized for correct insertion by use of two pins of larger diameter than others.

86-CP-8
plug

CP TYPE PLUGS

Contacts	WPI Number
4	86-CP-4
5	86-CP-5
6	86-CP-6
8 Octal	86-CP-8
11	86-CP-11
16	86-CP-16

Miniature Unshielded Type

Black phenolic plugs with molded-in nickel plated brass contacts used extensively for speaker connections. Rated 5 amps @ 500 VRMS. Mounts in ⅝" (15.88) dia. hole.

86-71-3S
plug

UNSHIELDED TYPE

Contacts	Pin Circle Diameter	WPI Number	Mating Sockets, Unshielded
3	.343	86-71-3S	78-S3S
6	.406	86-71-6S	78-S6S

Light Duty Connectors

For cable to cable application, mate with each other. For cable to panel applications, mate with type S, RS and MIP tube sockets. Includes metal cap. Available with either pin contacts or socket contacts.

86-PM8-11
plug with cable clamp cap

78-PF8
socket with grommet cap

CABLE CLAMP CAPS

Contacts	Pin Contacts	Socket Contacts
4	86-PM4-11	78-PF4-11
5	86-PM5-11	78-PF5-11
6	86-PM6-11	78-PF6-11
8	86-PM8-11	78-PF8-11
11	86-PM11-11	78-PF11-11

GROMMET CAPS

Contacts	Pin Contacts	Socket Contacts
4	86-PM4	78-PF4
5	86-PM5	78-PF5
6	86-PM6	78-PF6
8	86-PM8	78-PF8
11	86-PM11	78-PF11

Caps

Make inexpensive cable connectors of standard sockets, plugs and receptacles. For applications requiring frequent mating and unmating, use 86-3-858 with molded finger grip.

86-3-13
end outlet

86-3-858
strain relief

86-3-24
cable clamp

CAPS

Description	WPI Number
End Outlet, 7/16" (11.13) I.D. insulator. Black Epoxy Finish Steel.	86-3-13
Cable Clamp, ⅜" (9.52) wire insulator. Black Epoxy Finish Steel.	86-3-24
Strain Relief Thermoplastic End Outlet 5/16" (7.92) I.D. Black	86-3-858

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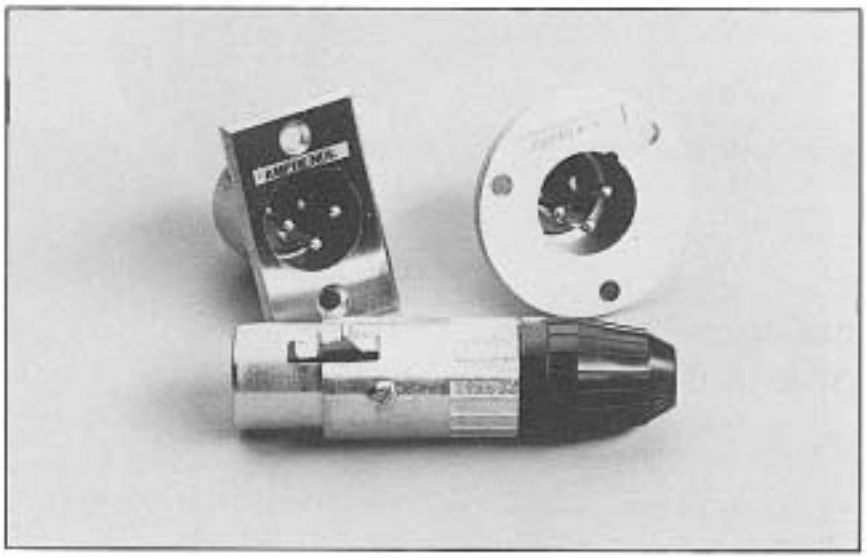
microphone connectors
91-Q series— audio connector

WPI now introduces the 91-Q Series connectors that effectively meet the rugged challenges of contemporary, sophisticated consumer and industrial electronics in a grounded-version connector.



versatile

91-Q Series connectors can be used in a wide range of applications:

audio equipment—Microphones, amplifiers, pre-amps, mixers, speakers, record players, tape decks, recorders, inter-coms, 2-way radio equipment, broadcast studio equipment, sound movie projectors, film strip projectors, video recorder systems, patch cords, etc.

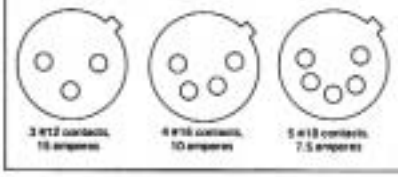
test instruments—Analyzers, bridges, comparators, decade, boxes, gauges and indicators, meters, standards, test probes, medical electronic instruments, x-ray equipment, scientific recording, measuring devices, etc.

corrosion resistance—Withstands standard MIL-STD-202 48-hour salt spray test without damage or corrosion.

control systems—Counters, detectors, alarms, transducers, servos, electric eyes, gauges, indicators, timers, regulators, etc.

and others—Computer peripheral equipment, educational equipment, entertainment systems, etc.

STANDARD CONTACT ARRANGEMENT



great performance

electrical—

No. of Contacts	Test	Voltage Rms Rating	Current Rating	Wire Size AWG
3	1400	133	15A	12
4	1400	133	10A	16
5	1400	133	7.5A	18

temperature rating—20°F to 160°F. (– 30°C to 71°C).

dielectric withstanding voltage—1400 V at 60Hz for one minute between any two contacts or between any contact and connector shell.

durability—Withstands 500 coupling cycles without any detrimental mechanical or electrical breakdowns.

insulation resistance—Exceeds 100 megohms.

contact resistance—Voltage drop is between 45-55 mV at rated current dependent upon contact and wire size.

application engineered

rugged—Solid die cast construction provides tough, high impact strength to withstand rugged use without the risk of failure from breakage.

attractive—Satin nickel plating enhances the appeal of even the most sophisticated equipment. . . non-reflective finish is ideally suited for studio use. Also available in lustrous black chrome.

compact—Reduced shell length for minimum weight and bulk for easier handling.

fully intermateable and interchangeable . . . with all present industry standard latch-lock type audio connectors.

quick, easy assembly/disassembly—Unique set screw cable strain relief feature effectively grips wide range of cable diameters. Unitized inserts all combine to provide greater savings in connector assembly and termination.

quality construction

shells and latchlock—Durable zinc die-cast with protective satin nickel plate.

insert dielectric—High strength reinforced thermoplastic.

contacts—Copper alloy with silver plating. Pins and sockets with solder cup termination are fixed in position for quick termination.

cable clamp—Internal set screw cable clamp and Noryl® nut accept commonly used 3/16" to 5/16" diameter cables.

Noryl® is a registered trademark of General Electric Co.

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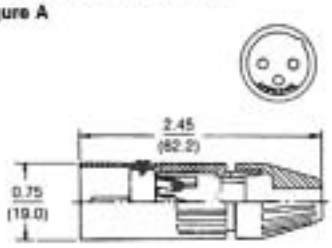
91-Q series— audio connector

straight cord plugs

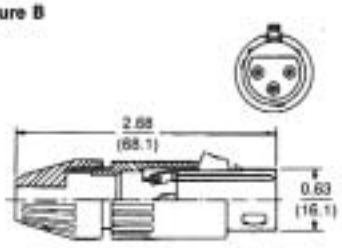
figure A



PIN CONTACTS

Number of Contacts	3	4	5
WPI Part Number	91-3CM	91-4CM	91-5CM

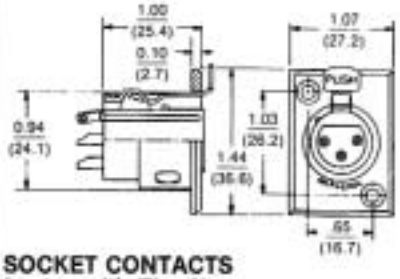
figure B



SOCKET CONTACTS

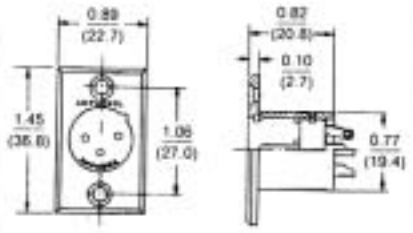
Number of Contacts	3	4	5
WPI Part Number	91-3CF	91-4CF	91-5CF

wall mounting receptacles



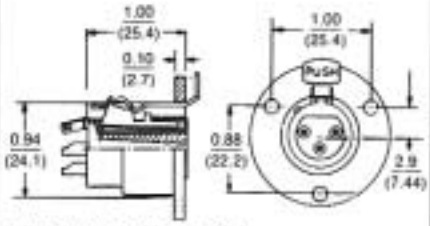
SOCKET CONTACTS (mates with Fig. A)

Number of Contacts	3	4	5
WPI Part Number	91-3SF	91-4SF	91-5SF



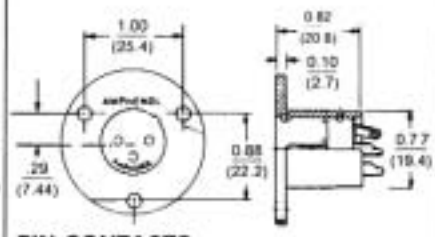
PIN CONTACTS (mates with Fig. B)

Number of Contacts	3	4	5
WPI Part Number	91-3SM	91-4SM	91-5SM



SOCKET CONTACTS (mates with Fig. A)

Number of Contacts	3	4	5
WPI Part Number	91-3RF	91-4RF	91-5RF



PIN CONTACTS (mates with Fig. B)

Number of Contacts	3	4	5
WPI Part Number	91-3RM	91-4RM	91-5RM

FULLY INTERCHANGEABLE WITH ALL LATCHLOCK AUDIO CONNECTORS

Select the right WPI connector from this cross reference guide.

All connectors shown are considered electrically equivalent and mechanically interchangeable.

WPI Part Number	Replaces Old Amphenol Number	Switchcraft	Cannon	Number of Contacts	Description Connector Type
91-3CF	91-454,91-854	A3F	XLR-3-11C	3 female	Cable Plug
91-3CM	91-453,91-853	A3M	XLR-3-12C	3 male	Cable Plug
91-3SF	91-456	D3F	XLR-3-31	3 female	Square Flange Receptacle
91-3SM	91-455	D3M	XLR-3-32	3 male	Square Flange Receptacle
91-3RF	91-856	C3F	XLR-3-13	3 female	Round Flange Receptacle
91-3RM	91-855	C3M	XLR-3-14	3 male	Round Flange Receptacle
91-4CF	91-458,91-858	A4F	XLR-4-11C	4 female	Cable Plug
91-4CM	91-457,91-857	A4M	XLR-4-12C	4 male	Cable Plug
91-4SF	91-460	D4F	XLR-4-31	4 female	Square Flange Receptacle
91-4SM	91-459	D4M	XLR-4-32	4 male	Square Flange Receptacle
91-4RF	91-860	C4F	XLR-4-13	4 female	Round Flange Receptacle
91-4RM	91-859	C4M	XLR-4-14	4 male	Round Flange Receptacle
91-5CF	91-462	A5F	XLR-5-11C	5 female	Cable Plug
91-5CM	91-461	A5M	XLR-5-12C	5 male	Cable Plug
91-5SF	91-464	D5F	XLR-5-31	5 female	Square Flange Receptacle
91-5SM	91-463	D5M	XLR-5-32	5 male	Square Flange Receptacle
91-5RF	—	C5F	XLR-5-13	5 female	Round Flange Receptacle
91-5RM	—	C5F	XLR-5-14	5 male	Round Flange Receptacle

NOTE: For black chrome finish add (436) to end of part number when ordering.

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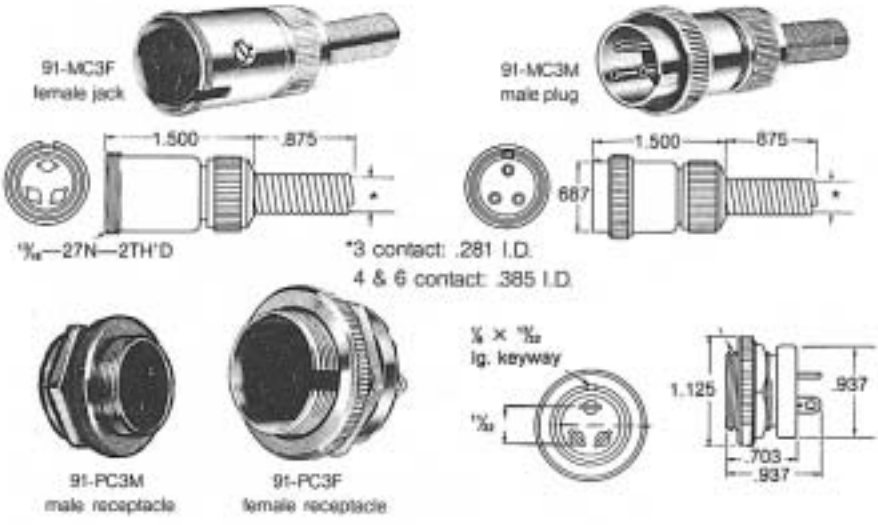
microphone connectors

3, 4 or 6 Contacts

The connectors are designed primarily for audio equipment but are used extensively on all types of portable equipment.

Connectors feature positive screw-type coupling ring connection and squeeze type clamp cable grips.



