

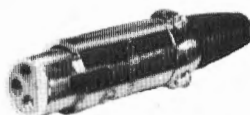
91 SERIES MICROPHONE CONNECTORS

BUNKER
RAMO

AMPHENOL



91-453



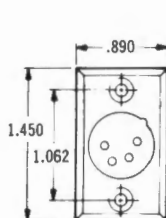
91-454

FEMALE CABLE PLUGS

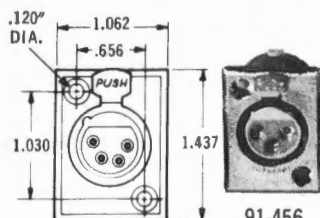
Number of Contacts	3	4	5
Part Number	91-454	91-458	91-462
Electrical	Cannon	XLR-3-11C	XLR-4-11C
Equivalent	Switchcraft	A3F	A4F
		A5F	

MALE CABLE PLUGS

Number of Contacts	3	4	5
Part Number	91-453	91-457	91-461
Electrical	Cannon	XLR-3-12C	XLR-4-12C
Equivalent	Switchcraft	A3M	A4M
		A5M	



91-455



91-456

CHASSIS RECEPTACLES (Mate with Female Cable Plugs)

Number of Contacts	3	4	5
Part Number	91-455	91-459	91-463
Electrical	Cannon	XLR-3-32	XLR-4-32
Equivalent	Switchcraft	D3M	D4M
		D5M	

CHASSIS RECEPTACLES (Mate with Male Cable Plug)

Number of Contacts	3	4	5
Part Number	91-456	91-460	91-464
Electrical	Cannon	XLR-3-31	XLR-4-31
Equivalent	Switchcraft	D3F	D4F
		D5F	



91-853



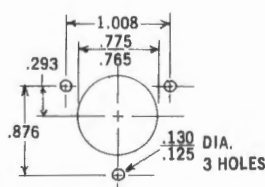
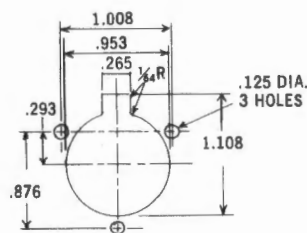
91-854



91-856



91-855



EXCELLITE CONNECTORS

A low cost, dependable audio-type connector with latchlock coupling. Made of sturdy ABS molded plastic with lustrous nickel plating, Excellite connectors resist denting, chipping, peeling or tarnishing. They are available in cable plugs and panel receptacles with 3, 4 and 5 contacts.

FEATURES

ECONOMICAL — Lower initial procurement cost, less downtime for installation, rewiring, field repairs.

LIGHTWEIGHT — Considerable weight savings over comparable die-cast zinc configurations.

WIRING — Unitized inserts (shell, button and insert are all one assembly) are easily removed and feature screw-machined solder cup type contacts for quick efficient termination.

POSITIVE GROUND — In all Excellite latchlock-type connectors, contact #1 engages first for use as ground — eliminating chance of accidental electrical damage to solid-state equipment or microphones.

POLARIZATION — Key on female connector, lock-in keyway on male to prevent mismatching.

SPECIFICATIONS

- SHELL AND CABLE CLAMP** — Molded plateable grade ABS (acrylonitrile butadiene styrene) with nickel plate over copper finish.
- INSERT DIELECTRIC** — Molded type 6 nylon.
- CONTACTS** — Copper alloy, silver plated and chromate dipped. Screw machine design with solder cup termination.
- CABLE RELIEF** — General purpose 40-60 durometer neoprene rubber.
- CABLE CLAMP** — Cable clamp and gland accepts commonly used .250" to 0.313" diameter cable.
- ELECTRICAL CHARACTERISTICS**

	3 Contact	4 Contact	5 Contact
Voltage	133 V (RMS)	133 V (RMS)	133 V (RMS)
Current	15 A.	10 A.	7.5 A

- TEMPERATURE RATING** — -20°F to 160°F
- DIELECTRIC WITHSTANDING VOLTAGE** — 1400 V at 60 Hz for one minute between any two contacts or between any contact and connector shell.

STANDARD CONTACT ARRANGEMENT (Face View-pin insert)



QWIKS - 91 SERIES

Efficient, easy-to-operate, quick-disconnect microphone connectors. Connectors automatically lock when fully mated. To disconnect, merely slide forward the button on female cable plug or depress button on male cable plug. Cable connectors mate for cable to cable applications — or mate cable plugs with chassis receptacles.

Qwiks are finished in attractive corrosion-resistant satin nickel, with bodies of high grade zinc alloy. Contacts are bronze, gold-plated over silver for high conductivity. Dielectric is diallyl phthalate.

ORDERING INFORMATION

Description	3 Contacts	4 Contacts
Male Cable Plug	91-853	91-857
Female Cable Plug	91-854	91-858
Male Chassis Receptacle	91-855	91-859
Female Chassis Receptacle	91-856	91-860

91T SERIES

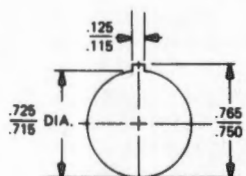
These miniature audio/electronic cable to panel connectors are available with up to 12 contacts in straight or right angle plug styles. They are ideal for use with microphones, recorders, two-way radios, test instruments, industrial controls and data processing. Approximately 33% smaller than Amphenol's standard 91 Series coupling ring connectors, these miniatures are intermateable with some types of imported European electronic equipment. They provide high density, low cost, top quality interconnections for many modern equipment requirements.



