

**MIL-C-26482  
Series I**

MIL-C-26482 Series I connectors are environmental circular connectors used in box- and panel-mount applications in tanks, aircraft, or ships. They are a front-release contact connector.

The captive free-rotating coupling nut of these connectors is always ready to mate, with no chance of precocking. Plugs, receptacles with front and rear wall-mount, rear box-mount, and jam nut-

mount configurations are offered. Inserts in these connectors are retained permanently by a multiple interlock system.

The connectors are completely sealed against the environment, including individual contact seals and interfacial seal between contacts. The line includes shell sizes 10 through 24 and accepts size 16 and 20 contacts.

Series I connectors are the only ones available to fully meet both the military and the Douglas Aircraft Customer Specification (which requires resistance to SKYDROL).

### MIL-C-26482

#### Series I (Continued)

### Performance Specifications

#### Voltage Rating

Altitude		Service Rating	
ft.	m	Inst.	A
Sea Level	-	1500	2300
50,000	15 240	500	750
70,000	21 336	375	500
110,000	33 528	200	200

**Note:** When the voltage as indicated above is applied between shell and closest contact to the shell or between the two closest contacts for a period of 5 seconds, there shall be no evidence of flashover or breakdown.

#### Contact Current Rating and Retention

Contact Size*	DC Test Amperage	Contact Retention	
		Axial Load	
		lb	N
20	7.5	15	66.7
16	13.0	25	111.2

\*Organize individual circuits to maintain heat rise within operating temperature requirements.

#### Operating Temperature Range

-55°C to +125°C (-67°F to +125°F)

#### Environmental Seal

Wired, mated connectors with the specified accessory attached, shall meet the environmental requirements of MIL-C-26482.

#### Durability

Minimum of 500 mating cycles.

#### Shock and Vibration Requirements

When tested as follows the connector shall sustain no physical damage or electrical discontinuity exceeding one microsecond.

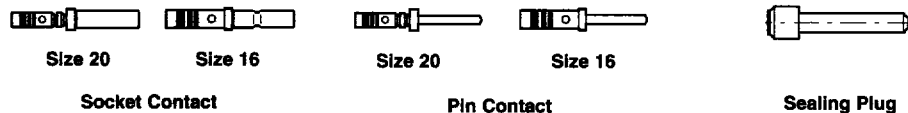
#### Shock

Pulse of an approximate half sine wave of 50 g magnitude with duration of 11 milliseconds applied in three axes.

#### Vibration

Twelve hours of random vibration having a range of 10 to 2,000 Hz with a .06 [1.52] inch double amplitude (10-55 Hz) and a 15 G peak level (55 to 2,000 Hz).

### Contacts, Sealing Plugs and Assembly Tools



Contact Size	Wire Range		Socket Contacts		Pin Contacts		Sealing Plugs	
	AWG	mm <sup>2</sup>	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.	Military Part No.	MATRIX Part No.
20	24-20	0.2-0.6	M39029/32-259	5100-401-0020	M39029/31-240	5000-255-0020	MS27488-20	3400-043-0020
16	20-16	0.5-1.4	M39029/32-247	5100-401-0016	M39029/31-228	5000-255-0016	MS27488-16	3400-043-0016

#### Crimping Tools

Contact Size	Wire Range		Finished Wire Dia. Range		Military Part No.	
	AWG	mm <sup>2</sup>	Inch	mm	Crimping Tool	Turret or Positioner
20	24-20	0.2-0.6	.040-.083	1.02-2.11	M22520/1-01	M22520/1-02
16	20-16	0.5-1.4	.053-.103	1.34-2.62	M22520/1-01	M22520/1-02

#### Insertion/Extraction Tools

Contact Size	Color Code	Military Part No.	MATRIX Part No.
20	Rd./Wh.	M81969/17-03 (MS24256A20)	M81969/19-07 (MS24256R20)
16	Bl./Wh.	M81969/17-04 (MS24256A16)	M81969/19-08 (MS24256R16)

**Note:** Each connector is furnished with contacts. One spare for inserts requiring 1 to 26 of each contact and two spares for inserts with more than 26 contacts and a minimum of one sealing plug up to 15% of the number of contacts.