SPECIFICATIONS

Shells	Chrome plated brass
Dielectric	molded black phenolic
Voltage rating	600 V (RMs)
Current rating	female contacts - 3 amps male contacts - 5 amps
Voltage breakdown (RMS) between terminal and ground	2000 V
Cord protector spring	3 contact - .281" (7.14) I.D. 4-6 contact - .385" (9.78) I.D.
Receptacle mounting hole	27/32" (21.44) up to ⅛" (3.18) thick

THREADED COUPLING – 3, 4, or 6 CONTACTS

No. Contacts	Description	WPI Number	Mates With WPI Number
3	Female Cable Jack	**91-MC3F**	**91-MC3M**
3	Female Cable Plug	**91-MC3F1**	**91-MC3M1,91-PC3M**
3	Male Cable Plug	**91-MC3M**	**91-MC3F,91-PC3F**
3	Male Cable Jack	**91-MC3M1**	**91-MC3F1**
3	Female Panel Receptacle	**91-PC3F**	**91-MC3M**
3	Male Panel Receptacle	**91-PC3M**	**91-MC3F1**
4	Female Cable Jack	**91-MC4F**	**91-MC4M**
4	Female Cable Plug	**91-MC4F1**	**91-MC4M1,91-PC4M**
4	Male Cable Plug	**91-MC4M**	**91-MC4F,91-PC4F**
4	Contact #1 in Line with Key	**91-MC4M-12**	–
4	Male Cable Jack	**91-MC4M1**	**91-MC4F1**
4	Female Panel Receptacle	**91-PC4F**	**91-MC4M**
4	Contact #1 in Line with Key	**91-PC4F-12**	–
4	Male Panel Receptacle	**91-PC4M**	**91-MC4F1**
6	Female Cable Jack	**91-MC6F**	**91-MC6M**
6	Female Cable Plug	**91-MC6F1**	**91-PC6M**
6	Male Cable Plug	**91-MC6M**	**91-MC6F,91-PC6F**
6	Female Panel Receptacle	**91-PC6F**	**91-MC6M**
6	Male Panel Receptacle	**91-PC6M**	**91-MC6F1**
–	Cap & Chain for Receptacle	**91-CCC3**	–
–	Female Insert	**91-3F**	–
–	Male Insert	**91-3M**	–

Single Contact

Standard type. Chrome plated machined brass with threaded coupling. Receptacles mount in .385" (9.78) holes when grounded; .500" (12.70) holes for ungrounded two circuit operation. Spring cord protection for 1/4" (6.35) cable.

SINGLE CONTACT

Description	WPI Number
Straight Plug	**80-75-MC1F**
Cable Jack	**80-75-MC1M**
Cap & Chain	**80-75-CCC1**

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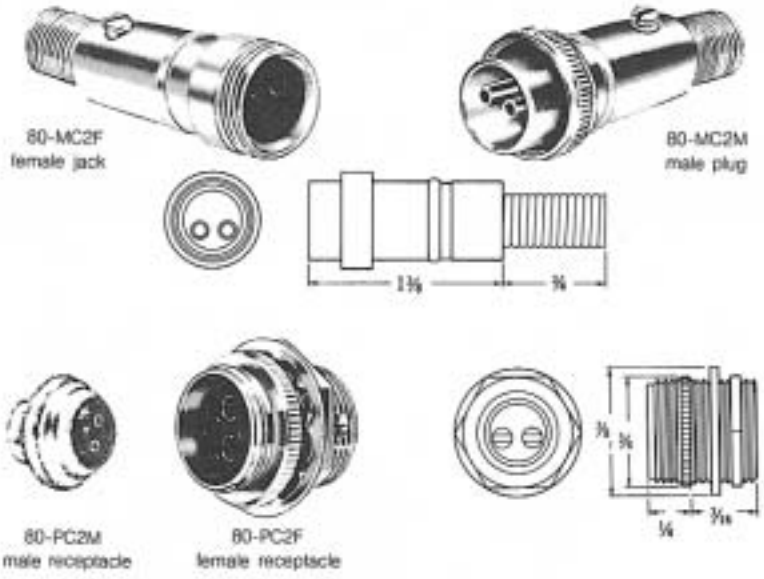
microphone connectors continued

Single and Double Contact

Chrome plated machined brass shells with threaded coupling and black phenolic dielectric. For shielded cables, single and two conductor cables, etc. Mounting hole 5/8" (15.88). Maximum chassis thickness for lock nut type receptacle: 1 11/32" (8.74). Cable dia: up to 5/16" (7.92).



SPECIFICATIONS

Voltage/current rating-single contact:	Male-1250 V, 5 amps Female-1000 V, 3 amps
Double contact:	Male-600 V, 3 amps Female-600 V, 3 amps
Voltage breakdown between terminals and ground	Single contact male-4000 V Female-3000 V Double contact male-2000 V Female-2000 V

THREADED COUPLING – 1 or 2 CONTACTS

Contacts	Description	WPI Number	Mates With
1	Male Cable Plug	80-M	80-C
1	Female Panel Receptacle	80-C	80-M
2	Male Cable Plug	80-MC2M	80-MC2F or 80-PC2F
2	Female Cable Plug	80-MC2F1	80-PC2M or 80-MC2M1
2	Female Cable Jack	80-MC2F	80-MC2M
2	Male Cable Jack	80-MC2M1	80-MC2F1
2	Female Panel Receptacle	80-PC2F	80-MC2M
2	Male Panel Receptacle	80-PC2M	80-MC2F1
–	Female Insert	80-2F	–
–	Male Insert	80-2M	–
–	Cap & Chain for Receptacle	80-75-CCC1	

Miniature Connectors

Compact connectors for shielded or unshielded cables. Can be used for battery antenna or microphone applications

91-MPF3S socket

91-MPM3S plug

SPECIFICATIONS

Shells	Cadmium plated brass
Dielectric	Black phenolic
Cable diameter	up to 1/4" (6.35)
Voltage rating	500 V, 3 amps

CABLE SOCKETS

No. Contacts	Sockets 13/16" Long Shell	Mating Plugs 13/16" Long Shell
3	91-MPF3S	91-MPM3S
4	91-MPF4S	91-MPM4S
5	91-MPF5S	91-MPM5S
6	91-MPF6S	91-MPM6S

CABLE PLUGS

No. Contacts	Plugs 13/16" Long Shell	Mating Socket	
		Cable Socket 13/16" Shell	Chassis Unshielded
3	91-MPM3S	91-MPF3S	78-S3S
4	91-MPM4S	91-MPF4S	–
5	91-MPM5S	91-MPF5S	–
6	91-MPM6S	91-MPF6S	78-S6S

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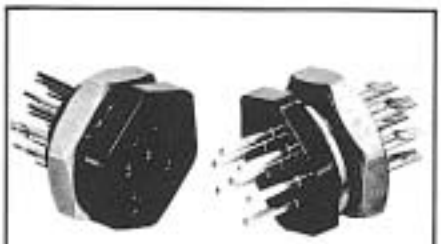
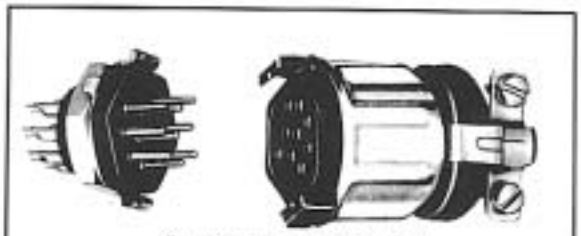
126 series
miniature hexagonal connectors

4 Contact Connector with Hood and Locking Clip #2



Connector Pair (any number of Contacts) with Hex Nuts



Panel Mount Plug and Mating Cable Receptacle with Hood and Lock-sleeve (5-7-9 Contacts only)

WPI miniature hexagonal connectors are available in four contact configurations with a variety of accessories to meet a wide range of applications.

The connectors can be used for rack and panel, cable to cable, and cable to panel connections.

Locking clips are available to prevent unmating caused by vibration or shock.

Dimensions

Overall Diameter – ¾"

Mated – $1^{15}/_{64}$" (extended length to the back of the cable clamp)

Specifications

Dielectric — thermoplastic

Contact size – #20 (except one #16 on 4 contact insert)

Wire size – #20 or smaller

Temperature range – -60°C to +125°C (-76°F to +257°F)

Current rating – 7.5 amps

Voltage rating – 500 VAC (RMS) at Sea Level

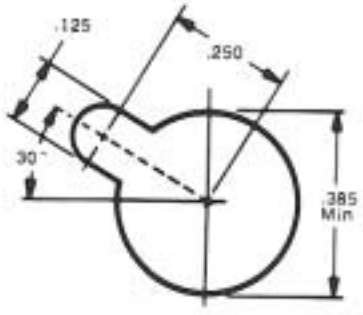
Hardware — cold rolled steel, nickel plated

Contacts - copper alloy, gold over nickel plate

Panel thickness – $^{3}/_{32}$" (max)

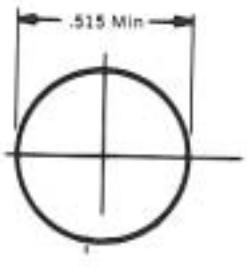
Mounting Holes

I



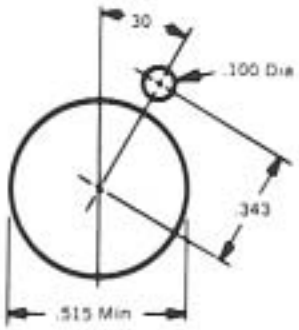
Four-Contact
126-214, 126-214-1001,
126-233, 126-215-1002 only

II



5-7-9 Contact
Hex Nut Type Without
Panel Locking Clip

III



5-7-9 Contact
Hex Nut Type With
Panel Locking Clip

Design specifications subject to change. Consult WPI for the latest specifications.

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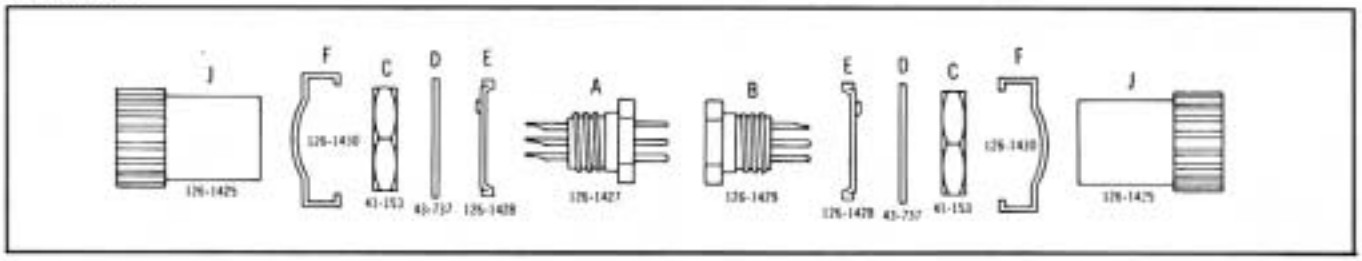
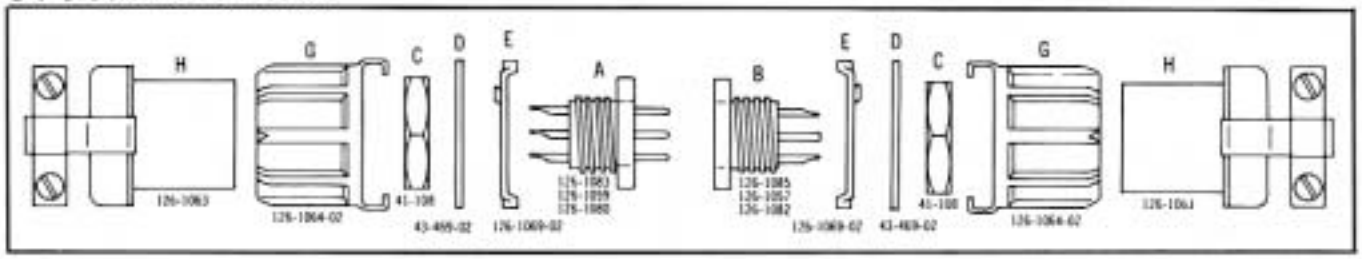
126 series
connector assemblies

4-Contact



5-7-9 Contact Connectors



order information

These connectors can be ordered in any combination to suit your needs. Please refer to the exploded view drawing above to determine the components you require. Note the identification letter. Then order by the WPI part number indicated along side the desired combination of components and the required number of contacts. For example, a male 5 contact connector with rear hood & cable clamp and lock sleeve requires components A, G and H. In the column for male 5 contact assemblies, AGH indicates part number 126-217. If you order part #126-217, you will automatically receive all three components. They may also be ordered individually, if you prefer. Simply refer to the individual component part numbers shown below.

connector assemblies

4-Contact

Key	MALE Part No.	Mtg.	Key	FEMALE Part No.	Mtg.
A	126-1427	—	B	126-1429	—
AC	126-1431 *	—	BC	126-3815 *	—
ACD	126-1432 *	—	BCD	126-3816 *	—
AFJ	126-214-1000	—	BFJ	126-215	—
ACE	126-214	I	BCE	126-233	I
ACDE	126-214-1001 *	I	BCDE	126-215-1002 *	I
AEJ	126-214-1002 *	—	BEJ	126-215-1001 *	—

Backshells do not have cable clamps.

5-Contact

Key	MALE Part No.	Mtg.	Key	FEMALE Part No.	Mtg.
A	126-1083	—	B	126-1085	—
AC	126-010	II	BC	126-011	II
ACD	126-010-1000 *	II	BCD	126-011-1000 *	II
AGH	126-217	—	BGH	126-223	—
ACE	126-216	III	BCE	126-218	III
ACDE	126-216-1000 *	III	BCDE	126-218-1000 *	III
AEH	126-217-1000 *	—	BEH	126-223-1000 *	—

*Non-stocking item — Consult factory for delivery.

