



### R & S SERIES

MIL-C-26482 Hermetic connectors were developed for application where a controlled atmosphere such as inert gasses, partial vacuums, or constant environments are needed. These receptacles are designed for use in aerospace, electronic, electrical power, and control circuits.

The "R" & "S" Series receptacles are manufactured to American Micro Products, Inc. (AMPI / ACE) standards and meet the intermateability requirements of MIL-C-26482 Series 1 and Series 2 respectively. They are hermetically sealed with a single compression glass seal around all contacts to prevent air leakage in excess of  $1 \times 10^{-6}$  cc/sec of helium at one atmosphere.

Standard hermetic receptacles are supplied with either solder cup or eyelet type contact terminations. Contacts for other applications such as thermocouple or flex prints are also available. Standard "R" series receptacles are steel shells with nickel-iron alloy contacts and a final coat of tin plate. Standard "S" series receptacles are tin plated steel shells with gold plated nickel-iron alloy contacts. Other materials and finishes can be supplied to meet specific application requirements. Series 1 and 2 are supplied with interfacial gaskets and peripheral seals. Series 2 are supplied with raised seal barriers around each contact. Series 1 can be supplied with O-rings.

### ELECTRICAL SERVICE DATA

The maximum current to be carried by the connector based on contact size, is the same as permitted by the wire bundle. Maximum current ratings and corresponding voltage drops under test condition, fully assembled, are shown below.

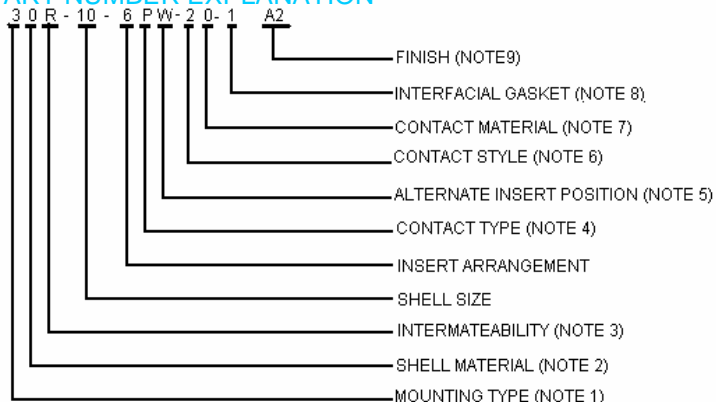
CONTACT SIZE	TEST CURRENT (AMPS)	POTENTIAL DROP (MILLIVOLTS)
20	5	100
16	10	95
12	17	95

### HIGH POTENTIAL TEST VOLTAGE

Unmated connectors tested per method 3001 of MIL-STD-1344 shall have a maximum leakage of 2 milliamperes and show no evidence of electrical breakdown of flashover.

SERVICE RATING	TEST VOLTAGE (RMS 60 CPS)
I	1500
II	2300

### PART NUMBER EXPLANATION



### STANDARD MATERIALS AND FINISHES

#### FERROUS ALLOY SHELLS

Material: Cold rolled steel per ASTM 108  
 Finish: R receptacles (series 1) fused tin over copper.  
 S receptacles (series 2)  
 100 microinches minimum fused tin per MIL-T-10727  
 Type 1-over copper per MIL-C-14550 over nickel per QQ-N-290

#### STAINLESS STEEL SHELLS

Material: Corrosion resistant steel per QQ-S-764, type 303 or as specified.  
 Finish: Passivated.

#### CONTACTS

Material: Nickel-iron alloy per MIL-I-23011, class 2.  
 Finish: R receptacles (series 1) with ferrous alloy shells  
 100 microinches minimum tin per MIL-10727, type 1over a suitable underplate.  
 R receptacles (series 1) with stainless steel shells  
 50 microinches minimum gold per MIL-G-45204 over nickel per QQ-N-290  
 S receptacles (series 2)  
 50 microinches minimum gold per MIL-G-45204 over nickel per QQ-NJ-290

#### BAYONET PINS

Material: Corrosion resistant steel per QQ-S-764, type 303.

#### INSERTS

Material: Glass

#### INTERFACIAL SEALS AND "O" RINGS

Material: Fluorosilicone rubber.