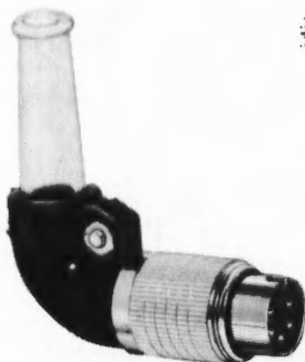
91T-3360-1



91T-3363-9



PANEL CUTOUT



91T-3360-6



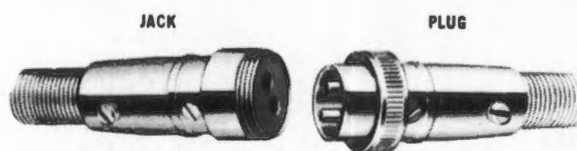
91T-3363-9



ORDERING INFORMATION

Number of Contacts	Part Numbers		
	Cable Plugs		Panel Receptacles
	Straight	Right Angle *	
*2	91-T-3200-1	91-T-3200-6	91-T-3203-9
3	91-T-3260-1	91-T-3260-6	91-T-3263-9
4	91-T-3300-1	91-T-3300-6	91-T-3303-9
5	91-T-3360-1	91-T-3360-6	91-T-3363-9
6	91-T-3400-1	91-T-3400-6	91-T-3403-9
7	91-T-3475-1	91-T-3475-6	91-T-3478-9
12	91-T-3635	91-T-3635-6	91-T-3638-9

*Special Order Only.



80MC2F

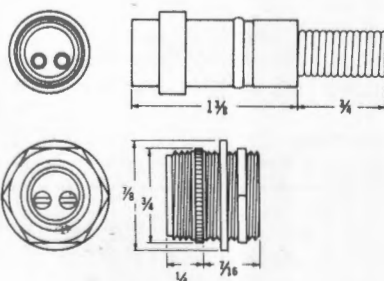
80-MC2M

PLUG RECEPTACLE

80-PC2M



80-PC2F



80 SERIES - SINGLE AND DOUBLE CONTACTS

Connector Assemblies for use with shielded cables, single and two-conductor cables, applications for microphone cables, twisted pairs, concentric lines, photo cell leads, patch cords, and electronic instruments. Suitable for connecting many kinds of small apparatus.

Element is black phenolic; shell is machined from solid brass and finished in polished chrome.

Chassis connectors have same precision construction, assuring positive connections free from noise, leaks, or shorts. Cable plugs and panel receptacles of 80 Series are available with either male or female contacts. All mount in $\frac{5}{16}$ " holes. Maximum chassis thickness for lock-nut type receptacles is $\frac{1}{32}$ ". Can be mounted directly on mike body with $\frac{5}{16}$ "-27 tapped hole. Cable spring guard accommodates cables to $\frac{3}{16}$ ". Cap and chain 75-CCC1 can also be used with 80 Series connectors.

ORDERING INFORMATION

Contacts	Part No.	Description	Mates With
1	80-M	Male Cable Plug	80-C
1	80-C	Female Panel Receptacle	80-M
2	80-MC2M	Male Cable Plug	80-MC2F or 80-PC2F
2	80-MC2F1	Female Cable Plug	80-PC2M or 80-MC2M1
2	80-MC2F	Female Cable Jack	80-MC2M
2	80-MC2M1	Male Cable Jack	80-MC2F1
2	80-PC2F	Female Panel Receptacle	80-MC2M
2	80-PC2M	Male Panel Receptacle	80-MC2F1

75-CCC1

Cap & Chain for Receptacle

91 SERIES THREADED COUPLING MICROPHONE CONNECTORS

These are 3, 4, and 6-contact connectors designed primarily for audio equipment but used extensively on all types of portable equipment.

Positive screw-type coupling ring connection eliminates accidental disconnects. Squeeze type clamp grips cable securely after assembly and prevents pulling and twisting strain on soldered contacts.

Dielectric is molded from black phenolic cable. Shells are of brass, finished in bright chrome plating.

Cord protector springs on a 3-contact style have .281" I.D.; 4 and 6-contact styles have .385" I.D. Chassis receptacles mount in $\frac{3}{32}$ " dia. chassis holes up to $\frac{1}{4}$ " thick. Service end accommodates coupling ring on cable connector or cap and chain to seal open chassis units against dirt or tampering.

ORDERING INFORMATION

No. Contacts	P/N	Description	Mates With
3	91-MC3F	Female Cable Jack	91-MC3M
3	91-MC3F1	Female Cable Plug	91-MC3M1, 91-PC3M
3	91-MC3M	Male Cable Plug	91-MC3F, 91-PC3F
3	91-MC3M1	Male Cable Jack	91-MC3F1
3	91-PC3F	Female Panel Receptacle	91-MC3M
3	91-PC3M	Male Panel Receptacle	91-MC3F1
4	91-MC4F	Female Cable Jack	91-MC4M
4	91-MC4F1	Female Cable Plug	91-MC4M1, 91-PC4M
4	91-MC4M	Male Cable Plug	91-MC4F, 91-PC4F
4	91-MC4M1	Male Cable Jack	91-MC4F1
4	91-PC4F	Female Panel Receptacle	91-MC4M
4	91-PC4M	Male Panel Receptacle	91-MC4F1
6	91-MC6F	Female Cable Jack	91-MC6M
6	91-MC6F1	Female Cable Plug	91-MC6M1, 91-PC6M
6	91-MC6M	Male Cable Plug	91-MC6F, 91-PC6F
6	91-MC6M1	Male Cable Jack	91-MC6F1
6	91-PC6F	Female Panel Receptacle	91-MC6M
6	91-PC6M	Male Panel Receptacle	91-MC6F1
—	91-CCC3	Cap & Chain for Receptacle	