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126 series
connector assemblies (cont.)

parts

4-Contact Connector

Description	Part No.	Item Key
Basic Male Connector	126-1427	A
Basic Female Connector	126-1429	B
Hex Nut	41-153	C
Lockwasher	43-737	D
Clip #1	126-1428	E
Clip #2	126-1430	F
Hood	126-1425	J

7-Contact

Key	MALE Part No.	Mtg.	Key	FEMALE Part No.	Mtg.
A	126-1059	—	B	126-1057	—
AC	126-191	II	BC	126-192	II
ACD	126-191-1000 *	II	BCD	126-192-1001 *	II
AGH	126-195	—	BGH	126-196	—
ACE	126-197	III	BCE	126-198	III
ACDE	126-197-1000 *	III	BCDE	126-196-1003 *	III
AEH	126-195-1002 *	—	BEH	126-196-1000 *	—

9-Contact

Key	MALE Part No.	Mtg.	Key	FEMALE Part No.	Mtg.
A	126-1060	—	B	126-1062	—
AC	126-012	II	BC	126-013	II
ACD	126-012-1000 *	II	BCD	126-013-1000 *	II
AGH	126-220	—	BGH	126-222	—
ACE	126-219	III	BCE	126-221	III
ACDE	126-219-1000 *	III	BCDE	126-221-1000*	III
AEH	126-220-1000 *	—	BEH	126-221-1001 *	—

5-7-9-Contact Connectors

Description	Part No.	Item Key
5-contact Basic Male Connector	126-1083	A
5-contact Basic Female Connector	126-1085	B
7-contact Basic Male Connector	126-1059	A
7-contact Basic Female Connector	126-1057	B
9-contact Basic Male Connector	126-1060	A
9-contact Basic Female Connector	126-1062	B
Hex Nut	41-108	C
Lock washer	43-469-02	D
Clip	126-1069-02	E
Locksleeve	126-1064-02	G
Hood & Cable Clamp	126-1063	H

*Non-stocking item — Consult factory for delivery.

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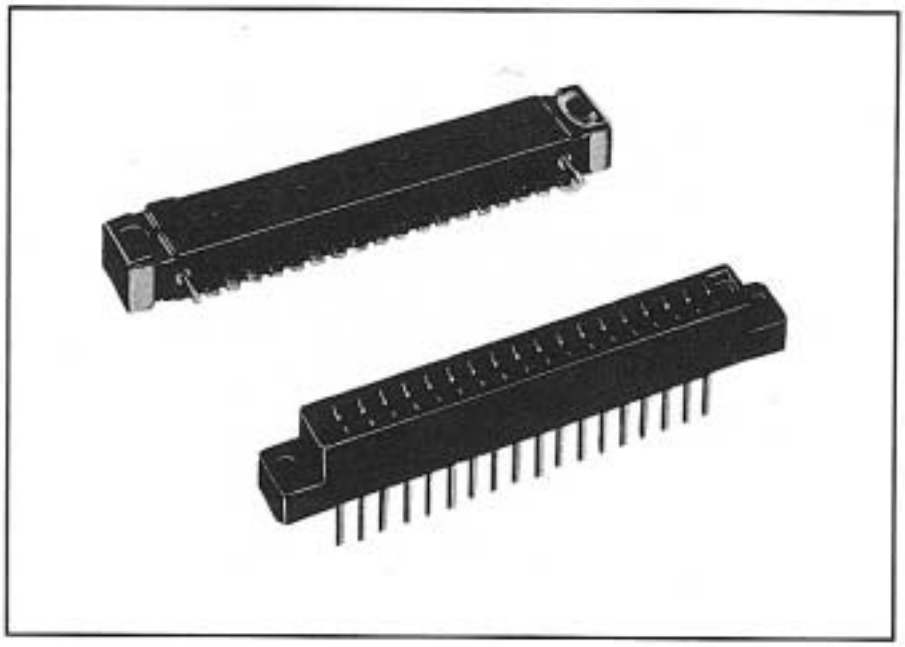
133/143 series commercial and industrial printed circuit connectors



specifications

operating voltage: 600 VAC (RMS) at sea level

current rating: 5 amps

dielectric material: industrial type blue-mineral-filled diallyl phthalate per MIL-M-14 Type MDG.

dielectric resistance: 5000 megohms min.

contact material: 133 series-brass, 143 series-phosphor bronze and copper alloy.

contact plating: standard .000020 (0.000508) min. gold over nickel

contact resistance: 25 millivolts at rated current

board thickness: 133 series - male plug adapters for pc boards, especially useful in situations involving other than normal 1/16 (1,57) thick boards **143 series** - .054 (1,37 to .070 (1,78) pc board or 133 series plugs

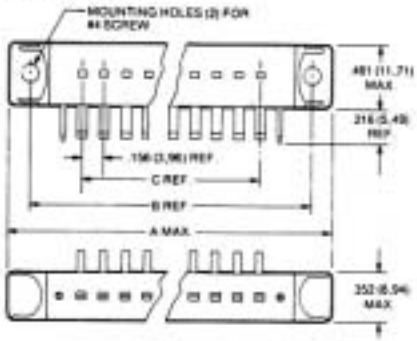
guide pin material: zinc plated brass

end cap material: stainless steel (passivated)

133 series dimensions

No. of Contact Positions	A Max.	B Ref.	C Ref.
6	1.852 (47.04)	1.531 (38.89)	0.781 (19.84)
10	2.477 (62.92)	2.156 (54.76)	1.406 (35.91)
12	2.790 (70.87)	2.468 (62.69)	1.718 (43.64)
15	3.257 (82.73)	2.937 (74.60)	2.187 (55.55)
18	3.727 (94.67)	3.406 (86.51)	2.656 (67.46)
22	4.352 (110.54)	4.031 (102.39)	3.281 (83.38)

133 series



ALL DIMENSIONS REFERENCE ONLY

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133/143 series commercial and industrial printed circuit connectors (cont.)

.156" (3.96) contact centers

order information

To order the 133/143 series connector required, put the part number together as per the following example:

1 3 3 - 0 1 5 - 2 1 - (1 0 1)

SERIES NUMBER

133 Plug
143 Receptacle

NUMBER OF CONTACT POSITIONS

Digit Group	No. of Contacts
006-	6
010-	10
012-	12
015-	15
018-	18
022-	22
028-	28
036-	36

The 28 and 36 position connectors are available only in the 143 Series.

USER INFORMATION

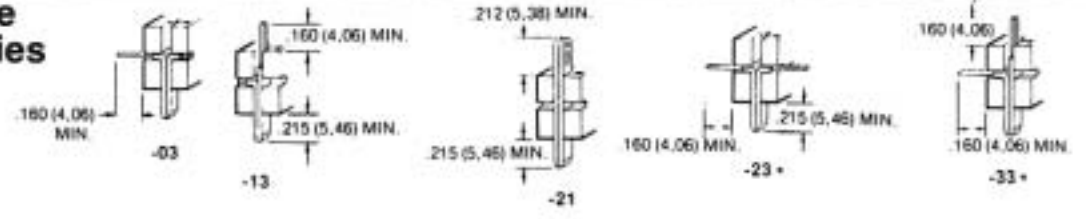
POLARIZING KEY LOCATION (on 143 Series)

A 1001-	P 1013-	c 1025-
B 1002-	R 1014-	d 1026-
C 1003-	S 1015-	e 1027-
D 1004-	T 1016-	f 1028-
E 1005-	U 1017-	g 1029-
F 1006-	V 1018-	h 1030-
H 1007-	W 1019-	j 1031-
J 1008-	X 1020-	k 1032-
K 1009-	Y 1021-	m 1033-
L 1010-	Z 1022-	n 1034-
M 1011-	a 1023-	p 1035-
N 1012-	b 1024-	r 1036-

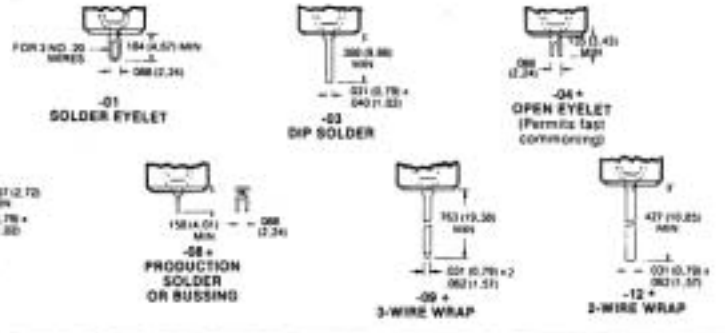
COMMON DEVIATIONS

- **(101)** .0001 (0.00254) min. gold-over nickel contact plating
- **(102)** .00003 (0.00086) gold-over-nickel contact plating
- **(107)** (for receptacle) stainless-steel float bushings
- ***(110)** (for receptacle) card guide, 15, 18 & 22 size only

tail style 133 series



143 series



polarization

143-953
Over-the-Contact Metal Key

143-754
Between the Contact Plastic Key
(available for 15, 1', 22 or 28 sizes.)

*Non-stocking item — Consult factory for delivery.

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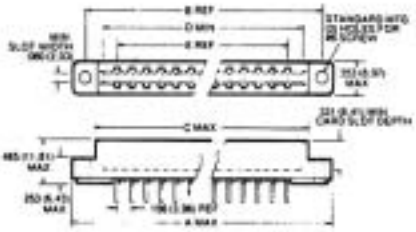
133/143 series commercial and industrial printed circuit connectors (cont.)

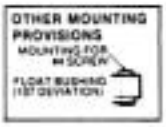
143 series dimensions

No. of Contacts Positions	A Max.	B Ref.	C Max.	D Min.	E Ref.
6	1.784 (45.31)	1.534 (38.96)	1.242 (31.55)	1.093 (27.76)	.781 (19.84)
10	2.411 (61.24)	2.156 (54.76)	1.870 (47.49)	1.719 (43.66)	1.406 (35.71)
12	2.724 (69.19)	2.468 (62.69)	2.181 (55.40)	2.031 (51.59)	1.718 (43.64)
15	3.194 (81.13)	2.937 (74.60)	2.650 (67.31)	2.504 (63.60)	2.187 (55.55)
18	3.664 (93.07)	3.406 (86.51)	3.120 (79.25)	2.968 (75.36)	2.656 (67.46)
22	4.291 (108.99)	4.031 (102.39)	3.747 (95.17)	3.593 (91.26)	3.281 (83.34)
28	5.227 (132.77)	4.968 (126.19)	4.683 (118.95)	4.529 (115.04)	4.219 (107.16)
**36	6.477 (164.51)	6.210 (157.73)	5.928 (150.57)	5.772 (146.60)	5.460 (138.68)

**36 card slot contains two .056 (1,42) barriers: one between contacts N & P, and one between contacts b & c.

143 series



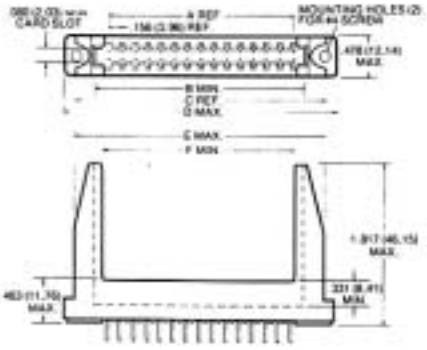


143 series commercial and industrial connectors – card guide connectors (110) deviation (special order)

Card guides extend 1⅜" (34,92 mm) above main body of connector. These integral card guides provide positive alignment in blind installations and prevent board rocking. Has .100 (2,45 mm) more block width than standard 143 line. Available in 15, 18 and 22 position sizes with slots between contacts for plastic keys (P/N 143-754) to permit polarization without loss of contacts.

order information

For blue mineral-filled diallyl phthalate insulator, order 143-OXX-XX (110).*



dimensions

POSITIONS	A REF.	B MIN.	C REF.	D MAX.	E MAX.	F MIN.
15	2.184 (55,47)	2.500 (63,50)	2.934 (74,52)	3.201 (81,31)	2.941 (74,70)	2.250 (57,15)
18	2.652 (67,36)	2.968 (75,39)	3.406 (87,51)	3.664 (93,07)	3.404 (86,46)	2.728 (69,29)
22	3.276 (83,21)	3.593 (91,26)	4.031 (102,39)	4.291 (108,99)	4.031 (102,38)	3.350 (85,09)

*Non-stocking item — Consult factory for delivery.

