Amphenol® 67 and 165 Series Miniaturized Standard Connectors

12-023-6

Amphenol

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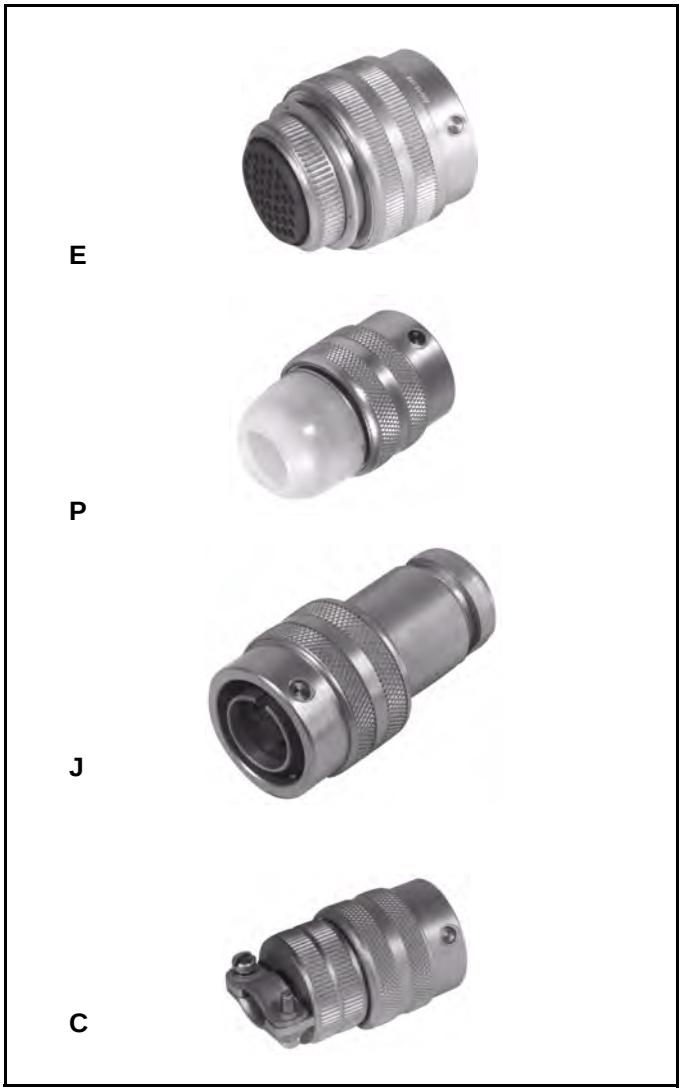
Sales Office Listing

Amphenol® 67 Series "Minni E"
environmental resistant cylindrical connectors



Voltage Rating

	Rating**	Mechanical Spacing (Nominal)	Flashover V-RMS*	Test V-RMS*	Recommended Working Voltage	
					DC	AC
Sea Level (unsealed)	A	.034	2,000	1,500	700	500
	B	.046	2,300	1,800	840	600
Sea Level (sealed)	A	.034	2,500	2,000	700	500
	B	.046	3,000	2,500	840	600
70,000 ft. (unsealed)	A	.034	500	375	175	125
	B	.046	600	450	210	150
70,000 ft. (sealed)	A	.034	2,500	1,500	700	500
	B	.046	3,000	1,800	840	600

* RATING - "B" rating is for insert 14-5 which takes a higher voltage; "A" rating is for other inserts.

** TYPICAL FLASHOVER VOLTAGES AT STANDARD CONDITIONS

(unsealed) Refers to connectors with no provisions for sealing front or rear areas.

(sealed) Refers to connectors that are potted or pressurized in mounting, with front and rear areas sealed.

DESIGN CHARACTERISTICS

- **Approximately half the weight of standard cylindricals**
- **Quick, positive, stainless steel bayonet coupling**
- **Operating temperatures from -67°F to +257°F per MIL-C-5015**
- **Sealed connectors capable of 1500 VRMS at 70,000 ft. altitude**
- **Vibration resistance of 10 to 2,000 cps at 20Gs**
- **Interfacial seal of neoprene rubber with individual contact barriers**
- **Moisture resistance exceeds MIL-C-5015 requirements with potting**
- **UL approved recognition file E115497**

CUSTOMER OPTIONS

- **Five shell styles**
- **Choice of unitized back end grommet or provision for potting**
- **Seventeen insert configurations**
- **Four construction classes available:**
  - **E -** with unitized grommet for individual wire seal
  - **P -** includes potting mold
  - **J -** sealing clamp for jacketed cable
  - **C -** vise action with two-screw strain relief

Shell components are fabricated from high grade aluminum with gray anodize finish and stainless steel bayonet pins and slots. Contacts are copper alloy gold over nickel plate. Inserts are diallyl phthalate, providing high arc and insulation resistance under both humidity and thermal stress conditions. Positive locking action is provided by the spring-loaded coupling ring.