**MIL-C-26482**  
**Series I (Continued)**

**Military Part Number System**

**MS3120 E 12 - 10 P W**

**Alternate Insert Position**

Leave blank for normal  
 (Use W, X, Y, or Z for alternates)

**Contact Style**

P = Pin  
 S = Socket

**Insert Arrangement**

**Shell Size** (Even Numbers 10 thru 24)

**Class**

E = Environmental, straight backshell  
 (Except MS3122, no backshell)  
 F = Environmental, straight strain relief backshell  
 P = Potted seal

**Military Basic Number**

MS3120 = Wall mount receptacle  
 MS3121 = Cable connecting receptacle  
 MS3122 = Box Mount receptacle  
 MS3124 = Jam nut mount receptacle  
 MS3126 = Plug

**MATRIX Part Number System**

**M B F2 0 E 12 W 10 P W**

**Alternate Insert Position**

Leave blank for normal  
 (use W, X, Y, or Z for alternates)

**Contact Style**

P = Pin  
 S = Socket

**Insert Arrangement**

**Shell Finish**

W = Aluminum shell, cadmium plate,  
 olive drab

**Shell Size** (Even numbers 10 thru 24)

**Class**

E = Environmental, straight backshell,  
 (except box mount)  
 F = Environmental, straight strain relief backshell  
 P = Environmental, potting cup

**Shell Style**

0 = Wall Mount receptacle  
 1 = Cable connecting receptacle  
 2 = Box mount receptacle  
 4 = Jam nut mount receptacle  
 6 = Plug

**Matrix MIL-C-26482 Series I**

F2 = Front release contacts

**Bayonet Coupling**

**Matrix Science Corporation**

*2,450*

2  
 Pin and Socket Connectors  
 Military Specified Circular Connectors

### MIL-C-26482 Series I (Continued)

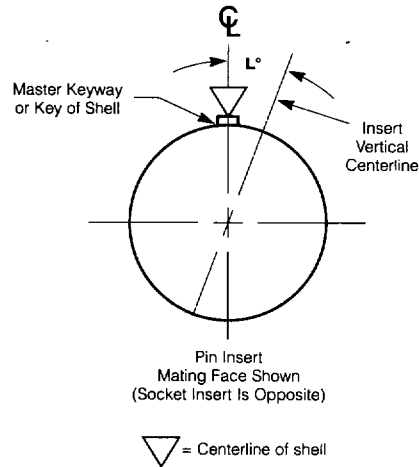
#### Polarization

#### Clocking Positions

1. In the normal insert clocking position (position N) the insert centerline coincides with the centerline of the master key/keyway of the shell.
2. In the alternate clocking position (W, X, Y, Z) the pin insert is rotated clockwise relative to the centerline of the master key-keyway as indicated in the figure and chart.

The socket insert is rotated counter-clockwise.

3. Plugs have keys. Receptacles have keyways.



#### Insert Arrangement and Clocking Positions (Per MIL-STD-1669)

Shell Size & Insert Arrangement	L Degrees					Service Rating
	N	W	X	Y	Z	
10-6	0	90	-	-	-	I
12-3	0	-	-	180	-	II
12-8	0	90	112	203	292	I
12-10	0	60	155	270	295	I
14-5	0	40	92	184	273	II
14-12	0	43	90	-	-	I
14-15	0	17	110	155	234	I
14-18	0	15	90	180	270	I
14-19	0	30	165	315	-	I
16-8	0	54	152	180	331	II
16-23	0	158	270	-	-	I
16-26	0	60	-	275	338	I
18-11	0	62	119	241	340	II
18-30	0	180	193	285	350	I
18-32	0	85	138	222	265	I
20-16	0	238	318	333	347	II
20-39	0	63	144	252	333	I
20-41	0	45	126	225	-	I
22-21	0	16	135	175	349	II
22-32	0	72	145	215	288	I
22-55	0	30	142	226	314	I
24-31	0	90	225	255	-	I
24-61	0	90	180	270	324	I