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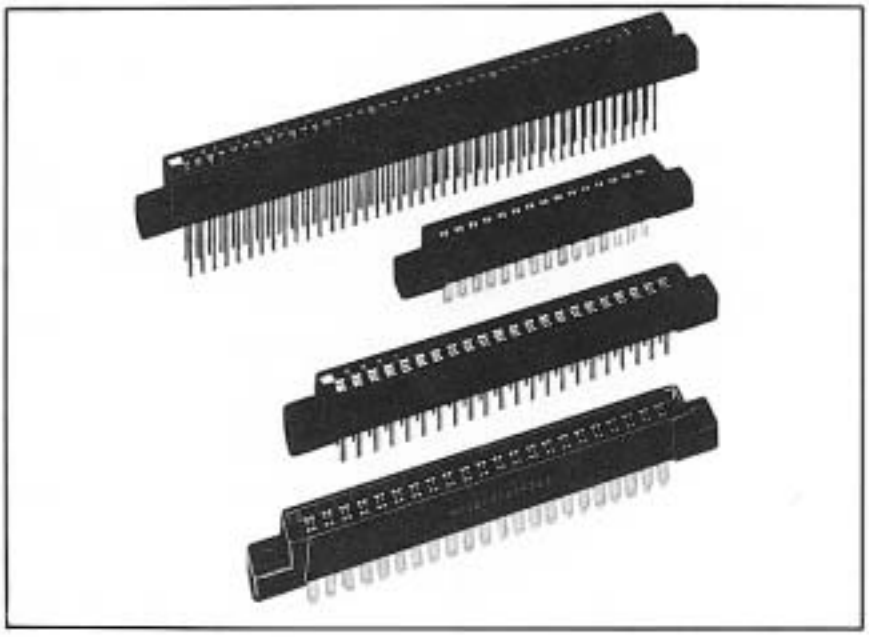
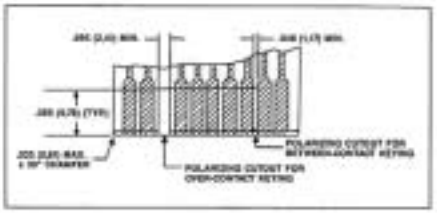
225 series printed circuit connectors



recommended 225 series P.C. board cutouts



specifications

commercial connectors

operating voltage:
600 VAC (RMS) at sea level
150 VAC (RMS) at 70,000 feet

current rating:
5 amps

dielectric material:
wire wrappable type – electrical grade phenolic, black
solder type – glass filled phenolic, black

insulation resistance:
5,000 megohms minimum

contact material:
wire wrappable type – phosphor bronze plated .000020 (0.000508) min. gold over nickel
solder type - copper alloy .000020 (0.000508) min. gold over nickel

contact resistance:
30 millivolts maximum at rated current

board thickness:
.054 (1.37) to .071 (1.80)

industrial connectors

operating voltage:
600 VAC (RMS) at sea level
150 VAC (RMS) at 70,000 feet

current rating:
5 amps

dielectric material:
solder type – glass-fiber-reinforced diallyl phthalate type SDG-F per MIL-M-14.

insulation resistance:
5,000 megohms minimum

contact material:
solder-type - all beryllium copper except phosphor bronze for bridged contact with one tail

contact resistance:
30 millivolts maximum at rated current

board thickness:
.054 (1.37) to .071 (1.80)

military connectors qualified to MIL-C-21097 E/21

operating voltage:
600 VAC (RMS) at sea level
150 VAC (RMS) at 70,000 feet

current rating:
5 amps continuous

dielectric material:
glass-fiber-reinforced diallyl phthalate type SDG-F per MIL-M-14.

insulation resistance:
5,000 megohms minimum

contact material:
all beryllium copper except phosphor bronze for bridged contact with one tail

contact resistance:
30 millivolts maximum at rated current

board thickness:
.054 (1.37) to .071 (1.80)

- UL recognized (file #E115487)

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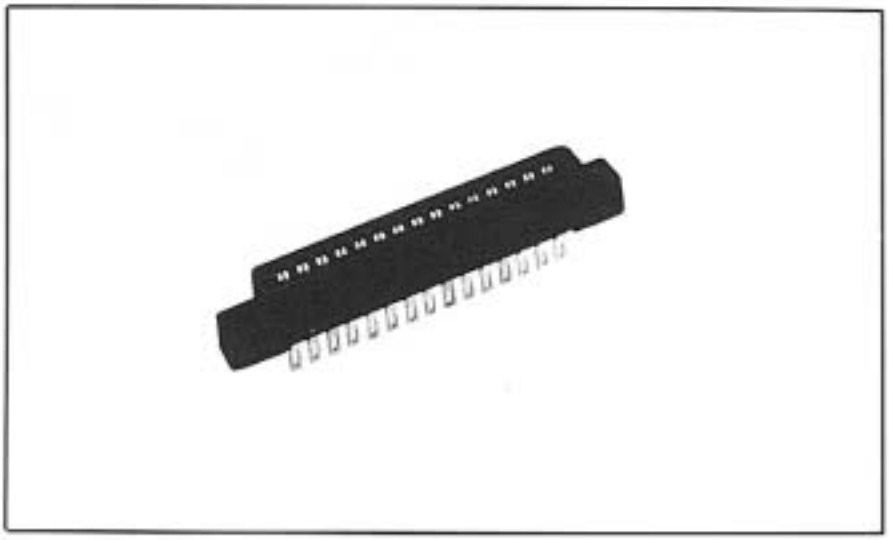
225 series commercial connectors – solder termination, folded ribbon contacts

.156" (3.96) centers x .140" (3.56) row spacing
.156" (3.96) centers x .200" (5.08) row spacing



operating voltage:
600 VAC (RMS) at sea level
150 VAC (RMS) at 70,000 feet

current rating:
5 amps

dielectric material:
wire wrappable type – electrical grade phenolic, black
solder type – glass filled phenolic, black

insulation resistance:
5,000 megohms minimum

contact material:
wire wrappable type – phosphor bronze plated .000020 (0.000508) min. gold over nickel
solder type - copper alloy .000020 (0.000508) min. gold over nickel

contact resistance:
30 millivolts maximum at rated current

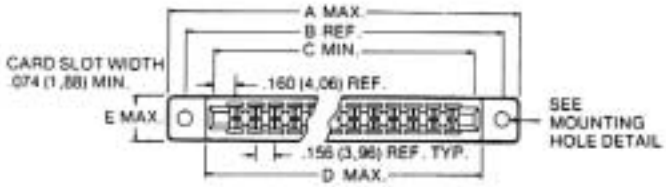
board thickness:
.054 (1.37) to .071 (1.80)

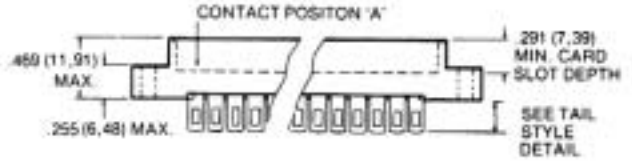
polarizing keys

225-559
Over contact key must be ordered separately

225-594
Between contact key. One included for each connector. Packed separately in bulk

Polarization can be achieved by using either of these types of polarizing keys on all eyelet and dip solder 225 Series Connectors





ALL DIMENSIONS REFERENCE ONLY

dimensions

SIZES	A MAX.	B REF.	C MIN.	D MAX.	E MAX.
06	1.864 (47.34)	1.532 (38.91)	1.095 (27.81)	1.240 (31.50)	346 (8.79)
10	2.478 (62.94)	2.156 (54.76)	1.715 (43.56)	1.864 (47.35)	346 (8.79)
15	3.258 (82.75)	2.938 (74.63)	2.494 (63.34)	2.646 (67.21)	346 (8.79)
18	3.726 (94.64)	3.406 (86.51)	2.965 (75.31)	3.115 (79.12)	346 (8.79)
22	4.350 (110.49)	4.029 (102.33)	3.584 (91.03)	3.740 (94.99)	350 (8.89)
25	4.820 (122.43)	4.496 (114.21)	4.054 (102.97)	4.204 (106.78)	346 (8.79)
28	5.274 (133.96)	4.958 (125.93)	4.512 (114.60)	4.662 (118.41)	503 (12.78)
36	6.522 (165.66)	6.213 (157.81)	5.765 (146.43)	5.910 (150.11)	503 (12.78)
43	7.610 (193.29)	7.296 (185.31)	6.854 (174.09)	7.010 (178.05)	506 (12.85)

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225 series commercial connectors – solder termination

order information

To order the 225 series connector required, put together the part number as per the following example:

2 2 5 - 2 0 6 2 1 - 4 01 (117)

SERIES NUMBER
225-

TERMINATION CLASS

Digit	Termination
2	Solder

CONTACT POSITIONS

Digit Group	No. of Contacts
06	6 or 12
10	10 or 20
15	15 or 30
18	18 or 36
22	22 or 44
25	25 or 50
28	28 or 56
36	36 or 72
43	43 or 86

CONTACT CONFIGURATION

1 Single row connector with back-up springs

2 Two rows of independent contacts

5* Two rows of bridged contacts with one tail

*Available in Solder Eyelet (01) and .235 (5,97) Dip Solder (04) Terminations only. Not available in 36 terminations.

MOUNTING PROVISIONS

MOUNTING HOLE FOR #4 SCREW

.255 (6.48) MAX

1

FLOAT MOUNTING FOR #4 SCREW

.005 (0.13) MIN.

.469 (11.91) MAX.

.335 (8,51) MAX.

2*

.010 (0,25) min. radial float

*Available in Solder Eyelet (01) Termination only

THREADED HOLE

4-40 NC-2B THD

.255 (6.48) MAX

3

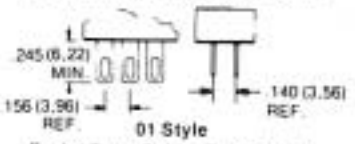
MOUNTING HOLE FOR # 6 SCREW

.255 (6.48) MAX.

4

DEVIATIONS
(117) Commercial Type

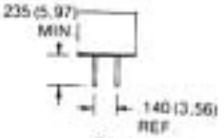
TAIL STYLE
All contacts on .156 (3,96) REF. centers



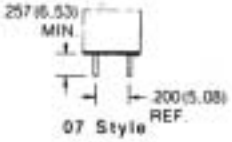
01 Style
Eyelet Type Solder Termination

01 Style
Eyelet Type
Down-the-Center

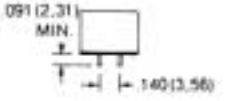
04
Down-the-Center



04
Dip Solder



07 Style



10 Style

CONTACT PLATING

Digit	Plating
4	000020(0.000508) min. Gold over nickel

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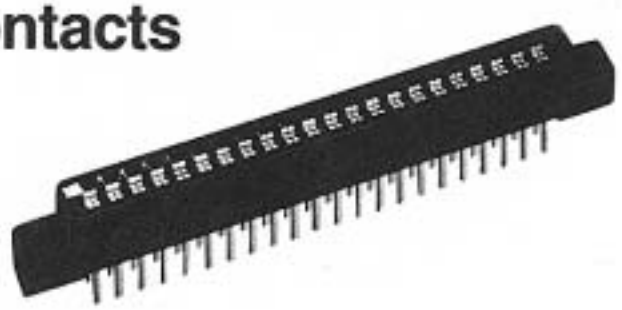
country code 1

225 series industrial connectors – solder termination, bifurcated bellows contacts



.156" (3.96) centers x .140" (3.56) row spacing
.156" (3.96) centers x .200" (5.08) row spacing

operating voltage:
600 VAC (RMS) at sea level
150 VAC (RMS) at 70,000 feet

current rating:
5 amps

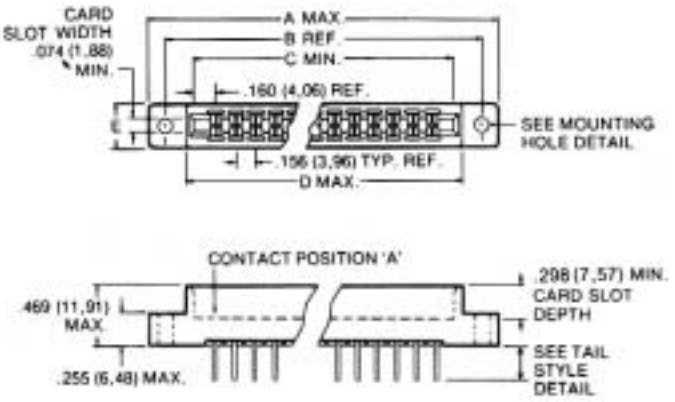
dielectric material:
solder type - blue glass-fiber-reinforced diallyl phthalate type SDG-F per MIL-M-14.

insulation resistance:
5,000 megohms minimum

contact material:
solder-type - all copper alloy except phosphor bronze for bridged contact with one tail

contact resistance:
30 millivolts maximum at rated current

board thickness:
.054 (1.37) to .071 (1.80)



ALL DIMENSIONS REFERENCE ONLY

polarizing keys

225-559
Over contact key must be ordered separately.

225-594
Between contact key. One included for each connector. Packed separately in bulk.

Polarization can be achieved by using either of these types of polarizing keys on all eyelet and dip solder 225 Series Connectors.

WPI 225 series printed circuit industrial connectors with solder terminations are intended for flush installation on printed circuit boards with pads and spacer barriers that permit thorough flux washing. Connectors with solder eyelets will accept up to three #20 AWG wires. All dip-solder terminals are designed for .043" (1.09 mm) min. diameter holes.

dimensions

SIZES	A MAX.	B REF.	C MIN.	D MAX.	E MAX.
06	1.854 (47,09)	1.532 (38,91)	1.095 (27,81)	1.240 (31,50)	.346 (8,79)
10	2.478 (62,94)	2.156 (54,76)	1.719 (43,66)	1.864 (47,35)	.346 (8,79)
15	3.258 (82,75)	2.938 (74,63)	2.499 (63,47)	2.646 (67,21)	.346 (8,79)
18	3.726 (94,64)	3.406 (86,51)	2.967 (75,36)	3.115 (79,12)	.346 (8,79)
22	4.360 (110,74)	4.032 (102,41)	3.591 (91,21)	3.750 (95,25)	.350 (8,89)
28	5.274 (133,96)	4.964 (126,08)	4.525 (114,93)	4.662 (118,41)	.503 (12,78)
36	6.522 (165,66)	6.219 (157,96)	5.773 (146,63)	5.910 (150,11)	.503 (12,78)
43	7.610 (193,29)	7.302 (185,47)	6.866 (174,39)	7.010 (178,05)	.503 (12,78)

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phone (609) 935-7601
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country code 1

225 series industrial connectors — solder termination

order information

To order the 225 series connector required, put together the part number as per the following example:

2 2 5 - 2 0 6 2 1 - 1 01

SERIES NUMBER
225-

TERMINATION CLASS

Digit	Termination
2	Solder

CONTACT POSITIONS

Digit Group	No. of Contacts
06	6 or 12
10	10 or 20
15	15 or 30
18	18 or 36
22	22 or 44
25	25 or 50
28	28 or 56
36	36 or 72
43	43 or 86

CONTACT CONFIGURATION

1 Single row connector with back-up springs.

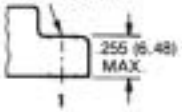
2 Two rows of independent contacts.

