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5015 STYLE CONNECTORS







MIL-DTL-5015 Style · Cage Code 8NHG3

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Interconnecting Products

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VER 4

TABLE OF CONTENTS

Introduction 01
Technical Data 02
Materials 03
Part Numbering System 04
Alternate Insert Positions 05
Contact Arrangements 07
Product Dimensions 17
Wall Mount Receptacle (MSW3100) 18
In-Line Receptacle (MSW3101) 20
Box Mount Receptacle (MSW3102) 22
Straight Plug (MSW3106) 24
Right Angle Plug (MSW3108) 26
Protective Covers 28
Cable Clamps & Bushings 29



5015 CONNECTOR INTRODUCTION

MIL-DTL-5015 style connectors are rugged, threaded-coupling circular connectors used in military, aerospace, industrial and heavy-equipment applications. MilSpecWest's MSW 5015 style series is offered in general duty and environmental versions, in wall mount, in-line and box mount receptacles and in straight and right angle plugs, with a wide range of insert arrangements from a single contact up to 101 contacts.

TECHNICAL FEATURES AT A GLANCE

- MIL-DTL-5015 style circular connectors
- Threaded coupling
- Operating temperature range: -55°C to +125°C
- General duty (Class A) and environmental (Class E, F, R) versions
- Shell sizes 8S through 36
- Insert arrangements from 1 to 101 contacts
- Contact sizes 16, 12, 8, 4 and 0
- Solder contacts; crimp contacts available (F80)
- Alternate insert positions W, X, Y and Z
- Wall mount, in-line and box mount receptacles
- Straight and right angle plugs
- Olive drab chromate finish; black and electroless nickel alternatives
- Protective covers, cable clamps and bushings available





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TECHNICAL DATA *(Electrical)*

Contact Rating

Assembled in insulator

Contact size	Current [A]
16	13
12	23
8	46
4	80
0	150

Insulation Resistance

The insulation resistance to be tested per EIA364.21 and MIL-DTL-5015 3.18 test condition B: DC500V / 5000MΩ min.

Contact Resistance

Voltage drops to be tested with the coupling ring removed per EIA364.06 and MIL-DTL-5015 3.15.

Contact size	Test current [A]	Potential drop max. mV	Contact resistance max. mΩ
16	13	49	6
12	23	42	3
8	46	26	1
4	80	23	0.5
0	150	21	0.2

Operating & Test Voltage

The dielectric withstanding voltage to be tested per EIA364.20 and MIL-DTL-5015 3.11.

Service rating	Test Voltage AC (rms)		Operating Voltage	
	Sea level	70,000 ft	DC	AC (rms)
Inst	1000	260	250	200
A	2000	360	700	500
D	2800	400	1250	900
E	3500	440	1750	1250
B	4500	480	2450	1750
C	7000	560	4200	3000

Contact Retention

The contact retention to be tested per EIA364.29 and MIL-DTL-5015 3.10.

Contact size	Test force N (lbs)
16	44.5 (10)
12	66.7 (15)
8	89.0 (20)
4	89.0 (20)
0	111.2 (25)

TECHNICAL DATA *(Mechanical)*

Ambient Temperature	-55°C / +125°C
Humidity	14-day 71°C ±2°C to 95% ±3% humidity testing per EIA364.31 Method II and MIL-DTL-5015 3.14.
Durability	Test mating / unmating 100 times at the speed of max. 60 times / hour, per EIA364.09 and MIL-DTL-5015 3.16.
Salt Spray	Unmated connectors and contacts meet 48-hour exposure per EIA364.26 test condition letter B and MIL-DTL-5015 3.17.
Sine Vibration	10µs max. at 10 to 500 Hz (15g) discontinuity per EIA364.28 test condition II and MIL-DTL-5015 3.12.1.
Shock	50g's / 11ms duration, three major axes, 10µs max. discontinuity per EIA364.27 test condition A and MIL-DTL-5015 3.13.

Engagement & Separation Forces

To be tested per EIA364.37 and MIL-DTL-5015 3.25.