Amphenol® 67 Series connectors are ideal for applications that require a light to medium weight, durable, environmentally sealed connector.

For additional information on Amphenol® 67 Series connectors, or for special application requirements, contact your local sales office, authorized distributor, or

Amphenol Corporation
Amphenol Aerospace
40-60 Delaware Avenue
Sidney, New York 13838-1395
Phone: 607-563-5011
Fax: 607-563-5157
www.amphenol-aerospace.com

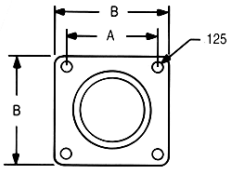
Amphenol Aerospace is a certified ISO 9001 manufacturer.

67 Series
connector applications

	Plugs	Cable-to-Cable Receptacles	Wall Receptacles
With Grommet for Individual Wire Seal			
	67-06E	**67-01E**	**67-00E**
With Form for Potting Seal			
	67-06P	**67-01P**	**67-00P**
With Standard Type Cable Clamp for Unjacketed Individual Wire Leads			
	67-06C	**67-01C**	**67-00C**
	Panel Mounting Receptacle	**Round Flange Receptacle**	**With Cable Seal for Jacketed Cable**
	67-02E	**67-03E**	**67-06J**

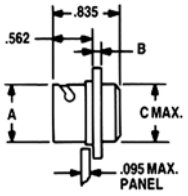
Mounting Dimensions
(For all 67 Series square flange connectors)

Connector Size	A	B	Suggested Mounting Hole
12	.812	1.031	.700
14	.906	1.125	.822
18	1.062	1.312	1.072
20	1.156	1.437	1.197
22	1.250	1.562	1.291

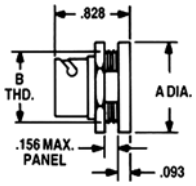


NOTE: All dimensions for reference only.

67 Series
connector applications



67-02E



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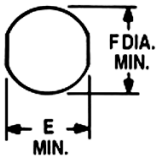
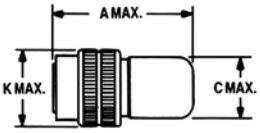


Suggested
Mounting Hole

Connector Size	A	B	C
12	.662	.062	.690
14	.781	.062	.812
18	1.032	.093	1.062
20	1.156	.093	1.187
22	1.281	.093	1.281

Connector Size	A	B	E	F
12	1.031	.750	.695	.755
14	1.156	.875	.820	.880
18	1.406	1.125	1.079	1.130
20	1.531	1.250	1.195	1.255
22	1.656	1.375	1.320	1.380



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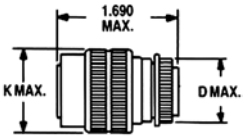

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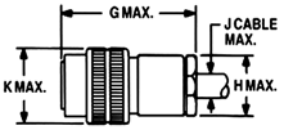

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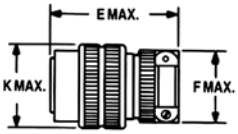

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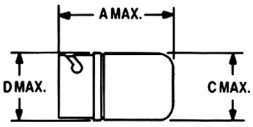

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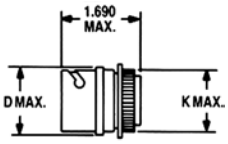

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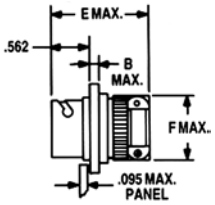

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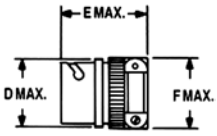

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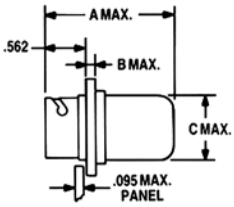

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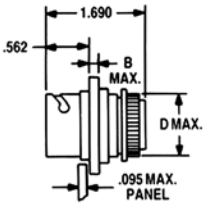