SOURCE: Catalog 82647

**Specifications  
subject to change.**

**1-800-522-6752**  
Product Information Center/ AMP FAX Service

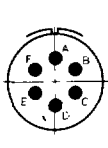
**1-800-722-1111**  
Tooling/Technical Assistance Center

### MIL-C-26482 Series I (Continued)

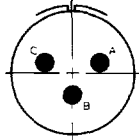
Insert Arrangements (Per MIL-STD-1669)

Numbering identification example: **1210** (Insert Arrangement No.)  
**10 #20** (Contact quantity and size)

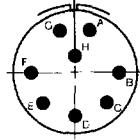
Note: For Service Rating see table on page 2087.



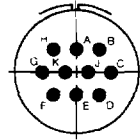
**1006**  
6 #20



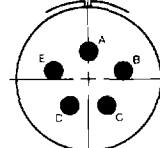
**1203**  
3 #16



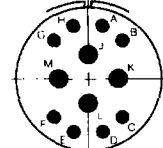
**1208**  
8 #20



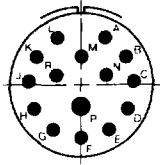
**1210**  
10 #20



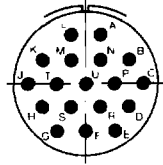
**1405**  
5 #16



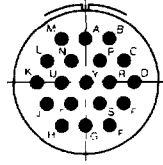
**1412**  
4 #6, 8 #20



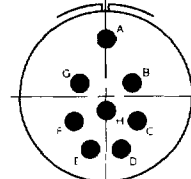
**1415**  
1 #16, 14 #20



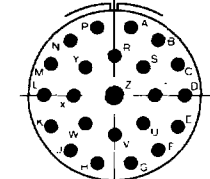
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18 #20



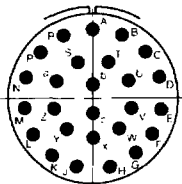
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19 #2



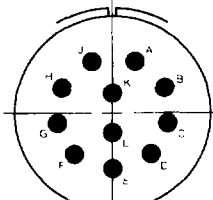
**1608**  
8 #16



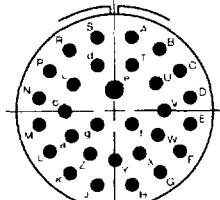
**1623**  
1 #16, 22 #20



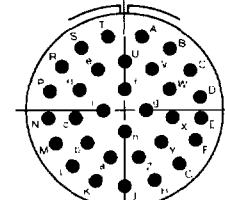
**1626**  
26 #20



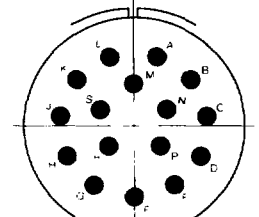
**1811**  
11 #16



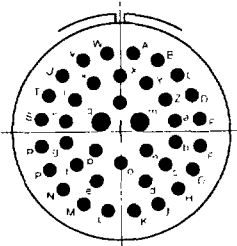
**1830**  
1 #16, 29 #20



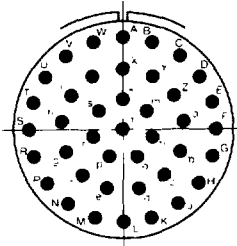
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32 #20



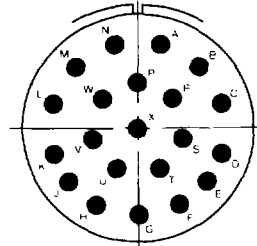
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16 #16