Contact size	Engagement and separation force		
	Min N (lbs)	Average N (lbs)	Max N (lbs)
16	0.6 (0.13)	2.06 (0.46)	13.3 (3)
12	0.8 (0.18)	3.50 (0.79)	22.2 (5)
8	1.4 (0.31)	–	44.5 (10)
4	2.8 (0.63)	–	66.7 (15)
0	4.2 (0.94)	–	89.0 (20)

Contact Size

Contact size	Pin O.D. [mm]	Solder pot [mm]
16	1.6	2.0
12	2.4	3.0
8	3.6	5.4
4	5.7	8.5
0	9.1	12.0

Wire Sealing Range

Contact size	Wire range accommodations			
	Insulation O.D. limit	Wire size	Metric [mm²]	Conductor [mm]
16	1.6~3.3	16~20	1.3 max	1.25~1.7
12	2.9~4.3	12~14	3.5 max	1.95~2.4
8	4.2~6.5	8~10	8.0 max	4.3~4.8
4	6.9~9.4	4~6	22.0 max	5.2~6.0
0	10.5~14.0	0~2	50.0 max	9.6~10.7

Materials

Shell material	Aluminum alloy die castings & aluminum alloy
Shell finish	Olive drab chromate coating over zinc plating
Alternative finish	Black coating over zinc plating (RoHS); electroless nickel
Insulator	Synthetic rubber & polychloroprene; synthetic plastic
Grommet	Synthetic rubber & polychloroprene
Contact material	Copper alloy
Contact finish	Silver plating; gold plating

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PART NUMBER DEFINITION

Ordering legend – example: **MSW3100A10SL-4PXF80**

MSW	3100	A	10SL-4	P	X	F80
Designation	Shell Type	Class	Shell Size / Arrangement	Contact Type	Insert Rotation	Modifications

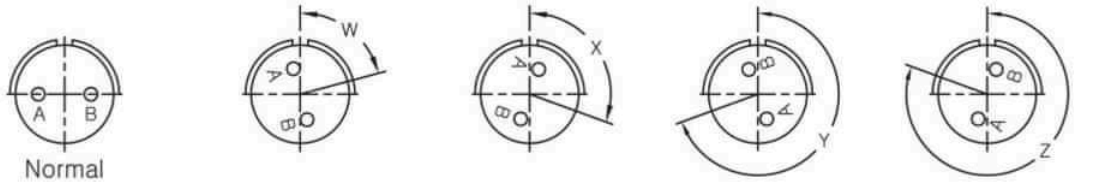
Field	Code – Description
Designation	**MSW** – MilSpecWest designation
Shell Type	**3100** – Wall Mount Receptacle 3101 – In-Line Receptacle 3102 – Box Mount Receptacle 3106 – Straight Plug 3108 – Right Angle Plug
Class	**A** – General Duty E – Environmental Duty F – Environmental Duty R – Environmental Duty
Shell Size / Contact Arrangement	See Alternate Insert Positions (pages 5–6) and Contact Arrangements (pages 7–16)
Contact Type	**P** – Pin S – Socket
Insert Rotation	**W, X, Y, Z** – Alternate positions (see pages 5–6) Blank – Normal position
Modifications	**F80** – Crimp contacts F80-FO – Less crimp contacts

Part Number Example

MSW3100A10SL-4PXF80 = wall mount receptacle, general duty, shell size 10SL, insert arrangement 4, pin contacts, alternate insert position X, crimp contacts.

ALTERNATE INSERT POSITIONS *[For Class A, E/F, R]*

※ View shows pin front side or socket rear side



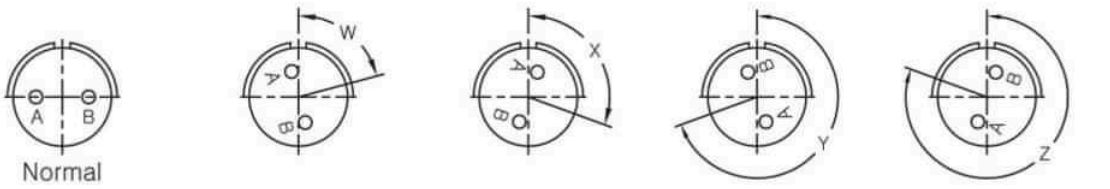
Shell Size	Insert Number	Contacts							Alternate pos.			
		Tot	20	16	12	8	4	0	W	X	Y	Z
10SL	10SL-3	3		3								
	10SL-4	2		2								
12s	12s-3	2		2					70	145	215	290
	12s-4	1		1								
	12SA10	4		4								
12	12-5	1			1							
14s	14s-1	3		3								
	14s-2	4		4						120	240	
	14s-4	1		1								
	14s-5	5		5						110		
	14s-6	6		6								
	14s-7	3		3					90	180	270	
	14s-9	2		2					70	145	215	290
	14SA7	7		7								
	14SA10	10	10									
14	14-3	1				1						
16s	16s-1	7		7					80			280
	16s-4	2		2					35	110	250	325
	16s-5	3		3					70	145	215	290
	16s-8	5		5						170	265	
	16s-01	8	8									
16	16-9	4		2	2				35	110	250	325
	16-10	3			3				90	180	270	
	16-11	2			2				35	110	250	325
18	18-1	10		10					70	145	215	290
	18-3	2			2				35	110	250	325
	18-4	4		4					35	110	250	325
	18-5	3		1	2				80	110	250	280
	18-8	8		7	1				70			290
	18-9	7		5	2				80	110	250	280