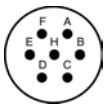
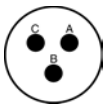
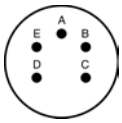
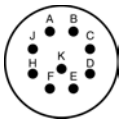
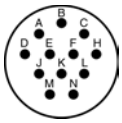
67-00E

Connector Size	A	B	C	D	E	F	G	H	J	K
12	1.687	.093	.795	.895	1.870	.817	1.937	.706	.250	.957
14	1.687	.093	.920	1.000	1.870	.967	1.937	.812	.375	1.082
18	1.687	.093	1.170	1.250	1.870	1.185	1.937	1.062	.656	1.375
20	1.734	.093	1.223	1.375	1.970	1.312	2.312	1.187	.750	1.500
22	1.734	.093	1.352	1.468	1.970	1.440	2.312	1.317	.875	1.625

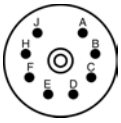
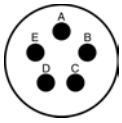
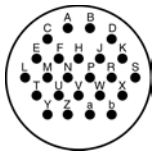
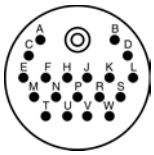
NOTE: All dimensions for reference only.

67 Series
insert arrangements

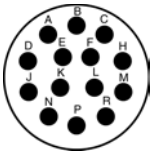
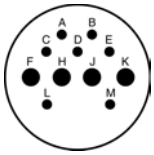
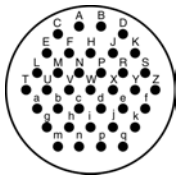
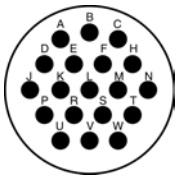
front face of insert illustrated

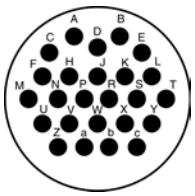
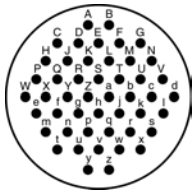
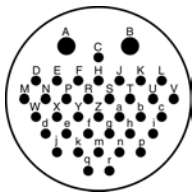
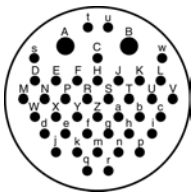
Insert Arrangement	12-7	12-60	14-5	14-9	14-12
Number of Contacts	7	3	5	9	12
Contact Size	20	16	20	20	20

Insert Arrangement	14-61	14-63	18-24	18-62
Number of Contacts	8	5	24	19
Contact Size	20	16	20	20
	plus 1 shielded contact			plus 1 shielded contact

Insert Arrangement	18-64	18-65	20-37	20-66
Number of Contacts	14	7 4	37	19
Contact Size	16	20 16	20	16

Insert Arrangement	22-67	22-48	22-68	22-69
Number of Contacts	25	48	36 2	40 2
Contact Size	16	20	20 16	20 16

Current rating - #20 contact: 7.5 amps, #16 contact: 12 amps
Shielded contact: 7.5 amps