5** Two rows of bridged contacts with one tail.

**Available in Phosphor Bronze only

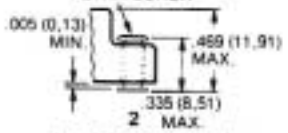
MOUNTING PROVISIONS

MOUNTING HOLE FOR #4 SCREW



1

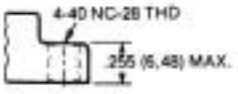
FLOAT MOUNTING FOR #4 SCREW



2

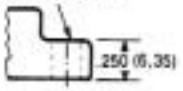
.010 (0,25) min. radial float

THREADED HOLE



3

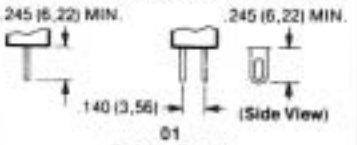
MOUNTING HOLE FOR #6 SCREW



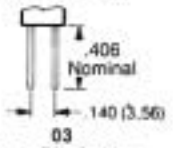
4

TAIL STYLES

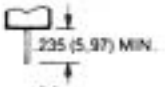
All contacts on .156 (3,96) REF. centers



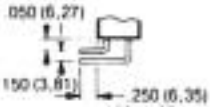
01
Solder Eyelet



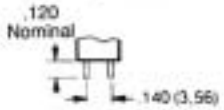
03
Long Dip Solder



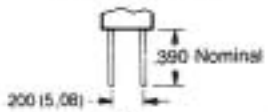
04
Down-the-Center Dip Solder



05
Right Angle Dip Solder



10
Short Dip Solder



11
Long Dip Solder

CONTACT PLATING

Digit	
1	.000030 (0,000762) min. Gold over Nickel
2	.000050 (0,00127) min. Gold over Nickel

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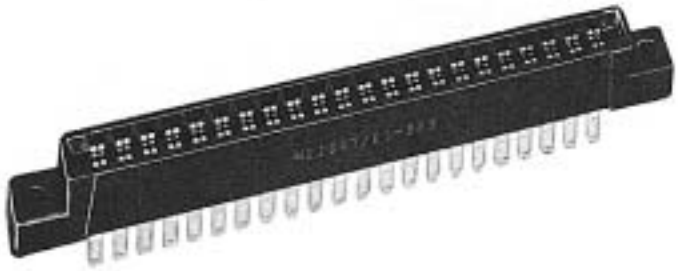
country code 1

225 series military qualified connectors - solder termination, bifurcated bellows

MIL-C-21097 E/21

.156" (3.96) centers x .140" (3.56) row spacing
.156" (3.96) centers x .200" (5.08) row spacing



operating voltage:
600 VAC (RMS) at sea level
150 VAC (RMS) at 70,000 feet

temperature range:
-65°C to +125°C
(-85°F to +257°F)

contact material:
all beryllium copper except phosphor bronze for bridged contact with one tail

contact resistance:
30 millivolts maximum at rated current

board thickness:
.054 (1.37) to .071 (1.80)

current rating:
5 amps continuous

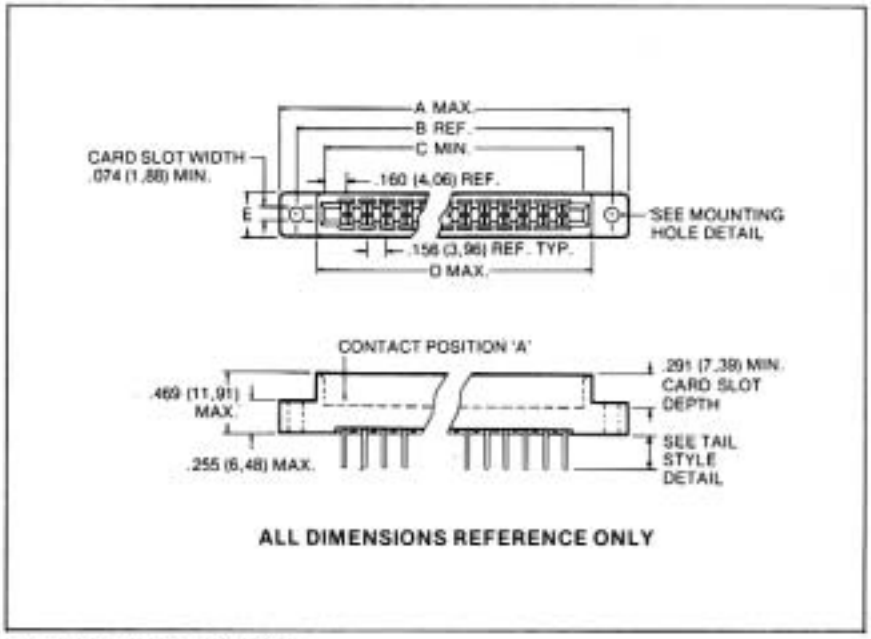
dielectric material:
blue glass-fiber-reinforced diallyl phthalate type SDG-F per MIL-M-14.

insulation resistance:
5,000 megohms minimum

polarizing keys

225-559
Over contact key must be ordered separately.

225-594
Between contact key. One included for each connector. Packed separately in bulk.



WPI 225 series printed circuit military connectors with solder terminations are intended for flush installation on printed circuit boards with pads and spacer barriers that permit thorough flux washing. Connectors with solder eyelets will accept up to three #20 AWG wires. All dip-solder terminals are designed for .043" (1.09 mm) min. diameter holes.

dimensions

SIZES	A MAX.	B REF.	C MIN.	D MAX.	E MAX.
06	1.854 (47,09)	1.532 (38,91)	1.095 (27,81)	1.240 (31,50)	.346 (8,79)
10	2.478 (62,94)	2.156 (54,76)	1.719 (43,66)	1.864 (47,35)	.346 (8,79)
15	3.258 (82,75)	2.938 (74,63)	2.499 (63,47)	2.646 (67,21)	.346 (8,79)
18	3.726 (94,64)	3.406 (86,51)	2.967 (75,36)	3.115 (79,12)	.346 (8,79)
22	4.360 (110,74)	4.032 (102,41)	3.591 (91,21)	3.750 (95,25)	.350 (8,89)
28	5.274 (133,96)	4.964 (126,08)	4.525 (114,93)	4.662 (118,41)	.503 (12,78)
36	6.522 (165,66)	6.219 (157,96)	5.773 (146,63)	5.910 (150,11)	.503 (12,78)
43	7.610 (193,29)	7.302 (185,47)	6.866 (174,39)	7.010 (178,05)	.503 (12,78)

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country code 1

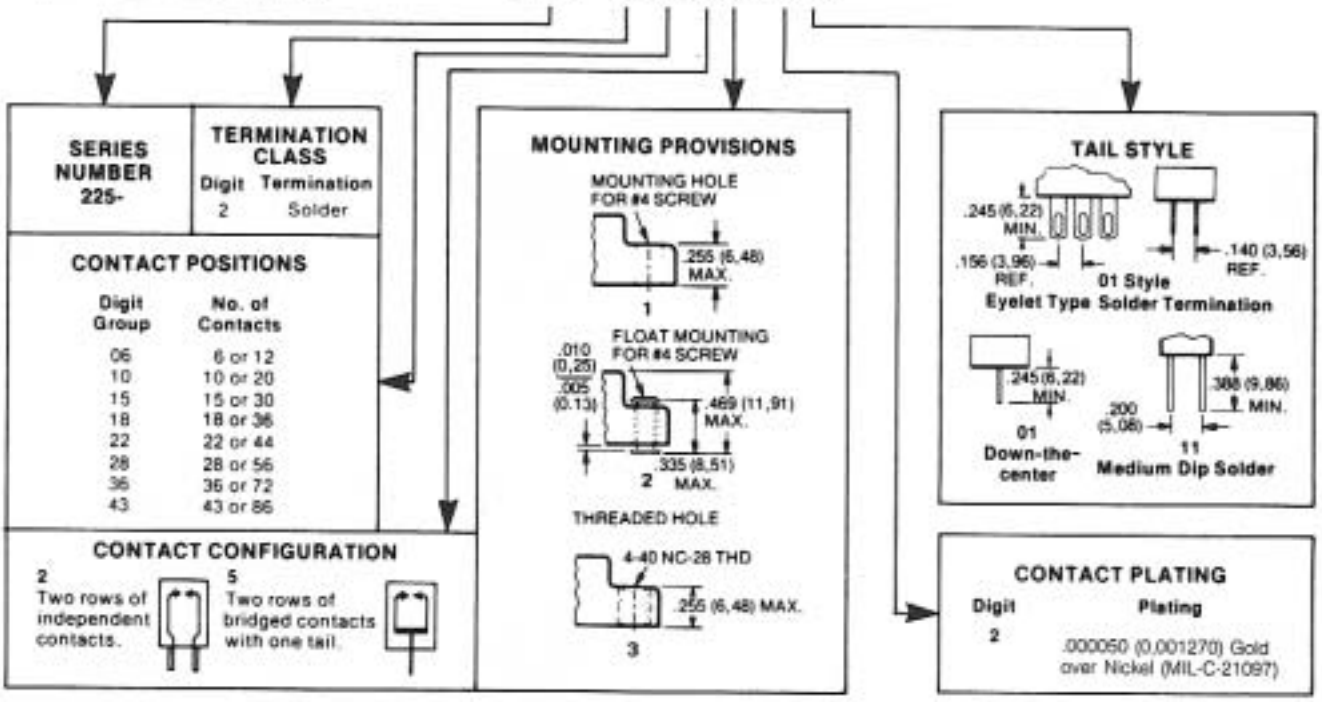
225 series military qualified connectors — solder termination

MIL-C-21097 E/21

order information

To order the 225 series connector required, put together the part number as per the following example:

2 2 5 - 2 0 6 2 1 - 2 01



cross reference to MII-C-21097E /21 (Also to MIL-C-21097/1)

Military Number	WPI Number	Military Number	WPI Number	Military Number	WPI Number	Military Number	WPI Number
M21097E/21-001	225-20651-201	M21097E/21-073	225-21551-201	M21097E/21-145	225-22251-201	M21097E/21-235	225-23621-201
-004	-20653-201*	-076	-21553-201*	-148	-22253-201*	-238	-23623-201*
-007	-20652-201*	-079	-21552-201*	-151	-22252-201*	-241	-23622-201*
-019	-20621-201	-091	-21521-201	-163	-22221-201	-244	-23621-211*
-022	-20623-201*	-094	-21523-201*	-166	-22223-201*	-247	-23623-211*
-025	-20622-201*	-097	-21522-201*	-169	-22222-201*	-250	-23622-211*
-028	-20621-211*	-100	-21521-211*	-172	-22221-211*	-271	-24321-201
-031	-20623-211*	-103	-21523-211*	-175	-22223-211*	-274	-24323-201*
-034	-20622-211*	-106	-21522-211*	-178	-22222-211*	-277	-24322-201*
-037	-21061-201	-109	-21851-201	-181	-22851-201	-280	-24321-211*
-040	-21063-201*	-112	-21853-201*	-184	-22853-201*	-283	-24323-211*
-043	-21052-201*	-115	-21852-201*	-187	-22852-201*	-286	-24322-211*
-055	-21021-201	-127	-21821-201	-199	-22821-201		
-058	-21023-201*	-130	-21823-201*	-202	-22823-201*		
-061	-21022-201*	-133	-21822-201*	-205	-22822-201*		
-064	-21021-211*	-136	-21821-211*	-208	-22821-211*		
-067	-21023-211*	-139	-21823-211*	-211	-22823-211*		
-070	-21022-211*	-142	-21822-211*	-214	-22822-211*		

NOTE: Above parts include 4 keys. Part Number 225-594 (M21097/11-08).

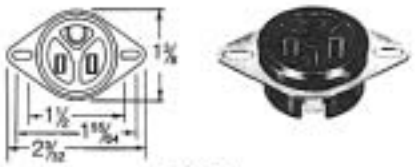
*Non-stocking item—
Consult factory for delivery.

125 V plugs and receptacles

Components UL recognized . . . for specifics, see charts below

mounting plate type

Cadmium plated steel mounting plate assembled to molded thermo-plastic body. Mounting hole: 1 9/32" (32.54) dia. with two 9/64" (3.57) slots on 1½" (38.10) to 1 55/64" (47.22) centers.



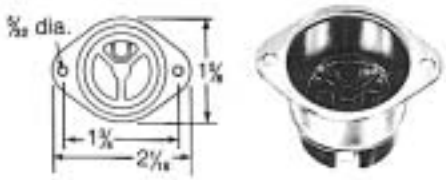
160-2-N receptacle

MOUNTING PLATE TYPE

Description	WPI Number	
2 Pole Receptacle Phosphor Bronze Contacts	160-2-N	
2 Pole Plug Brass Contacts	160-3-N	

flush motor type

Consists of inserts assembled in cadmium plated steel shells for below surface mounting. Mounting hole: 1 7/16" (36.53) dia. hole with two 5/32" (3.96) screw holes on 1¾" (44.45) centers.