SERIES 1		
DESCRIPTION	MILITARY DESIGNATION	AMPI DESIGNATION
SOLDER MOUNT	MS3113H*A*P	21R-.*P-20
	MS3113H*B*P	21R-.*P-10
	MS3113H*C*P	20R-.*P-20
	MS3113H*Y*P	20R-.*P-10
JAM NUT MOUNT	MS3114H*A*P	51R-.*P-20
	MS3114H*B*P	51R-.*P-10
	MS3114H*C*P	50R-.*P-20
	MS3114H*Y*P	50R-.*P-10
BOX MOUNT	CLASS H NOT SPECIFIED	30R-.*P-20
		30R-.*P-10
MATING PLUG	MS3116	
SERIES 2		
BOX MOUNT	MS3440H*C*PN	30S-.*PN-20
SOLDER MOUNT	MS3443H*C*PN	20S-.*PN-20
JAM NUT MOUNT	MS3449H*C*PN	50S-.*PN-20
MATING PLUG	MS3476	

#### NOTES:

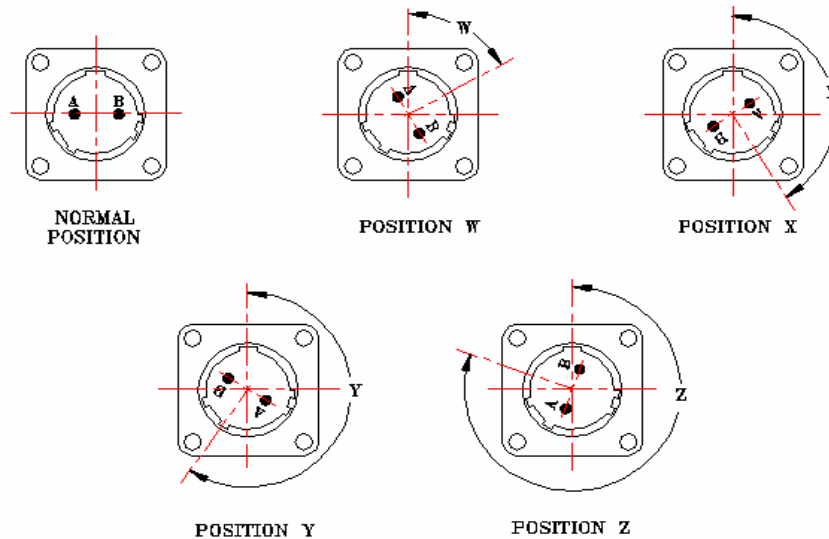
- 1 -- 2-- Circular flange solder mount  
 3-- Square flange box mount  
 5-- Jam nut mount
- 2 -- 0-- Ferrous alloy  
 1 thru 7- various stainless steel #303 thru #347
- 3 -- R-- MIL-C-26482, series I intermateability  
 S-- MIL-C-26482, series II intermateability
- 4 -- P---Pin
- 5 -- Insert position indicator
- 6 -- 1--Eyelet  
 2--Solder cup
- 7 -- 0--Nickel-iron alloy
- 8 -- Blank -- Fluorosilicone gaskets  
 1- Silicone O-ring series I only
- 9 -- R series  
 A2- Fused tin over copper over nickel  
 M2- Gold contacts with shell passivated  
 S series  
 M3- Fused tin over copper over nickel with gold on contacts  
 M2- Gold contacts with shell passivated



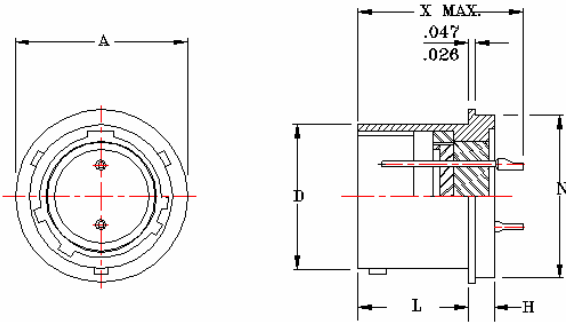
INDEX OF INSERT ARRANGEMENTS MIL-STD-1669