Contact Legend

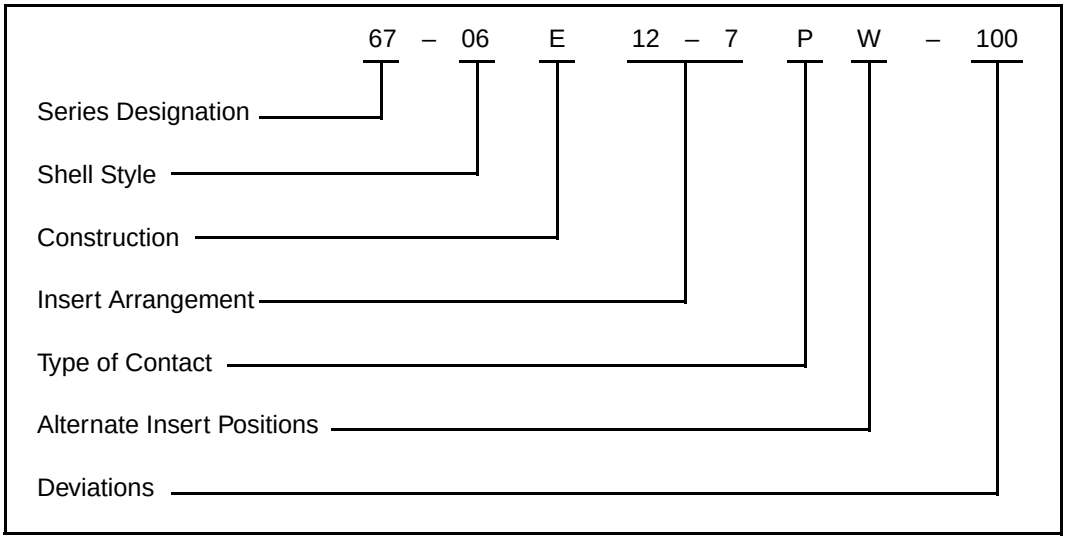
16 ●

20 •

shielded ◎

67 Series
how to order

Amphenol® 67 Series “Minni E” Connectors can be ordered by coded part number. Ordering procedure is illustrated by part number 67-06E12-7PW-100 as shown below:



Series Designation
67 –

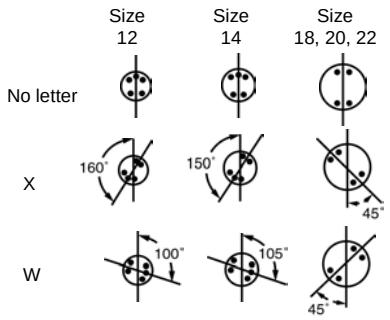
Shell Style
00 - Wall mounting receptacle
01 - Cable mounting receptacle
02 - Panel mount receptacle
03 - Rear panel mount, round flange receptacle
06 - Cable plug - straight

Construction
E Environmentally sealed (Unitized grommet)
P Environmentally sealed (Disposable polyethylene potting form furnished)
J Sealing clamp for jacketed cable (Waterproof)
C Mechanical Clamp (Sealed only when potted)

Insert Arrangement
See available insert arrangements, page 4

Type of Contact
P - Pin
S - Socket

Alternate Insert Positions



Front of socket and rear of pin insert

Deviations
100 - 100 µin. gold over silver contacts
106 - Pretinned solder wells
113 - Aluminum parts iridite finish

Amphenol® 165 Series
miniaturized standard connectors

Cable Receptacle for Jacketed Cable

Plug for Jacketed Cable

Cable Receptacle for Potting

Plug for Potting

Square Flange Receptacle

DESIGN CHARACTERISTICS

- **Approximately one-third the size and weight of standard MIL-C-5015 connectors**
- **Quick, positive, bayonet coupling**
- **O-ring seals in both plugs and receptacles make connectors pressure proof and water protected when mated**
- **Meets pressure seal requirements of MIL-C-5015, Class C construction**
- **UL approved recognition file E115497**

CUSTOMER OPTIONS

- **Five shell styles in two sizes - large and small**
- **Seven insert configurations**

Shell components are fabricated from high grade aluminum with gray anodize finish. Contacts are copper alloy gold over nickel plate. Inserts are diallyl phthalate, providing high arc and insulation resistance under both humidity and thermal stress conditions. Connectors using female inserts feature a sandwich construction with the insert spun into a cartridge. Connectors are factory sealed to prevent leakage.

Amphenol® 165 Series connectors are ideal for applications that demand a lightweight connector that meets MIL-C-5015 requirements.

For additional information on Amphenol® 165 Series connectors, or for special application requirements, contact your local sales office, authorized distributor, or

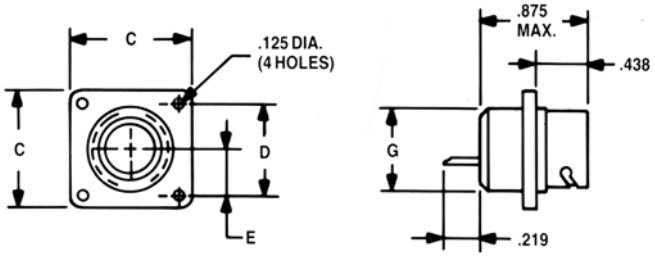
Amphenol Corporation
Amphenol Aerospace
40-60 Delaware Avenue
Sidney, New York 13838-1395
Phone: 607-563-5011
Fax: 607-563-5157

Connector Weights

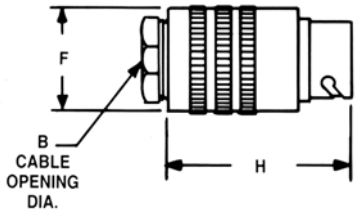
Style	Weight (pounds)	
	Small	Large
Cable receptacle for potting	0.0415	0.0599
Cable receptacle	0.0600	0.0945
Panel receptacle	0.0264	0.0439
Plug	0.0659	0.0975
Plug for potting	0.0302	0.0490

Amphenol Aerospace is a certified ISO 9001 manufacturer.