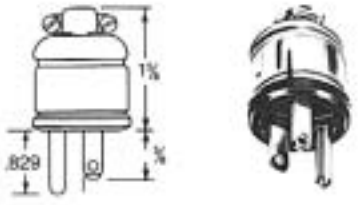
160-4-N receptacle

FLUSH MOTOR TYPE

Description	WPI Number	
2 Pole Flush Motor Receptacle	160-4-N	
2 Pole Flush Motor Plug	160-5-N	

shielded type

Consists of inserts with sturdy steel plug caps finished in black epoxy. Plug caps: 1 1/16" (26.97) long. End nylon bushing: 13/32" (10.31) I.D. Cable clamp: fits ⅜" (9.52) O.D. cables.



160-9-N plug w/cable clamp

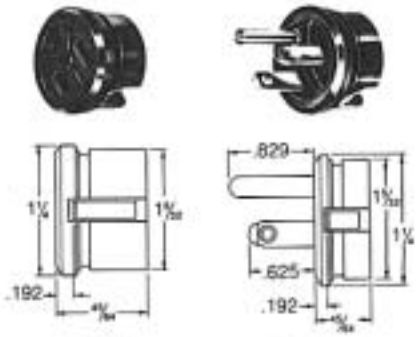
SHIELDED TYPE

Description	WPI Number	
2 Pole Shielded Receptacle w/Nylon Bushing	160-6-N*	
2 Pole Shielded Plug w/Nylon Bushing	160-7-N*	
2 Pole Shielded Receptacle w/Cable Clamp	160-8-N*	
2 Pole Shielded Plug w/Cable Clamp	160-9-N*	

inserts

High temperature thermo-plastic bodies. Zinc plated retaining ring. Copper alloy contacts. Mounted in 1 11/64" (29.77) keyed hole. Grooved to fit .031" -(0.79)-.050" (1.27) thick panels.

*Non-stocking item — Consult factory for delivery.



160-10-N receptacle insert

160-11-N plug insert

INSERTS

Description	WPI Number	
2 Pole Receptacle Insert	160-10-N	
2 Pole Plug Insert	160-11-N	

UL listing file #E116778 recognized under file #E115487

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country code 1

220 series contacts

FOR 221, 222, 223 SERIES CONNECTOR

Ultra-Tac Contacts

Top quality micro-miniature contacts. The socket contacts are hooded to resist test prod damage.

Relia-Tac Contacts

Durable, customer-proven contacts.

Part Number	Description
220-P02 (Pin) 220-S02 (Socket)	Standard, See specifications below
220-844-02 (Pin) 220-845-02 (Socket)	Same as above, except heavy gold plating and inspection hole in crimp area

Pin Tail Contacts

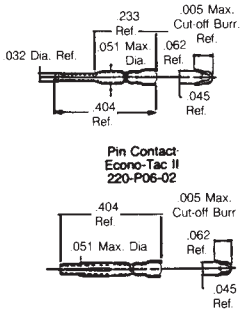
Pin Tail Relia-Tac contacts may be used for mounting connectors directly to printed circuit boards. Can be provided with right angle bend.

Solder Cup Contacts

Can be soldered to leads before insertion or, with proper heat sink, after contacts are assembled.

specifications

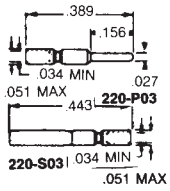
ECONO-TAC



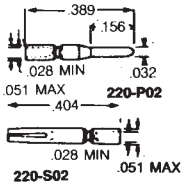
Pin Contact Econo-Tac II
220-P06-02

Socket Contact Econo-Tac II
220-S06-02

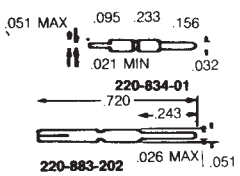
ULTRA-TAC



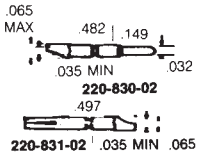
RELIA-TAC



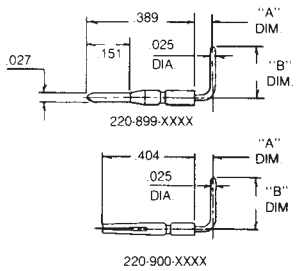
PIN TAIL



SOLDER CUP



****RIGHT ANGLE PIN TAIL**



	ECONO-TAC	ULTRA-TAC	RELIA-TAC	PIN TAIL	SOLDER CUP	**RIGHT ANGLE PIN TAIL
Current (Amps) Rating	5	5	5	5	5	5
Contact Resistance* (ohms)	.0060	.0060	.0060	.0050 to .0060	.0060	.0060
Wire Range (Ga.) (Solid & Stranded)	24,26,28	22,24,26	24,26,28	N/A	24,26,28	N/A
Contact Finish	Gold-over-Copper on Copper Alloy Bodies	Gold-over-Copper on Copper Alloy Bodies	Gold-over-Copper on Copper Alloy Bodies	Gold-over-Copper on Copper Alloy Bodies	Gold-over-Copper on Copper Alloy Bodies	Gold-over-Copper on Copper Alloy Bodies

* Constant to a minimum of 100 cycles of insertion and withdrawal.

Ordering Information

Minimum order quantity is 100 pieces.
Contacts can be supplied on reels for use in semi-automatic, crimp machines. Contact factory.

NOTE: All socket contacts are completely shrouded within the plug inserts for optimum protection against damage. Pin contacts are normally exposed when assembled into receptacle inserts.

**Right Angle Pin Tail Dimensions

Pin	Socket	"A"	"B"	Series Used On
220-899-01XX	—	.166	.306	223
—	220-900-01XX	.166	.306	223
220-899-02XX	—	.080	.220	223
—	220-900-02XX	.080	.220	223
220-899-03XX	—	.080	.172	221
—	220-900-03XX	.080	.172	221
—	220-900-04XX	.180	.306	223

NOTE: Substitute XX with:
02 - .000020" Gold over Nickel
03 - Bright Tin/Lead

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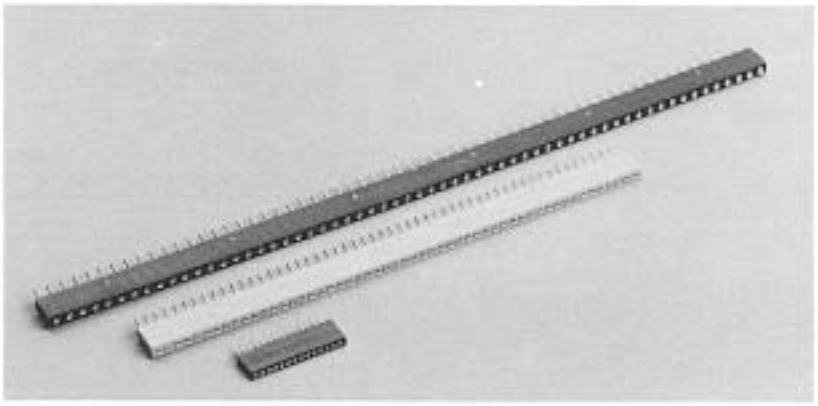
country code 1

221 series strip connectors



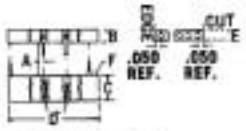
WPI Strip Connectors are highly reliable, low cost micro-miniatures with great application versatility. They are furnished in 4" and 6" lengths, but you can cut and stack them to whatever configuration you need to satisfy your various application requirements.

Strip connectors use Poke-Home contacts and perform superbly. Where keying is desired, guide pins are inserted in two or more plug strip contact holes.

Because Strip connectors are injection molded, special configurations can be produced quickly and inexpensively.

Strips can be used in stacked arrangement. Should be stacked parallel only.

PC board application using strip connectors.



CUSTOM LENGTH

Number of holes multiplied by contact center dimension equals approximate length of strip.

dimensions

Description	A Contact Centers	B	C	D	E	F Contact Positions
6" Plug Strip	.100	—	.456	6.00	.105	60
6" Receptacle Strip	.100	.230	—	6.00	.105	60
4" Plug Strip	.075	—	.456	4.00	.105	53
4" Receptacle Strip	.075	.230	—	4.00	.105	53
4" Plug Strip	.050	—	.281	4.00	.075	80
4" Receptacle Strip	.050	.218	—	4.00	.075	80

Ordering Information

Standard and custom lengths.

Number of Contact Holes needed: from 02 to 60 on .100 centers (standard 6" strip contains 60 holes); from 02 to 53 on .075 centers (standard 4" strip contains 53 holes); from 02 to 80 on .050 centers (standard 4" strip contains 80 holes).
Note: Must use 2 digits.

Note: Order Contacts Separately

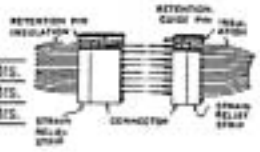
Use Relia-Tac pin contacts for receptables, socket contacts for plugs.

Strain Relief Strips Protect Wire

WPI has a solution to the problem of excessive flexing that breaks wire strands in cable-terminated applications. Strain relief strips are available to encase and protect the wire in the crimp area at the rear of the strips. Molded in black Nylon 6/6 material, the strips can be ordered to match any WPI strip connector. Held in place by retention pins, which can also be used as a guide pin.

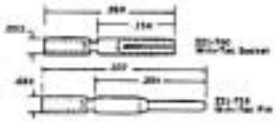
Ordering Information

221-9160—for use with strip connectors on .100 ctrs.
221-9253—for use with strip connectors on .075 ctrs.
221-9380—for use with strip connectors on .050 ctrs.



Mini-Tac Contacts

(Sub-miniature Relia-Tac contacts for .050" center mini-strip connectors only).
Current Rating: 3 Amps.
Wire Size: 26 to 32 ga. stranded wire.



Poke-Home® Guide Pins

Poke-Home guide pins when seated in plug inserts serve functions of polarizing, keying or connector alignment. They can be used in conjunction with Relia-Tac contacts. Contact factory for information.

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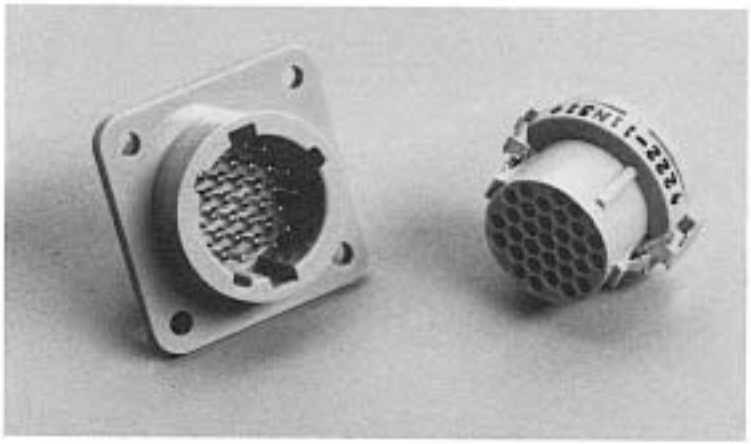
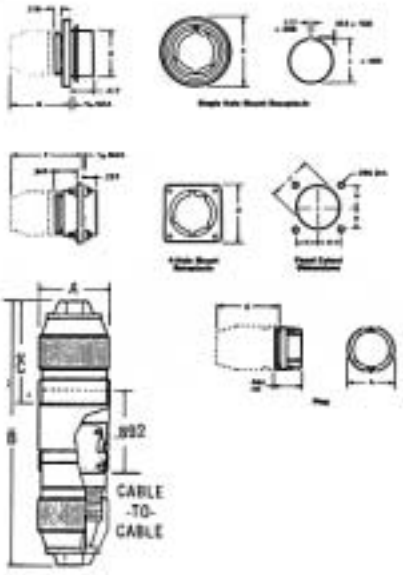
222 series — Mighty Mite® connectors

19 to 61 Contacts — .085 Contact Centers





Superior Performance at Low Cost

WPI Mighty-Mite connectors are low cost, highly reliable micro-miniature connectors designed to serve an exceptionally wide range of cable-to-cable and cable-to-chassis applications.

Mighty-Mite connectors are available as straight plug, single hole mounting, square flange, and cable receptacles. Standard connectors are molded of onepiece, rugged polycarbonate.

	No. of Contacts		
	19	31	61
A ref. diameter	.621	.746	.996
B ref. length	2.618	2.948	3.530
C ref. length	.962	1.134	1.418
D ref. square	.875	1.000	1.250
E ref. diameter	1.065	1.189	1.444
F ref. length	1.278	1.450	1.734
G ref. length	1.084	1.256	1.540
H length	.312	.375	.500
J diameter	.636	.761	1.011
Strain Relief Assembly No.	222-518	222-519	222-520
Retaining Ring No.	2-311	2-312	2-313

arrangements

inserts available (Showing front face of plug insert)

Shell Size	12	14	18
rated 5 amperes for wire sizes 24-26-28 solid and 24-26-28 stranded			
	19 contacts 12-19	31 contacts 14-31	61 contacts 18-61

ordering information

222- 1 1 N 61

Series Designation 222

Method of Mounting
1—Flangeless
2—4 hole mount receptacle
3—Single hole mount Receptacle (includes retaining ring)

Insert Style
1—Plug
2—Receptacle

Connector Class: N—Non-environmental

Number of Contacts 19, 31, 61

Note: Order Contacts Separately

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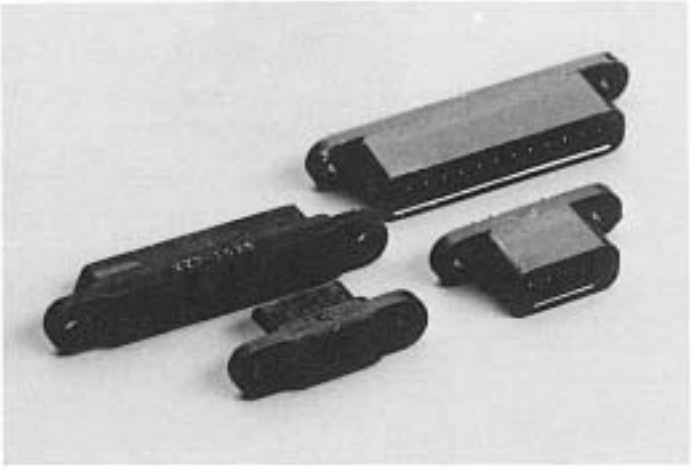
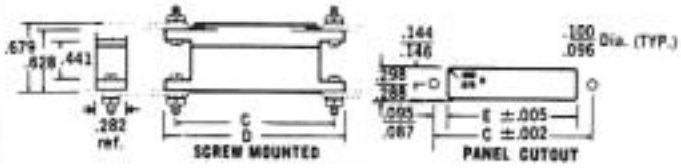
223 series – Tiny Tim® connectors





Exceptional interconnections for circuit modules, either potted-in or surface mounted, and can also be used as micro-miniature rack-and-panel, cable-to-cable, and cable-to-panel connectors.