SHELL SIZE	INSERT ARRANGEMENT	TOTAL CONTACTS	CONTACT SIZE				SERVICE RATING	ALTERNATE INSERT POSITIONS (DEGREES)			
			20	16	12	8		W	X	Y	Z
8	2	2	2				I	58	122	-	-
	3	3	3				I	60	210	-	-
	4	4	4				I	45	-	-	-
	33	3	3				I	90	-	-	-
	98	3	3				I	-	-	-	-
10	6	6	6				I	90	-	-	-
	98	6	6				I	90	180	240	270
12	3	3		3			II	-	-	180	-
	8	8	8				I	90	112	203	292
	10	10	10				I	60	155	270	295
14	4	4			4		I	45	-	-	-
	5	5		5			II	40	92	184	273
	12	12	8	4			I	43	90	-	-
	15	15	14	1			I	17	110	155	234
	18	18	18				I	15	90	180	270
	19	19	19				I	30	165	315	-
16	8	8		8			II	54	152	180	331
	26	26	26				I	60	-	275	338
18	8	8			8		I	180	-	-	-
	11	11		11			II	62	119	241	340
	32	32	32				I	85	138	222	265
20	16	16		16			II	238	318	333	347
	41	41	41				I	45	126	225	-
22	21	21		21			II	16	135	175	349
	55	55	55				I	30	142	226	314
24	61	61	61				I	90	180	270	324

INSERT POSITIONS  
FRONT FACE OF PIN INSERT SHOWN



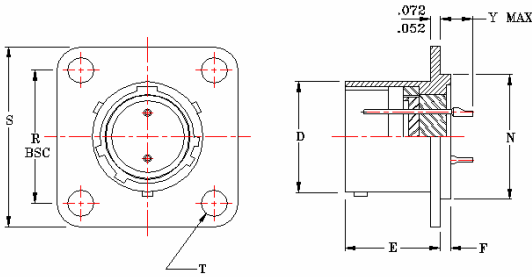
**SOLDER MOUNT  
20R RECEPTACLES (REF. MS3113)**



SHELL SIZE	PART NUMBER	A	D	H	L	N	X MAX
		+0.015 -0.015	+0.001 -0.005	+0.010 -0.010	+0.031 -0.000	+0.001 -0.005	
8	20R-8-(*P▼-(**))	0.625	0.473	0.094	0.411	0.562	0.828
10	20R-10-(*P▼-(**))	0.750	0.590			0.672	
12	20R-12-(*P▼-(**))	0.844	0.750			0.781	
14	20R-14-(*P▼-(**))	0.968	0.875			0.906	
16	20R-16-(*P▼-(**))	1.094	1.000			1.031	
18	20R-18-(*P▼-(**))	1.218	1.125			1.156	
20	20R-20-(*P▼-(**))	1.312	1.250			1.250	
22	20R-22-(*P▼-(**))	1.438	1.375	0.125	0.473	1.375	0.921
24	20R-24-(*P▼-(**))	1.563	1.500		0.506	1.500	

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR (/\*) PIN ARRANGEMENT INDICATOR NOT REQUIRED FOR NORMAL POSITION (/\*\*) CONTACT STYLE AND MATERIAL