75 SERIES SINGLE CONTACT

Standard type used on microphones, amplifiers, speakers, transmitters, etc. Brass machined shells with chrome finish. Threaded coupling and unique button contact permits plugs to be converted to jacks by removal of coupling ring. Receptacles mount in .385" holes when grounding. .500" holes for ungrounded two circuit operation. Spring cord protection for $\frac{1}{4}$ " cable.

ORDERING INFORMATION

Description	Part No.
Chassis Receptacle	75-PC1M
Straight Plug	75-MC1F
Cable Jack	75-MC1M
Angle Plug	75-MC1FA
Cap & Chain	75-CCC1
Phone Plug Adapter	75-MC1P

91 SERIES MINIATURE CABLE CONNECTORS

High quality compact connectors for shielded or unshielded cables. Make ideal battery or antenna connectors. Can also serve as inexpensive microphone connectors.

Black phenolic elements, housed in cadmium plated brass shells and held in place by set screws in side. Polarized contact spacing prevents incorrect insertion. Accommodate cables up to $\frac{1}{4}$ " diameter. Rated 3 amps., 500 volts.

ORDERING INFORMATION

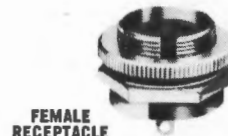
No. Contacts	Short Shell $1\frac{1}{16}$ " Long	Long Shell $1\frac{3}{16}$ " Long	Mating Sockets			
			Cable Socket Short $1\frac{1}{16}$ "	Cable Socket Long $1\frac{3}{16}$ "	Chassis Shielded	Chassis Unshielded
3	91-MPM3S	91-MPM3L	91-MPF3S	91-MPF3L	78-PCG4	78-S3S
4	91-MPM4S	91-MPM4L	91-MPF4S	91-MPF4L	78-PCG3	78-S4S
5	91-MPM5S	91-MPM5L	91-MPF5S	91-MPF5L	78-PCG5	78-S5S
6	91-MPM6S	91-MPM6L	91-MPF6S	91-MPF6L	78-PCG6	78-S6S

*Note — long shell only



91-MC3M

91-MC3F



FEMALE RECEPTACLE

91-PC3F



MALE RECEPTACLE

91-PC3M



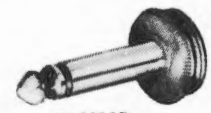
75-PC1M



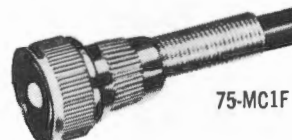
75-CCC1



75-MC1M



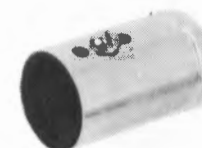
75-MC1P



75-MC1F



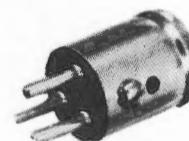
75-MC1FA



91-MPF3L



91-MPM3L



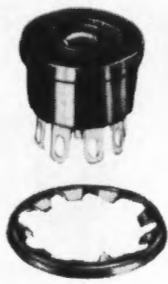
91-MPM3S



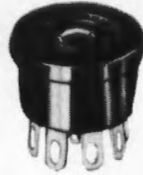
91-MPF3S

ORDERING INFORMATION — CABLE SOCKETS

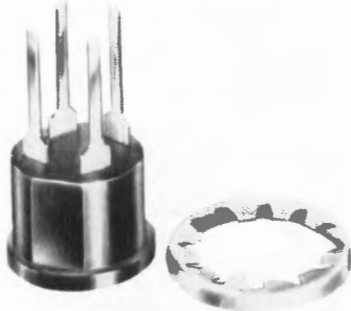
No. Contacts	Short Shell $1\frac{1}{16}$ " Long	Long Shell $1\frac{3}{16}$ " Long	Mating Plugs		
			Cable Plug Short $1\frac{1}{16}$ "	Cable Plug Long $1\frac{3}{16}$ "	Chassis Unshielded
3	91-MPF3S	91-MPF3L	91-MPM3S	91-MPM3L	86-CP3S
4	91-MPF4S	91-MPF4L	91-MPM4S	91-MPM4L	86-CP4S
5	91-MPF5S	91-MPF5L	91-MPM5S	91-MPM5L	
6	91-MPF6S	91-MPF6L	91-MPM6S	91-MPM6L	



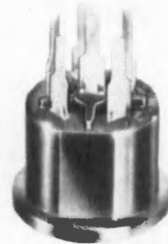
78-S6S



78-7P



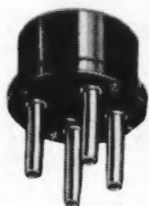
SOLDERLESS WRAP STYLE
WITH RETAINING RING



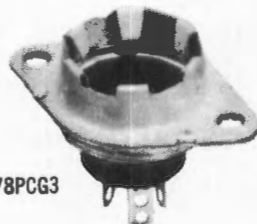
PC BOARD STYLE



71-3S



86-CP-4S



78PCG3

MINIATURE WITH RETAINER RING MOUNTING

Especially designed for installations where space is at a premium, these sockets resemble AMPHENOL "S" Type Sockets but are less than half their size.