The positive mating is the result of the snap latch engagement locking device molded into the connector body. Contact identification numbers are also molded in.

Trapezoidal mating faces are used for polarization. Guide pins provide keying. Contact spacing is .100" on centers on each row.

specifications

Temperature Range: -55°C to +125°C

Current Rating: 3 amps (Econo-Tac II contacts)
5 amps (all other contacts)

Voltage Rating: 600 VAC (RMS) at sea level
125 VAC (RMS) at 70,000 ft.

Dielectric: Glass-filled nylon (polycarbonate resin also available)

Strain relief 223-714-09 — 9 contacts; 223-714-17 — 17 contacts; 223-714-25 — 25 contacts; 223-714-44 — 33 contacts.

dimensions

No. of Contacts	E Length of Cutout	C Mounting Centers	D ref. Overall Length
5	.410 (10.414)	.593 (15.062)	.843 (21.438)
9	.610 (15.494)	.793 (20.142)	1.043 (26.518)
17	1.015 (25.781)	1.193 (30.302)	1.443 (36.678)
25	1.410 (35.814)	1.593 (40.462)	1.843 (46.838)
33	1.810 (45.974)	1.993 (50.622)	2.243 (56.998)

Use Relia-Tac pin contacts for receptacles, socket contacts for plugs.

ordering information

223- 1 1 17

Series Designation 223

Method of Mounting
1—Screw Mount

Number of Contacts
05, 09, 17, 25, 33

Insert Style
1—Plug, Lexan (Green)
2—Receptacle, Lexan (Green)
5—Plug, Nylon (Black)
6—Receptacle, Nylon (Black)

NOTE: Order Contacts Separately. See Section 9 Page 1

Strain Relief

Thermoplastic cable clamp strain relief housings for use with above connectors:

Contact Size	Part No.	Contact Size	Part No.
9	223-714-09	25	223-714-25
17	223-714-17	33	223-714-33

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military audio connectors
5 & 6 contact MIL-C-55116

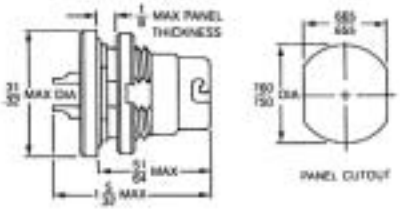
U-183/U Receptacle

Spring-loaded contacts, **five or six contacts**, solder terminals. Also available with printed circuit terminals.

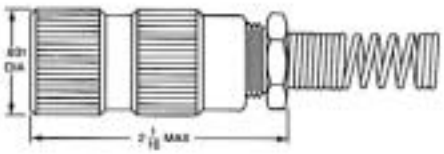
U-229/U Plug

Rigid contacts, barrel pin terminals, **five or six contacts**. Also available with solder terminals.

Consult factory for additional specials and modifications.



U-183-/U



U-229/U

material & finish

shells: stainless steel, passivated, sand-blasted
panel nuts: stainless steel, passivated, sand-blasted
contacts: copper alloy, .000030 gold per MIL-G-45204, Type I class 0 over .001 nickel per QQ-N-290
insulators: diallyl phthalate per MIL-M-14F, Type MDG

electrical specifications

dielectric strength: 500 V RMS
insulation resistance: 1000 Megohms. Min.
contact resistance (mated): 0.050 Ohms. Max.

mechanical specifications

air pressure: 2.5 psi.
immersion: 48 hrs. at 6 ft.
durability: 3000 cycles, mate and unmated

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military audio connectors (cont.)

10 contact MIL-C-10544

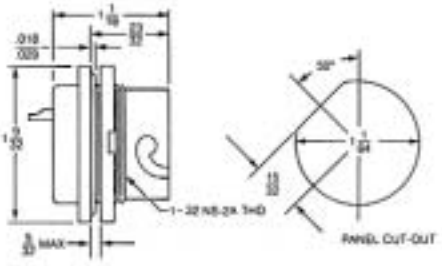
U-79/U Receptacle

Spring-loaded contacts, solder terminals. Also available with printed circuit terminals.

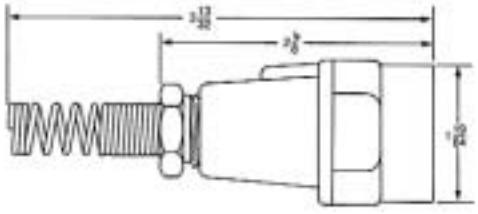
U-77/U Plug

Rigid contacts, solder terminals.

Consult factory for additional specials and modifications.



U-79/U



U-77/U

material & finish

receptacle shells: stainless steel, passivated, sand-blasted
plug shells: stainless steel, black passivated
plug rear housings: aluminum, black anodized
panels nuts: stainless steel, passivated, sand-blasted
contacts: copper alloy, .0002 silver
insulators: diallyl phthalate per MIL-M-14F, Type MDG

electrical specifications

dielectric strength: 500 V RMS
insulation resistance: 1000 Megohms. Min.
contact resistance (mated): 0.015 Ohms. Max.

mechanical specifications

air pressure: 2.5 psi
immersion: 48 hrs. at 6 ft.
durability: 1500 cycles, mate and unmate

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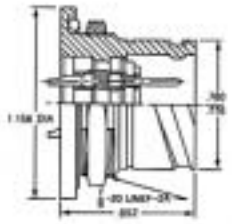
military u-type power connectors

U-288/U receptacle
MIL-C-55243

Multi-use, medium power receptacle. 12 # 20 pin contacts. Used in many military communications equipment such as AS 1729 antenna.



material & finish

body: stainless steel, cadmium plate with olive drab chromate

contacts: copper alloy, gold per MIL-G-45204 Type II Grade C Class I over nickel

U-237 B/G
power plug
cable mount
MIL-C-55449

U-238 B/G
power receptacle
panel mount
MIL-C-55449

Used to supply power to area-type communications systems. Four contacts, hermaphroditic.

Consult factory for availability of other U-types.

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military MW power connectors

MIL-C-55181

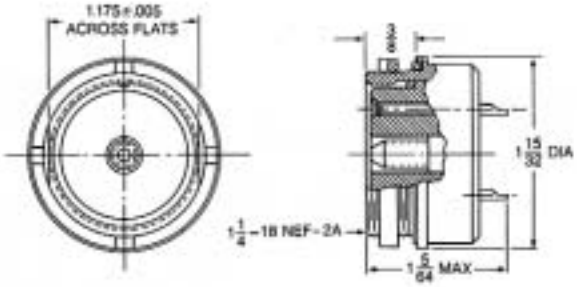
MW 20 receptacles

M55181/2-01
MW20M(M)A00

M55181/4-01
MW20F(M)A00

M55181/6-01
MW20F(M)B00

M51181/8-01
MW20F(M)D00



material & finish

shells, plugs: aluminum alloy, .0003 cadmium plate with olive drab chromate per MIL-F-14072
shells, receptacles: brass, .0003 cadmium plate with olive drab chromate per MIL-F-14072
drawscrews: stainless steel
contacts, socket: high conductivity copper alloy with beryllium copper spring element, .000030 gold over .0001 Ni per QQ-N-290
contacts, pin: yellow brass, .000030 gold over .0001 Ni per QQ-N-290
insulators: neoprene and/or glass-filled diallyl phthalate, type GDI-30 per MIL-M-14F

electrical specifications

dielectric strength: 4 contacts: 2000 V RMS, 9 & 18 contacts: 1500 V RMS
insulation resistance: 1000 Megohms min. at 500 V DC
voltage drop: 4 contacts: 20 MV at 35 A, 9 & 18 contacts: 25 MV at 7.5 A

mechanical specifications

air pressure: 2.5 psi
water immersion: 48 hrs. at 6 ft.
durability: 500 cycles with coupling torque of 12 in.-lbs.
contact retention: 10 lbs.
insert strength: 400 lbs.

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military UW power connectors

MIL-C-12520

plugs

UW1220

UW1320

UW1326

receptacles

UW2020

UW2026

material & finish

shells, plugs: aluminum alloy, .0003 cadmium plate with olive drab chromate per MIL-F-14072
shells, receptacles: brass, .0003 cadmium plate with olive drab chromate per MIL-F-14072
nosepieces: alloy steel, .0003 cadmium plate with olive drab chromate per MIL-F-14072
drawscrews: stainless steel
contacts, socket: high conductivity copper alloy with beryllium copper spring element, .000030 gold over .0001 copper
contacts, pin: yellow brass, .000030 gold over .0001 copper
insulators: neoprene and/or glass-filled diallyl phthalate, type GDI-30 per MIL-M-14F

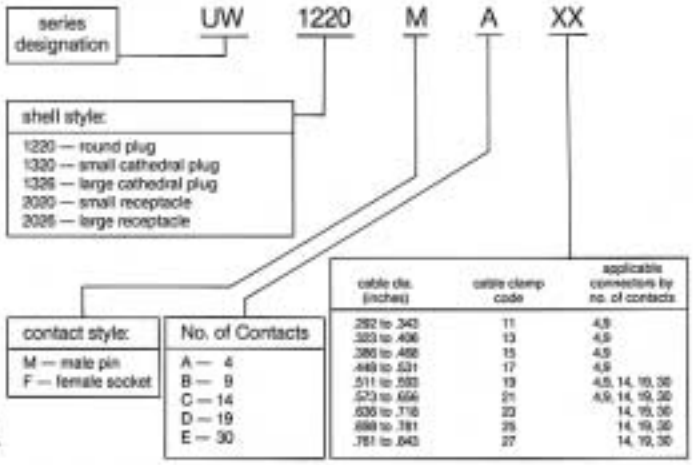
electrical specifications

dielectric strength: 4, 9, & 14 contacts: 2800 V RMS, 19 & 30 contacts: 2000 V RMS
insulation resistance: 1000 Megohms min. at 500 V DC
voltage drop: 4 contacts: 20 MV at 35 A, 9, 14, 19, & 30 contacts: 21 MV at 20 A

mechanical specifications

air pressure: 2.5 psi
water immersion: 48 hrs. at 6 ft.
durability: 500 cycles with coupling torque of 25 in.-lbs.
contact retention: 15 lbs.
insert strength: 400 lbs.

part numbering system



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cap and chain assemblies

164 series caps and chains greatly expand connector application possibilities by giving additional protection against moisture, dust, and sand. They are available in numerous variations of chain styles, paint and plating and may be made to meet special applications or military drawing specifications.

WPI Number	For Connector
164-377	164-7J U-79/U
164-895	164-183 U-183/U

WPI Number	USAECOM Number	Used with Connectors — UW Series
164-447	MIL-C-12520-3X	164-102-XXS, 164-202-XXS, 164-126F
164-499	MIL-C-12520-2X	164-101-XXP
164-507	MIL-C-12520-1X	164-101-XXS
164-782	MIL-C-12520-1N	164-102-XXP, 164-202-XXP, 164-126M
164-599	MIL-C-12520-3N	164-201-XXS, 164-120F
164-893-01	MIL-C-12520-2N	164-201-XXP, 164-120M

*For other cap and chain assemblies, contact factory.

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WPI® non-standard military connectors

CNI Series	ENVIRONMENTALLY-SEALED RECTANGULAR CONNECTORS
CX Series	VARIOUS MILITARY CONNECTORS AND/OR CABLE ASSEMBLY CALL OUTS
H Series	NAVAL SOUND-POWERED CONNECTORS
Q Series	MIL-C-55169 SUBMERSION-PROOF POWER CONNECTORS
ONO Series	POKE-HOME RECTANGULAR COAX CONTACT CONNECTORS
PL Series	MILITARY CIRCULAR CONNECTORS
Q2 Series	MIL-C-55169 SUBMERSION-PROOF POWER PLUGS
Q7A Series	MIL-C-55169 SUBMERSION-PROOF POWER RECEPTACLES
45 Series	MIL-C-55169 SUBMERSION-PROOF POWER CONNECTORS
84 Series	MINIATURE HIGH-TEMPERATURE "R" CONNECTORS
89 Series	SUBMERSION-PROOF POWER CONNECTORS
93 Series	POKE-HOME RECTANGULAR CONNECTORS
94 Series	POKE-HOME RECTANGULAR COMBINATION CONTACT CONNECTORS
126 Series	CNI ENVIRONMENTALLY-SEALED RECTANGULAR CONNECTORS
126 Series	MINIATURE RECTANGULAR CONNECTORS
164 Series	MILITARY POWER CONNECTORS
246 Series	ENVIRONMENT-RESISTANT CONNECTORS

Consult factory for specifications, samples, pricing, and delivery information.