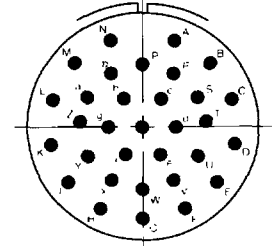
**2039**  
2 #16, 37 #20



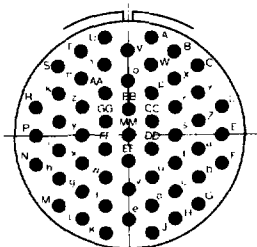
**2041**  
41 #20



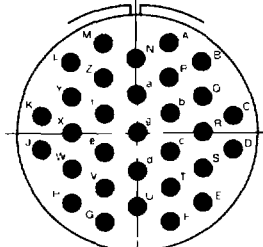
**2221**  
21 #16



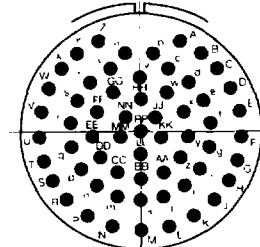
**2232**  
32 #20



**2255**  
55 #20



**2431**  
31 #16



**2461**  
61 #20

Note: Mating face of pin insert is shown, socket insert is opposite

Pin and Socket Connectors  
Military Specified Circular Connectors

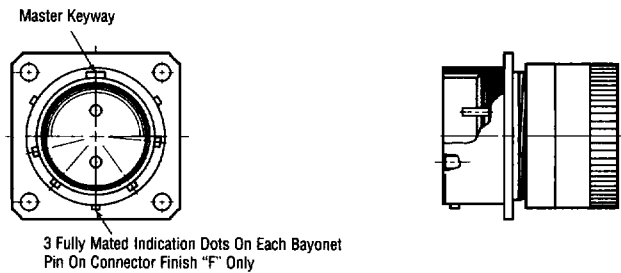
2

**MIL-C-26482**  
**Series I (Continued)**

**Shell Size:**

10
12
14
16
18
20
22
24

**Receptacle Shell,  
 Wall Mount,  
 Bayonet Coupling**  
 Military No. MS3120  
 MATRIX No. MBF20



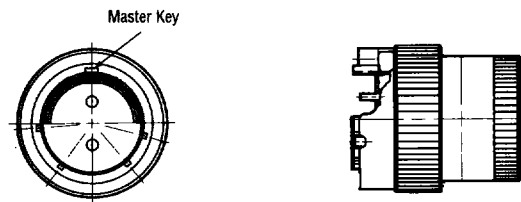
**Plug Shell,  
 Cable Connecting,  
 Bayonet Coupling**  
 Military No. MS3121  
 MATRIX No. MBF21



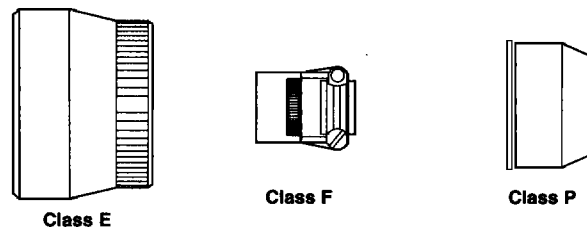
**Receptacle Shell,  
 Box Mount,  
 Bayonet Coupling**  
 Military No. MS3122  
 MATRIX No. MBF22



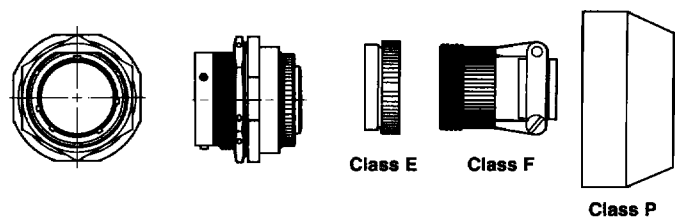
**Plug Shell,  
 Bayonet Coupling**  
 Military No. MS3126  
 MATRIX No. MBF26



**Backshells  
 (for 4 shells  
 shown above)**



**Receptacle Shell,  
 Jam Nut Mount,  
 Bayonet Coupling**  
 Military No. MS3124  
 MATRIX No. MBF24  
 and Backshells  
 (E, F, P)



Pin and Socket Connectors  
 Military Specified Circular Connectors

SOURCE: Catalog 82647