Sockets are easily mounted without screws or rivets in $\frac{3}{8}$ " round hole. Correct size retainer ring supplied with all sockets is easily assembled which assures a tight and secure mounting. Body is black phenolic. Rated 3 amps @ 500 vrms.

ORDERING INFORMATION

Contacts	Part No.	Pin Circle Diameter	Mating Plugs	
			Unshielded	Shielded
3	78-S3S	.344	71-3S	91-MPM3L
4	78-S4S	.406	71-4S	91-MPM4L
5	78-S5S	.406	71-5S	91-MPM5L
6	78-S6S	.406	71-6S	91-MPM6L
7	78-7P	.375	86-896	86-895

PC OR SOLDERLESS TERMINATIONS - Special Order Only

These sockets can be used for vacuum tubes, relays, input or output cable connections and many other circuit requirements where standard size sockets will not fit. Performance is equal to that of the larger sockets.

Contacts are of copper alloy (Luballoy) with a cadmium plated finish.

Solderless terminations mount in $\frac{3}{8}$ " diameter round panel cut out and are held in place by friction type retaining ring. All rated 500 vrms.

ORDERING INFORMATION

Contact	Part No.	Contact Tail Style	Pin Circle Diameter	Current Rating (Amps)	Mating Plugs	
					Unshielded	Shielded
3	78-S3SW-0500	Solderless	—	3	71-3S	91-MPM3L
3	78-S3SW-0525	Solderless	—	7.5	71-3S	91-MPM3L
3	78-S3SW-0125	Printed Circuit	.344	3	71-3S	91-MPM3L
4	78-S4SW-0500	Solderless	—	3	71-4S	91-MPM4L
4	78-S4SW-0525	Solderless	—	7.5	71-4S	91-MPM4L
4	78-S4SW-0125	Printed Circuit	.406	3	71-4S	91-MPM4L
5	78-S5SW-0125	Printed Circuit	.406	3	71-5S	91-MPM5L
6	78-S6SW-0125	Printed Circuit	.406	3	71-6S	91-MPM6L

MINIATURE UNSHIELDED - 71 SERIES

Extremely compact black phenolic plugs used extensively for speaker connections. Ideal for all plug-in connections where space is limited. Molded-in contacts are nickel plated brass. Rated 5 amps @ 500 vrms.

ORDERING INFORMATION

Contacts	Part No.	Pin Circle Diameter	Mating Sockets Unshielded
3	71-3S	.343	78-S3S
4	71-4S	.406	78-S4S
5	71-5S	.406	78-S5S
6	71-6S	.406	78-S6S

MINIATURE UNSHIELDED - 86 SERIES

Ideal for connecting speakers, carbon microphones, and antennas wherever space is at a premium. Right for test equipment, too. Retainer rings supplied with each part.

Plugs have black phenolic body, nickel plated brass contacts. Mount in $\frac{3}{8}$ " round hole. Rating 5 amps @ 500 vrms.

ORDERING INFORMATION

Contacts	Part No.	Pin Circle Diameter	Mating Sockets Shielded
3	86-CP-3S	.343	91-MPF-3S
4	86-CP-4S	.406	91-MPF-4S

SHIELDED CHASSIS TYPE

The 78PCG Series are made of standard 78 Series miniature sockets, assembled in a cadmium plated drawn steel mounting plate. Spring contacts wipe connector shell and assure good electrical connection between cable shield, connector shell and mounting surface. They also eliminate accidental disconnect.

Mount on surface or behind chassis or panel in $\frac{7}{8}$ " diameter hole on $1\frac{1}{4}$ " centers. Rated 3 amps @ 500 vrms.

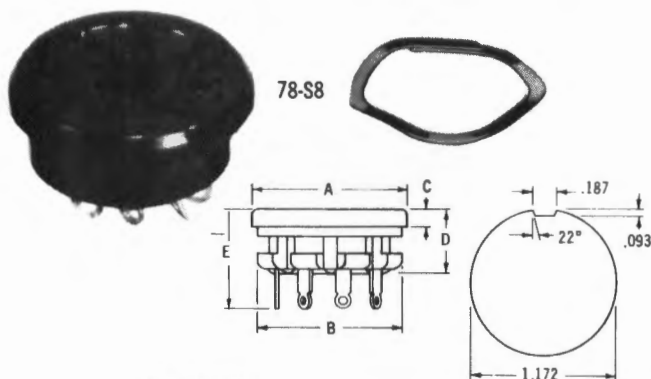
For a fully shielded connection, mate with 91 Series Long Shell Plugs.