**BOX MOUNT  
30R RECEPTACLES (REF. MS3112)**

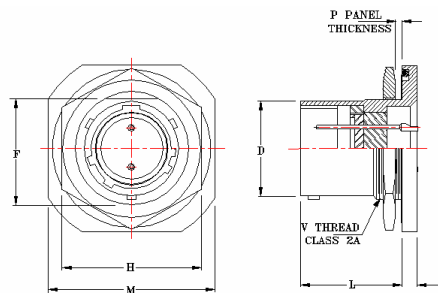


CONTACT SIZE	Y MAX	
	EYELET	SOLDER POT
20	0.231	0.278
16	0.293	0.340
12	0.293	0.340

SHELL SIZE	PART NUMBER	D	E	F	N	R	S	T
		+0.001 -0.005	+0.010 -0.010	+0.010 -0.010	+0.001 -0.005	BSC	+0.010 -0.010	+0.005 -0.005
8	30R-8-(*P▼-(**))	0.473	0.500	0.047	0.562	0.594	0.812	0.120
10	30R-10-(*P▼-(**))	0.590			0.672	0.719	0.938	
12	30R-12-(*P▼-(**))	0.750			0.781	0.812	1.031	
14	30R-14-(*P▼-(**))	0.875			0.906	0.906	1.125	
16	30R-16-(*P▼-(**))	1.000			1.031	0.969	1.219	
18	30R-18-(*P▼-(**))	1.125			1.156	1.062	1.312	
20	30R-20-(*P▼-(**))	1.250			1.250	1.156	1.438	
22	30R-22-(*P▼-(**))	1.375	0.562	0.078	1.375	1.250	1.562	0.147
24	30R-24-(*P▼-(**))	1.500			0.594	1.500	1.375	

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR (/\*) PIN ARRANGEMENT INDICATOR NOT REQUIRED FOR NORMAL POSITION (/\*\*) CONTACT STYLE AND MATERIAL

**JAM NUT MOUNT  
50R RECEPTACLES (REF. MS3114)**



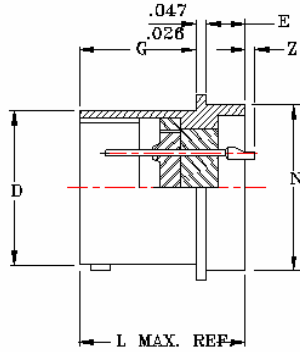
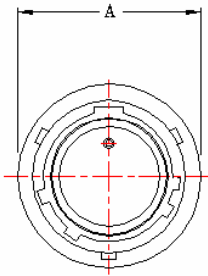
SHELL SIZE	PART NUMBER	D	F	H	L	M	P		W	V
		+0.001 -0.005	+0.000 -0.010	+0.016 -0.016	+0.031 -0.000	+0.010 -0.010	MIN	MAX	+0.015 -0.015	THREAD UNEF 2A
8	50R-8-(*P▼-(**))	0.472	0.530	0.750	0.691	0.938	0.125	0.117		0.5625-24
10	50R-10-(*P▼-(**))	0.590	0.655	0.875		1.062				0.6875-24
12	50R-12-(*P▼-(**))	0.750	0.818	1.062		1.250				0.8750-20
14	50R-14-(*P▼-(**))	0.875	0.942	1.188		1.375				1.000-20
16	50R-16-(*P▼-(**))	1.000	1.066	1.312		1.500				1.1250-18
18	50R-18-(*P▼-(**))	1.125	1.191	1.438		1.625				1.2500-18
20	50R-20-(*P▼-(**))	1.250	1.316	1.562		0.879				1.812
22	50R-22-(*P▼-(**))	1.375	1.441	1.688	1.938		1.5000-18			
24	50R-24-(*P▼-(**))	1.500	1.566	1.812	2.062		1.6250-18			

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR (/\*) PIN ARRANGEMENT INDICATOR NOT REQUIRED FOR NORMAL POSITION (/\*\*) CONTACT STYLE AND MATERIAL



### SOLDER MOUNT

### 20S RECEPTACLES (REF MS3443)



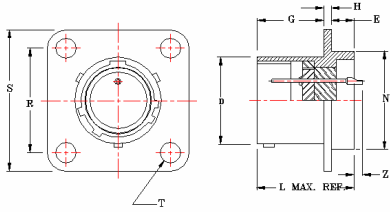
CONTACT SIZE	Z +/- .030	
	SHELL SIZE	
	8-20	22 & 24
20	0.148	0.116
16	0.218	0.186
12	0.218	0.186

SHELL SIZE	PART NUMBER	A	D	E	G	L	N
		+0.010 -0.010	+0.001 -0.005	+0.020 -0.020	+0.010 -0.010	MAX REF	+0.001 -0.005
8	20S-8-(*P▼-(**))	0.625	0.473	0.136	0.588	0.801	0.562
10	20S10-(*P▼-(**))	0.750	0.590				0.672
12	20S-12-(*P▼-(**))	0.844	0.750				0.781
14	20S-14-(*P▼-(**))	0.969	0.875				0.906
16	20S-16-(*P▼-(**))	1.094	1.000				1.031
18	20S-18-(*P▼-(**))	1.218	1.125				1.156
20	20S-20-(*P▼-(**))	1.312	1.250	0.168	0.650	0.863	1.250
22	20S-22-(*P▼-(**))	1.438	1.375			1.375	
24	20S-24-(*P▼-(**))	1.564	1.500			0.895	1.375
						1.500	1.500