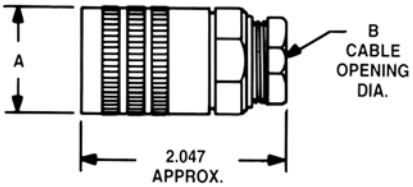
165 Series
connector applications



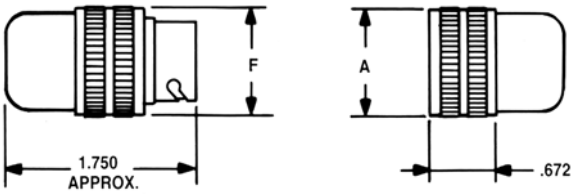
Panel Receptacle



Cable Receptacle



Cable Plug



Potting Construction

	A	B	C	D	E	F	G	H
Small	.891	.375*	1.063	.781	.391	.875	.813	1.922
Large	1.141	.656	1.313	.969	.484	1.125	1.063	1.938

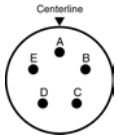
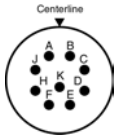
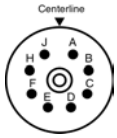
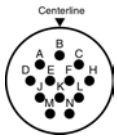
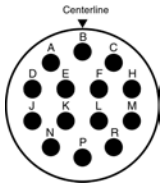
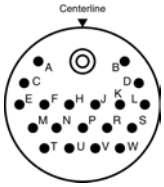
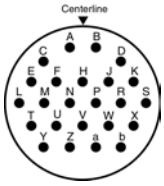
* 165-33 and 165-34 have cable opening of .281

NOTE: All dimensions for reference only

165 Series
insert arrangements, order information

front face of insert illustrated

The following chart provides ordering information. For example, to order a 165 Series plug with pin contacts use part number 165-33.

Insert Arrangements		Insert Style	Plug	Receptacle Sq. Flange	Cable Receptacle	Potting Constructions	
						Plug	Receptacle
	5 #20 contacts Current Rating (Amperes) 7.5 Voltage rating (Volts RMS at sea level) 600	Pin Socket	165-33 165-34	165-35 165-36	165-35-1002 165-36-1003	165-33-1000 165-34-1000	165-35-1000 165-36-1000
	9 #20 contacts Current Rating (Amperes) 7.5 Voltage rating (Volts RMS at sea level) 500	Pin Socket	165-13 165-14	165-15 165-16	165-15-1002 165-16-1003	165-13-1000 165-14-1000	165-15-1000 165-16-1000
	8 #20 contacts, 1 Shielded contact Current Rating (Amperes) 10.0 Voltage rating (Volts RMS at sea level) 500	Pin Socket	165-82 165-61-1008	165-73 165-83	165-73-1001 165-83-1001	165-82-1000 165-61	165-73-1000 165-83-1000
	12 #20 contacts Current Rating (Amperes) 7.5 Voltage rating (Volts RMS at sea level) 500	Pin Socket	165-9 165-10	165-11 165-12	165-11-1002 165-12-1002	165-9-1000 165-10-1000	165-11-1000 165-12-1000
	14 #16 contacts Current Rating (Amperes) 17.0 Voltage rating (Volts RMS at sea level) 500	Pin Socket	165-29 165-30	165-31 165-32	165-31-1003 165-32-1006	165-29-1000 165-30-1000	165-31-1000 165-32-1000
	19 #20 contacts, 1 Shielded contact Current Rating (Amperes) 10.0 Voltage rating (Volts RMS at sea level) 500	Pin Socket	165-86 165-62-1007	165-84 165-85	165-84-1001 165-85-1001	165-86-1000 165-62	165-84-1000 165-85-1000
	24 #20 contacts Current Rating (Amperes) 7.5 Voltage rating (Volts RMS at sea level) 500	Pin Socket	165-25 165-26	165-27 165-28	165-27-1005 165-28-1003	165-25-1000 165-26-1000	165-27-1000 165-28-1000