ORDERING INFORMATION

Contacts	Part No.	Pin Circle Diameter	Mating Plugs	
			Unshielded	Shielded
3	78-PCG3	.344	71-3S	91-MPM3L
4	78-PCG4	.406	71-4S	91-MPM4L
5	78-PCG5	.406	71-5S	91-MPM5L
6	78-PCG6	.406	71-6S	91-MPM6L

TUBE/RELAY SOCKETS

BUNKER RAMO AMPHENOL



DIMENSIONS

Sockets	A	B	C	D	E
78-S4, -S5, -S6, -S7	1 1/4	1 1/2	.135	.420	2 1/2
78-S8, -S9, -S11, -S12, -S16, -A9P	1 1/4	1 1/2	.145	.490	Approx. 7/8

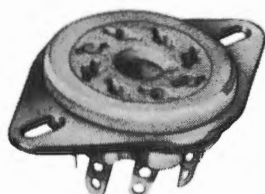
RETAINING RING SUPPLIED WITH 78 AND 49 "S" TYPE SOCKETS



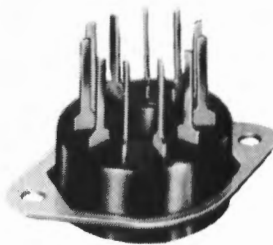
77-MIP-8



78-RS8



49-RSS-8



77-MIP9W-0525



78-S8W-0125



77-MIP11W-0125

SOLDERLESS WRAP SOCKETS

Standard socket series 77MIP and 78S of eight contacts or more have 1/2" long contact tails for solderless termination. Standard contacts are .016" thick, rated 3 amps for 22 ga. wire. Heavy duty contacts are .025" thick, rated 7.5 amps, for 16 ga. wire.

ORDERING INFORMATION

Part Numbers for General Purpose Phenolic Dielectric

Number of Contacts	Standard Contact		Heavy Duty Contact	
	Molded-In-Plate Style	Retaining Ring Style	Molded-In-Plate Style	Retaining Ring Style
8	77-MIP8W-0500	78-S8W-0500	77-MIP8W-0525	78-S8W-0525
*9	77-MIP-9W-0500	78-S9W-0500	77-MIP9W-0525	78-S9W-0525
11	77-MIP11W-0500	78-S11W-0500	77-MIP11W-0525	78-S11W-0525
*12	77-MIP12W-0500	78-S12W-0500	77-MIP12W-0525	78-S12W-0525

*Special Order Only.

"S" TYPE

Amphenol "S" type sockets feature the patented Amphenol Retainer Ring Mounting. These quick-mounting sockets use no screws or rivets; they are securely held by the retainer ring and can be easily mounted with a screwdriver or Amphenol hand tool 51-3. The sockets are notched around their circumference so that they may be rotated and mounted in the position that lines up the contacts for most convenient wiring. The retainer ring is furnished.

ORDERING INFORMATION

Contacts	Contacts	Black Phenolic	Mica Filled
4	Brass	78-S4	—
5	Brass	78-S5	—
6	Brass	78-S6	—
7	Brass	78-S7S	—
8 Octal	Luballoy	78-S8	78-S8T*
9	Luballoy	78-S9	—
11	Luballoy	78-S11	78-S11T*
12	Luballoy	78-S12	—
16	Luballoy	78-S16	—

MOUNTING PLATE TYPE

REPLACEMENT TYPE "S"

These superior sockets, ideal for any replacement, especially broken and noisy wafer types, are regular "S" type sockets, assembled with a retainer ring holding a sturdy nickel-plated steel mounting plate. Slotted holes in mounting plate fit centers from 1 1/2" to 1 5/8". Other dimensions and characteristics are the same as for "S" type.

MOLDED-IN-PLATE TYPE

Steel mounting plate molded directly into solid phenolic body assures dependable, secure mounting and eliminates breakage suffered by ordinary laminated sockets during riveting.

Contacts are spaced for easy, fast wiring. Two holes in each contact provide wiring and anchoring points for resistors, capacitors, chokes, and other components.

ORDERING INFORMATION

Contacts	Black Phenolic	Stearite #	Black Phenolic	Mica Filled
4	.78-RS4*	49-RSS4	77-MIP-4	77-MIP-4T*
5	78-RS5*	49-RSS5	77-MIP-5	—
6	—	—	77-MIP-6	—
7	—	—	77-MIP-7S	—
8 Octal	78-RS8*	49-RSS8	77-MIP-8	77-MIP-8T*
9	78-RS9	—	77-MIP-9	—
11	78-RS-11	—	77-MIP-11	77-MIP-11T*
12	—	—	77-MIP-12	—
20	—	—	77-MIP-20	—

* Military version available with silver plated contacts and, where applicable, stainless steel mounting plate. Add suffix "M" to catalog number. Example: 77-MIP-8TM.

PRINTED CIRCUIT SOCKETS

Standard socket series 77MIP and 78S of eight or more contacts for mounting directly to printed circuit boards. Luballoy contact tails are 1/8" long and mount through 1/16" diameter holes.

ORDERING INFORMATION

Part Numbers for General Purpose Phenolic Dielectric

Number of Contacts	Pin Circle Diameter	Part Number Molded-In-Plate Style	Part Number "S" Style
8	.687	77-MIP8W-0125	78-S8W-0125
*9	.687	77-MIP9W-0125	78-S9W-0125
11	.750	77-MIP11W-0125	78-S11W-0125
*12	.750	77-MIP12W-0125	78-S12W-0125
*20	outer 1.000 inner .687	77-MIP20W-0125	Not Available

*Special Order Only.