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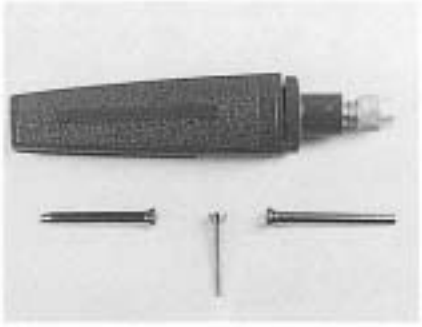
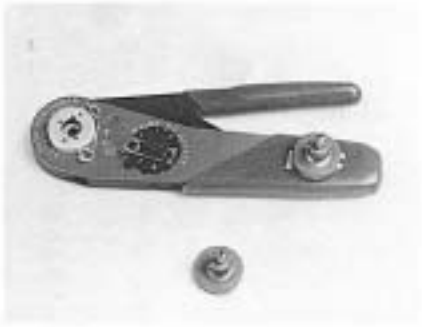
termination tooling for 17/117/220 series

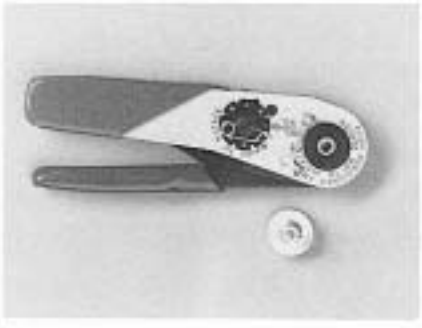


insertion tool
356-200 - tool handle only. Select correct insertion or removal bit from chart

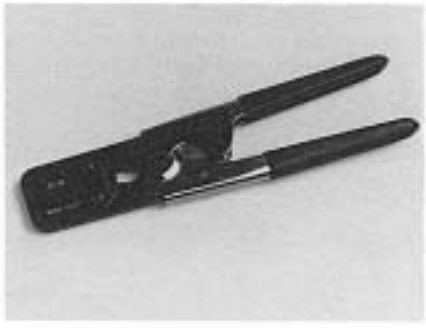
removal tool
356-271 - for 117/177/777 rear-release series - replaceable tips



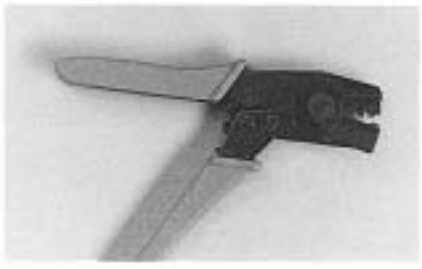
hand crimp tool
357-100 - adjustable, 4-indent miniature to MIL-C-22520. Requires contact locator bushing. For specific contact used, see section 15, page 3.



hand crimp tool for mini-tac contacts
357-101 - adjustable, 4-indent miniature to MIL-C-22520. Requires contact locator bushing. For specific contact used, see section 15, page 3.



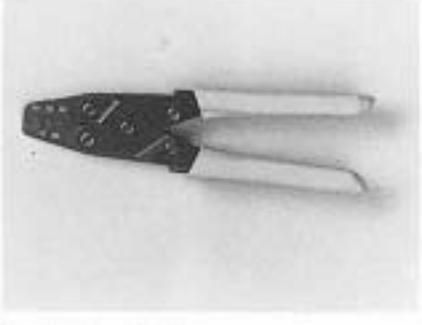
hand crimp tool
357-570 - used to crimp contacts - 220 stamped & formed



hand crimp tool
357-574 - Used to crimp contacts 17 - RRDX - FXX, 17 - RRDX - MXX 20-30 AWG wire.

crimping procedure for 357-574 crimptool

1. With locator side of tool facing downward, be sure that tool is completely open.
2. Place contact crimp barrel on correct anvil with open end facing toward crimper.
3. Properly locate contact by nesting slot in front of wire crimp barrel onto clip of locator. This should align both wire and insulation crimp barrels with their respective crimping jaws.
4. Slowly close handles until contact is locked into crimping die. Do not over-close.
5. Insert stripped wire to maximum depth. Be sure all strands of wire are inside barrel.
6. Close handles until ratchet disengages. Ratchet insures tool has completed crimp cycle and contact has been crimped before tool re-opens.



hand crimp tool
357-2500 - economy tool for 117 rear-release contacts - ideal for occasional use

hand crimp tool
357-2501 - economy tool for 17 series - standard crimp contacts

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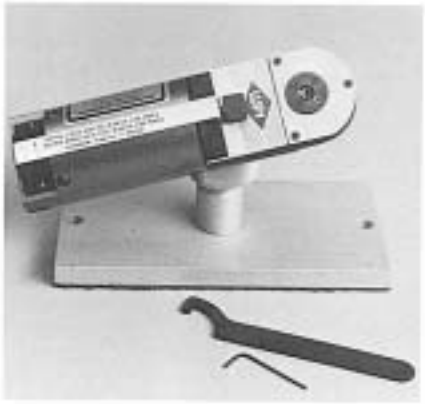
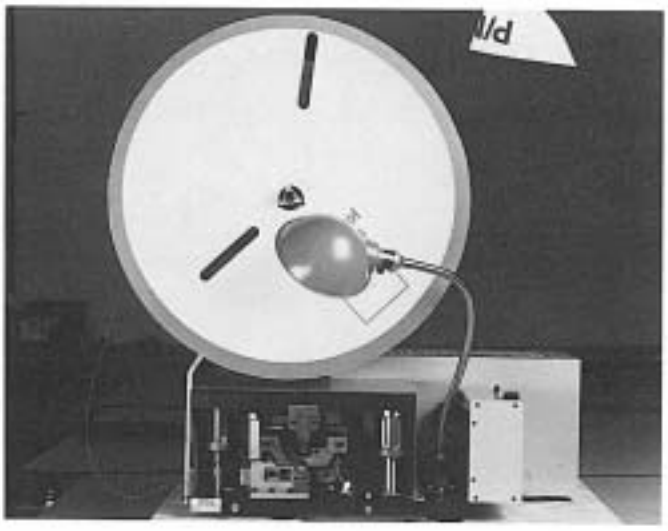
termination tooling

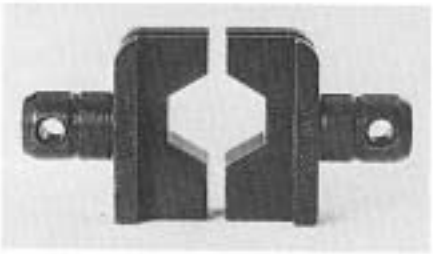


manual-feed pneumatic crimp tool
359-401 - 4-indent, cycle-controlled, less contact locator bushing. See chart for correct locator bushings and settings.



semi-automatic stripper/crimper machine 359-634 - strips and terminates discrete wire to open barrel, reel fed contacts. Used on stamped and formed 117 series contacts, auto-feed system maximizes production of crimp terminations of non-metallic insulated wire in ranges of #30-20 AWG. Termination rates can easily exceed 1500 wires per hour.

specifications
crimping speed:
up to 2,000 terminations per hour
contacts:
17 - RRDX - FXX male and 17 - RRDX - M02 female stamped and formed rear release contacts.
wire size:
20 to 24 guage AWG
24 to 30 guage AWG
dimensions:
33" wide x 21" deep x 13½" high.
weight:
190 lbs (approx.)
electrical requirements:
110 VAC standard 3 wire grounded supply
Meets all applicable OSHA standards.



crimp die
357-315-03
hexagonal clamp die for use with hand crimp tool (357-115). For overmold can.

hand crimp tool
357-115
economical hand tool, hexagonal ferrule crimp to cable and hood. Crimp die (357-315-03) purchased separately. For overmold can.

d-sub field service kit
17RR-232K
RS232 - assortment of connectors, backshells, contacts, & crimp tools - comparable to AMP model 606064-2

terminal & splice field service kit
AI-177
assortment of crimp-type terminals & splices, with hand-crimp tool

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country code 1

order information

NOTE: (Use 356-200 handles for insertion/removal bits)

Contact	Barrel O.D./I.D.	Crimp Tool	Bushing (Location)	Crimp Setting for Wire AWG. 16	18	20	22	24	26	28	30	Insertion Tool Bit	Removal Tool Bit
17-763(S) 17-766(P)	.007/.045	357-100	357-300-02			#7 .038 ±.003	#6 .034 ±.003	#5 .030 ±.003				356-400-1 or 356-400-10 (Encapsulated) Connector— to 20 Ga. Wire)	356-400-5 356-400-6
17-763(S) 17-766(P)	.007/.045	357-2501											356-400-5 356-400-6
17-764(S)	.062/.045	Solder										356-400-1	356-400-5
17-765(P)	.062/.045	Solder										356-400-1	356-400-6
17-767(P)	.062/.045	Solder										356-400-1	356-400-6
17-1005P	.105/.067	consult factory		.058 ±.003	.053 ±.003							356-400-2	356-400-6
17-1006(S)	.105/.067												356-400-5
17-1198(P)	.040 Tail	Rt. Angle										356-400-4	356-400-6
17-1207(P)	.040 Tail	Rt. Angle										356-400-4	356-400-6
17-1208(S)	.040 Tail	Rt. Angle										356-400-4	356-400-5
17-1209(S)	.040 Tail	Rt. Angle										356-400-4	356-400-5
17-1263(S)	.062/.045	Solder										356-400-1	356-400-5
17-1309(S)	.077/.032	357-100	357-300-02					#7 .036 ±.002	#6 .032 ±.002	#5 .030 ±.002		356-400-1	356-400-5
17-1310(P)	.077/.032												356-400-6
17-RRD1-FXX 17-RRD1-MXX		357-574				Applicator for contacts on reels—adj. crimp setting .044 ±.011	.044 ±.001	.043 ±.001					356-271
		357-2500											356-400-31
17-RRD2-MXX 17-RRD2-FXX		357-574		Applicator for contacts on reels—adj. crimp setting				.026 ±.001	.026 ±.001	.026 ±.001	.026 ±.001		356-271
		357-2500											356-400-31
220-S02(S)	.049/.031	357-100	357-300-01					.024±.002	.018±.002	.015±.002		356-400-11	356-400-14
220-P02(P)	.049/.031	357-100	357-300-08					.024±.002	.018±.002	.015±.002		356-400-11	356-400-15
220-S03(S)	.050/.036	357-100 357-104 357-110 359-400	357-300-03 357-304-03 357-310-03 359-340-05				.024±.002	.020±.002	.015±.002			356-400-11	356-400-14
220-P03(P)	.050/.036	357-100	357-300-08				.024±.002	.020±.002	.015±.002			356-400-11	356-400-15
220-830 220-831 220-834 220-883	— — — —	Solder Solder Solder Solder	— — — —									356-400-11 356-400-11 356-400-11 356-400-11	356-400-15 356-400-14 356-400-15 356-400-15
221-759(P) 221-760(S)	.033/.023 .033/.023	357-101 357-101	357-301-03 357-301-03					.021/.018 .021/.018	.018/.015 .018/.015	.015/.012 .015/.012		356-400-20 356-400-20	356-400-21 356-400-22

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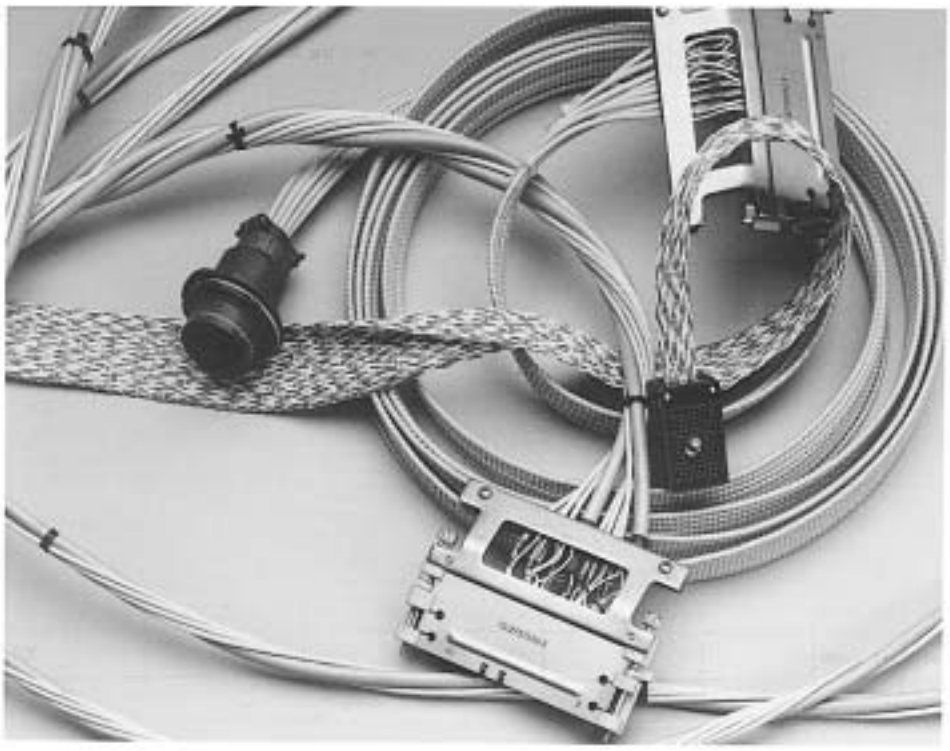

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