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR (/\*) PIN ARRANGEMENT  
NORMAL POSITION INDICATOR REQUIRED IS N (/\*\*) CONTACT STYLE AND MATERIAL

### BOX MOUNT

### 30S RECEPTACLES (REF MS3440)



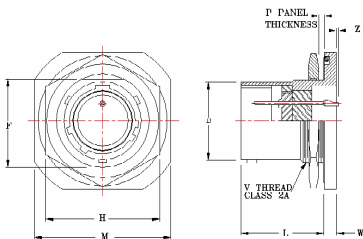
CONTACT SIZE	Z +/- .030	
	SHELL SIZE	
	8-20	22 & 24
20	0.148	0.116
16	0.218	0.186
12	0.218	0.186

SHELL SIZE	PART NUMBER	D	E	G	H	L	N	R	S	T		
		+0.001 -0.005	+0.010 -0.010	+0.010 -0.010	+0.016 -0.016	MAX REF	+0.001 -0.005	+0.005 -0.005	+0.015 -0.015	+0.005 -0.005		
8	30S-8-(*P▼-(**))	0.473	0.115	0.588	0.062	0.801	0.562	0.594	0.812	0.120		
10	30S10-(*P▼-(**))	0.590					0.672	0.719	0.937			
12	30S-12-(*P▼-(**))	0.750					0.781	0.812	1.031			
14	30S-14-(*P▼-(**))	0.875					0.906	0.906	1.125			
16	30S-16-(*P▼-(**))	1.000					1.031	0.968	1.218			
18	30S-18-(*P▼-(**))	1.125					1.156	1.062	1.312			
20	30S-20-(*P▼-(**))	1.250	0.083	0.650	0.094	0.863	1.250	1.156	1.437			
22	30S-22-(*P▼-(**))	1.375	0.115			0.895	1.375	1.250	1.562			
24	30S-24-(*P▼-(**))	1.500	0.115			0.650	0.094	0.895	1.500	1.375	1.687	0.147
									1.500	1.375	1.687	0.147

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR (/\*) PIN ARRANGEMENT  
NORMAL POSITION INDICATOR REQUIRED IS N (/\*\*) CONTACT STYLE AND MATERIAL

### JAM NUT MOUNT

### 50S RECEPTACLES (REF MS3449)



CONTACT SIZE	Z +/- .030		
	SHELL SIZE		
	8-18	20-22	24
20	0.104	0.069	0.039
16	0.174	0.139	0.109
12	0.174	0.139	0.109

SHELL SIZE	PART NUMBER	D	F	H	L	M	P		V	W
		+0.001 -0.005	+0.005 -0.005	+0.015 -0.015	+0.008 -0.008	+0.015 -0.015	MIN	MAX	THREAD UNE2A	+0.008 -0.008
8	50S-8-(*P▼-(**))	0.473	0.525	0.750	0.699	0.938	0.062	0.187	0.5625-24	0.105
10	50S10-(*P▼-(**))	0.590	0.650	0.875		1.062				
12	50S-12-(*P▼-(**))	0.750	0.813	1.062		1.250				
14	50S-14-(*P▼-(**))	0.875	0.937	1.188		1.375				
16	50S-16-(*P▼-(**))	1.000	1.061	1.312		1.500				
18	50S-18-(*P▼-(**))	1.125	1.186	1.438		1.625				
20	50S-20-(*P▼-(**))	1.250	1.311	1.562	0.764	1.812	0.250	1.3750-18	0.138	
22	50S-22-(*P▼-(**))	1.375	1.436	1.688		1.938				
24	50S-24-(*P▼-(**))	1.500	1.561	1.812		0.795		2.062		1.5000-18
										1.6250-18

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR (/\*) PIN ARRANGEMENT  
NORMAL POSITION INDICATOR REQUIRED IS N (/\*\*) CONTACT STYLE AND MATERIAL.