PLUGS

CP TYPE

Ideal for use as chassis connectors, with plug-in units or as inexpensive cable connectors. Plugs with 4, 5, 6, and 7 contacts do not have center guide post but are polarized for correct insertion by use of two pins of larger diameter than others.

REPLACEMENT TYPE

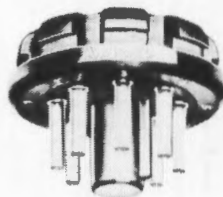
Aphenol replacement plugs are regular "CP" plugs conveniently assembled with a retainer ring holding the nickel-plated steel mounting plate. Slotted mounting plate holes fit centers from $1\frac{1}{2}$ " to $1\frac{5}{8}$ ".

SPEAKER TYPE

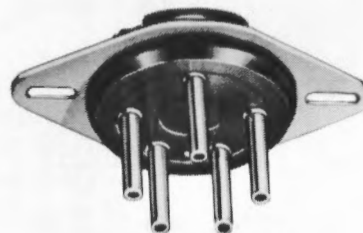
Were designed originally as speaker plugs but are very useful in test panels, intercommunication systems, public address remote control units, etc.

ORDERING INFORMATION

Contacts	CP Type		Replacement Type Black Phenolic	Speaker Type Black Phenolic
	Black Phenolic	Mica Filled		
4	86-CP-4	—	86-RCP-4	71-4
5	86-CP-5	—	86-RCP-5	71-5
6	86-CP-6	—	86-RCP-6	—
7	86-CP-7S	—	—	—
8 Octal	86-CP-8	86-CP-8T	86-RCP-8	—
9	86-CP-9	—	—	—
11	86-CP-11	86-CP-11T	86-RCP-11	—
12	86-CP-12	—	—	—
16	86-CP-16	—	—	—
20	—	—	—	71-20



"CP TYPE"
86CP8



REPLACEMENT TYPE
86-RCP-5



MOLDED SPEAKER TYPE
71-5



MINIATURE "CP" TYPE
86-893

MINIATURE PLUGS

Mates with 7 and 9 pin sockets, Diallyl Phthalate with gold over silver plated brass contacts. 1500 vrms at 5 Amps. Molded-in strain relief post.

ORDERING INFORMATION

	7 Pin	9 Pin
Plug	86-896	86-893
Plug with rubber cap	86-895	86-897
Plug with rubber cap, side outlet	86-894	—



PM AND PF STYLES
GROMMET CAP WITH
78 AND 86



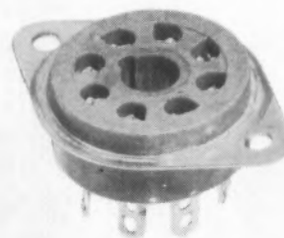
PM-11 AND PF-11 STYLES
CABLE CLAMP CAP WITH
78 AND 86

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 or use optional plastic cap.

ORDERING INFORMATION

Contacts	Pin Contacts	Socket Contacts	Pin Contacts	Socket Contacts
4	86-PM4	78-PF4	86-PM4-11	78-PF4-11
5	86-PM5	78-PF5	86-PM5-11	78-PF5-11
6	86-PM6	78-PF6	86-PM6-11	78-PF6-11
7	86-PM7S	78-PF7S	86-PM7S-11	78-PF7S-11
8	86-PM8	78-PF8	86-PM8-11	78-PF8-11
9	86-PM9	78-PF9	86-PM9-11	78-PF9-11
11	86-PM11	78-PF11	86-PM11-11	78-PF11-11
12	86-PM12	—	86-PM12-11	—



OCTAL "MIP"
59-103

OCTAL MIP-CLOVERLEAF CONTACTS

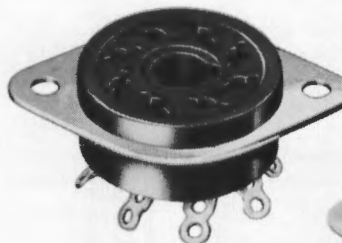
59-103	Octal. Same dimensions as standard MIP. Mica-filled, stainless steel mounting plate, cloverleaf contacts heavy duty type.
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COMPACT "MIP" SOCKETS

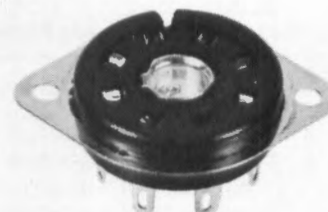
These 8-contact sockets are similar to standard "MIP" types except smaller. They mount in $1\frac{1}{8}$ " diameter round hole, have two .136" diameter mounting plate holes on $1\frac{5}{16}$ " centers.

ORDERING INFORMATION

88-8	Octal, Black Phenolic
88-8X	Octal Black Phenolic



88-8



88-8X

160 SERIES

Heavy duty outlet plugs and receptacles that meet Underwriters' Laboratories requirements for grounding home appliances and tools . . . a factor of increasing importance to electrical contractors as well as appliance manufacturers. Rated at 15 amp 125 volts or 10 amp 250 volt. 160-10N Receptacle, 160-11N Plug. U.L. Recognized.

WITH MOUNTING PLATE

Nickel plated steel mounting plate assembled to molded thermoplastic body. Mounting requires $1\frac{1}{32}$ " dia. center hole and two $\frac{5}{32}$ " holes on $1\frac{1}{2}$ " to $1\frac{5}{8}$ " centers. Contacts and grounding prong are brass. Plug is U/L approved. Receptacle is recognized under the U/L component program, 160-2N 2-Pole Receptacle, 160-3N 2-Pole Plug.

Flush Motor Type

Consist of 160-10 and 160-11 inserts assembled in cadmium plated steel shells for below-surface mounting. Mount in $1\frac{7}{16}$ " hole; two $\frac{5}{32}$ " screw holes on $1\frac{3}{4}$ " centers. Plug is U/L approved. Receptacle is recognized under the U/L component program. 160-4N 2-Pole Flush Motor Receptacle, 160-5N 2-Pole Flush Motor Plug.

SHIELDED

Consists of inserts 160-10 and 160-11 with sturdy steel plug caps finished in cadmium plate. Plug caps are $1\frac{1}{4}$ " LONG. End rubber grommet has $\frac{7}{16}$ " I.D. Cable clamp type fits cables up to $\frac{3}{8}$ " O.D. All plugs and receptacles are U/L approved. See below for ordering information.

60 AND 61 SERIES

Compact black phenolic units built to Underwriters' Laboratories standards. Rated at 15 amp, 110 volt or 10 amp, 250 volt. Available in either retainer ring or mounting plate style.

Assemble retainer ring style with plug caps for required type. Mounts in $1\frac{1}{4}$ " keyed hole on chassis up to .125" thick. Mounting plate style requires $1\frac{1}{32}$ " dia. hole. Mounts on $1\frac{1}{2}$ " to $1\frac{5}{8}$ " centers.

The two-pole receptacle accepts all standard 110-volt plugs. Contacts on three-pole receptacle are staggered so that Amphenol 60-M plugs can be inserted in only one way.

61-M plug has standard $\frac{1}{4}$ " brass blades spread $\frac{1}{2}$ ". 61-MP has one $\frac{1}{4}$ " and one $\frac{5}{16}$ " blade spread $\frac{1}{2}$ ". 60-M has three $\frac{1}{4}$ " blades staggered spaced. Binding screws for connecting cables are used on both plugs and receptacles.

MOLDED-IN-PLATE RECEPTACLE

High quality 110-volt receptacle identical to 61-F except for steel mounting plate molded into phenolic body. Mounts in $1\frac{3}{16}$ " dia. hole on $1\frac{1}{2}$ " centers. Mounting hole, $\frac{5}{32}$ " dia.

Receptacle is at an angle to place for close spacing or vertical mounting.

Part Number to Order: 61-MIP-61F

FLUSH MOTOR PLUG & RECEPTACLE

Compact plug or receptacle assembled in No. 61-61 steel shell for below-surface mounting. Mounts in $1\frac{7}{16}$ " hole; two $\frac{5}{32}$ " screw holes on $1\frac{3}{4}$ " centers.

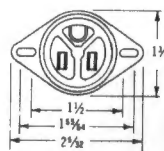
ORDERING INFORMATION

Mounting	2-Pole Black Phenolic 15 Amp., 125 Volts		2-Pole With Ground Black Phenolic 15 Amp., 125 Volts		3-Pole Polarized Black Phenolic 15 Amp., 125 Volts	
	Standard Plug	Receptacle	Plug	Receptacle	Plug	Receptacle
Retaining Ring	61-M	61-F	160-11-N	160-10-N	60-M	60-F
Mounting Plate and Retainer Ring	61-M1	61-F1	160-3-N	160-2-N	—	60-F1
Molded-In-Plate	—	61-MIP-61F	—	—	—	—
Flush Motor Type	61-M10	61-F10	160-5-N	160-4-N	—	—

* WITH STEEL CAP FOR CABLE

Rubber Grommet	—	—	160-7-N	160-6-N	—	—
Cable Clamp	—	—	160-9-N	160-8-N	—	60-F11

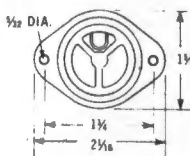
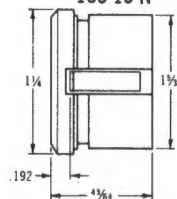
U/L APPROVED HOME & INDUSTRIAL TYPE PLUGS & RECEPTACLES



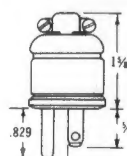
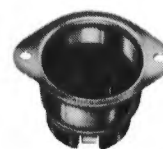
160-2-N



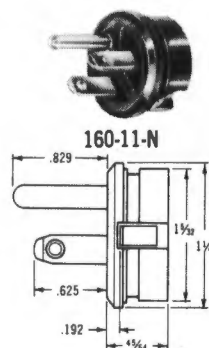
160-10-N



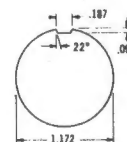
160-4-N



160-9-N



160-11-N



CUTOUT DIAGRAM



61-F



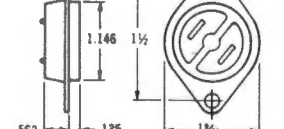
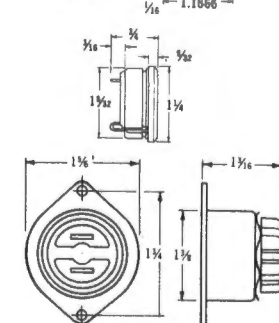
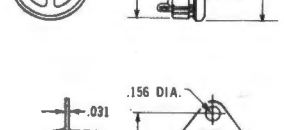
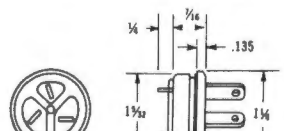
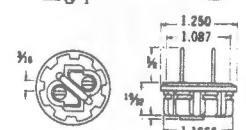
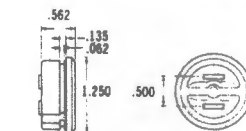
61-M



60-F



60-M



SADDLE TYPE OCTAL

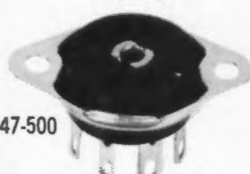
Octal socket with 4 ground lugs for below chassis mounting and 2 $\frac{3}{4}$ " holes on 1.312" centers for above chassis mounting. Black phenolic dielectric.

ORDERING INFORMATION

88-001	Wrap around contacts, Brass
88-015	Tuning fork contacts, Luballoy



88-015



147-500



147-905

MINIATURE SOCKETS

Phosphor bronze contacts with cadmium plating except as noted. Rated 500 V (RMS) at 1 Amp.

Mounting	Chassis Hole Cut Out	Mtng. Holes Cntr. to Cntr
7 Pin Sockets	$\frac{5}{8}$ "	$\frac{7}{8}$ "
9 Pin Sockets	$\frac{3}{4}$ "	$1\frac{1}{8}$ "

ORDERING INFORMATION

Contacts	Dielectric	Center Shield	Standard Bottom Mtd.	Shield Base Top Mounted
7	Black Phenolic	Large	147-500	147-905
7	Black Phenolic	None	147-504	—
7	Mica Filled	Small	147-505	—
7	Mica Filled	Small	—	—
9	Black Phenolic	Large	59-409	—
9	Mica	Large	59-410	—

RELAY AND TUBE BASE

Made of general purpose black phenolic. Nickel plated brass contacts. Four notches allow quick staking of a relay plate to either 8 or 11-pin plug base.

ORDERING INFORMATION

Part Number	Con-tacts	Outside Diam.	Pin Circle	Center Post
50-801	8	1.301"	.687"	Yes
50-820	11	1.301"	.750"	Yes



50-820

LAMP SOCKET

For medium base prefocused lamps. 1000 watts. 110/250 volts, UL approved.

98-8	Phenolic, to 450°F.
98-1	Steatite, to 1800°F



98-8

SCR SOCKETS

Three contact receptacle designed to accept General Electric Company's C106 SCR (Silicone controlled rectifier). Nickel silver contacts. Black nylon insulator. Voltage rating: 500 volts (RMS). Current rating: 5 Amps. Contact spacing: .100" centers Mating engagement depth: .160" min. Contact length: Approximately .323" x .020" square. Contact tails designed for wire wrap or printed circuit board mounting.



77-115

77-115	Press fit style without flange. To fit rectangular panel or chassis cut dimensions .335 \pm .005" x .1625 \pm .0015".
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GRID CAP

A grid cap of improved design for use with tube grid studs from $\frac{1}{4}$ " to $\frac{1}{2}$ " diameter on standard glass and metal tubes. Contacts are spring brass in black phenolic.

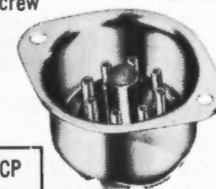


3-63	For tube grid caps, $\frac{1}{4}$ " to $\frac{1}{2}$ " diameter.
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RECESSING SHELLS

Cadmium plated steel shells lower S sockets, CP plugs, and outlet type connectors $1\frac{3}{8}$ " below surface. Mount in $1\frac{1}{8}$ " hole; have two $\frac{5}{32}$ " dia. screw holes on $1\frac{3}{4}$ " centers.

For use with 78S, 86CP, 60, 61 and 160 Series plugs and sockets.



61-61

ORDERING INFORMATION

61-23	Aluminum. Shell raise 49, 78S, 86CP types above chassis $1\frac{3}{8}$ ". $1\frac{3}{4}$ " mounting hole, uses 3 No. 6 screws.
61-61	Cadmium plated steel. Recesses unit $1\frac{3}{8}$ ". Mounts in $1\frac{1}{8}$ " hole. Two $\frac{5}{32}$ " mounting holes on $1\frac{3}{4}$ " centers.

CAPS

Makes inexpensive cable connectors of standard sockets, plugs and receptacles such as 78, 60, 61, 86 and 160 Series. For applications requiring frequent mating and unmating use 3-858 with molded finger grip.



3-858



3-13



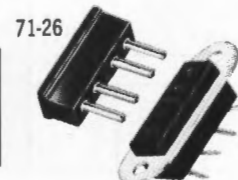
3-24

ORDERING INFORMATION

Finish		Cable Outlet	Maximum Cable O.D.
Black Thermoplastic	Black Epoxy		
—	3-10	None	Dust Cap
—	3-13	Rubber	$\frac{7}{16}$ "
—	3-24	Cable Clamp	$\frac{3}{8}$ "
3-858	—	Finger Grip Style	$\frac{1}{4}$ "

RECTANGULAR CONNECTOR

71-26	4 contact cable plug
77-26	4 contact receptacle, molded-in-plate, two $\frac{5}{32}$ " screw holes on $1\frac{3}{8}$ " centers, $\frac{3}{8}$ " x $1\frac{1}{8}$ " panel cutout



71-26