Shell Size	Insert Number	Contacts							Alternate pos.			
		Tot	20	16	12	8	4	0	W	X	Y	Z
18	18-10	4			4					120	240	
	18-11	5			5					170	265	
	18-12	6		6					80			280
	18-19	10		10						120	240	
	18-20	5		5					90	180	270	
	18-21	3			3							
	18-22	3		3					70	145	215	290
20	20-2	1						1				
	20-3	3			3				70	145	215	290
	20-4	4			4				45	110	250	
	20-7	8		8					80	110	250	280
	20-11	13		13								
	20-15	7			7				80			280
	20-16	9		7	2				80	110	250	280
	20-17	6		1	5				90	180	270	
	20-18	9		6	3				35	110	250	325
	20-19	3				3			90	180	270	
	20-22	6		3		3			80	110	250	280
	20-23	2				2			35	110	250	325
	20-24	4		2		2			35	110	250	325
	20-27	14		14					35	110	250	325
	20-29	17		17					80			280
	20-33	11		11								
	20-01	10		10								
	20A24	24	24									
	20A48	19		19						80	280	
22	22-1	2				2			35	110	250	325
	22-2	3				3			70	145	215	290
	22-5	6		4	2				35	110	250	325
	22-7	1						1				

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ALTERNATE INSERT POSITIONS *(Continued)*

※ View shows pin front side or socket rear side



Shell Size	Insert Number	Contacts							Alternate pos.			
		Tot	20	16	12	8	4	0	W	X	Y	Z
22	22-8	2			2				35	110	250	325
	22-9	3			3				70	145	215	290
	22-10	4		4					35	110	250	325
	22-14	19		19					80	110	250	280
	22-19	14		14					80	110	250	280
	22-22	4				4				110	250	
	22-23	8			8				35		250	
24	24-2	7			7				80			280
	24-5	16		16					80	110	250	280
	24-7	16		14	2				80	110	250	280
	24-9	2					2		35	110	250	325
	24-10	7				7			80			280
	24-11	9			6	3			35	110	250	325
	24-12	5			3		2		80	110	250	280
	24-20	11		9	2				80	110	250	280
	24-21	10		9		1			80	110	250	280
	24-22	4				4			45	110	250	
	24-28	24		24					80	110	250	280
	24-67	19			19				80			335
	24B24	12			12							
28	28-2	14		12	2				35	110	250	325
	28-3	3				3			70	145	215	290
	28-5	5		2	1		2		35	110	250	325
	28-6	3					3		70	145	215	290
	28-9	12		6	6				80	110	250	280
	28-10	7			3	2	2		80	110	250	280
	28-11	22		18	4				80	110	250	280
	28-12	26		26					90	180	270	
	28-15	35		35					80	110	250	280
	28-16	20		20					80	110	250	280

Shell Size	Insert Number	Contacts							Alternate pos.			
		Tot	20	16	12	8	4	0	W	X	Y	Z
28	28-17	15		15					80	110	250	280
	28-19	10		6	4				80	110	250	280
	28-20	14		4	10				80	110	250	280
	28-21	37		37					80	110	250	280
	28-22	6		3			3		70	145	215	290
	28-51	12			12				80	135	195	
	28-72	72	72						72	144	216	288
	28A16	9		5			4					
32	32-1	5			3			2	80	110	250	280
	32-3	9		4	2		2	1	80	110	250	280
	32-5	2						2	35	110	250	325
	32-6	23		16	2	3	2		80	110	250	280
	32-7	35		28	7				80	125	235	280
	32-8	30		24	6				80	125	235	280
	32-15	8			6			2	35	110	250	280
	32-17	4					4		45	110	250	
	32-59	42		40		2						
	32-63	5					5					
	32-101	101	101						30	142		
	32A10	54		54								
36	36-1	22		18	4				80	110	250	280
	36-3	6			3			3	70	145	215	290
	36-4	3						3	70	145	215	290
	36-5	4						4		120	240	
	36-8	47		46	1				80	110	250	280
	36-9	31		14	14	2	1		80	125	235	280
	36-10	48		48					80	125	235	280
	36-77	7					7					
	36-78	14		2		12			35	106	254	325
40	40-56	85		85					72	144	216	288

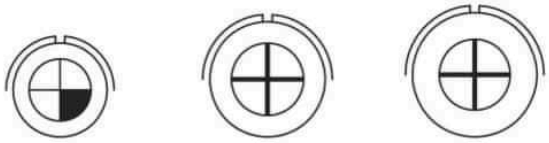
CONTACT ARRANGEMENTS *[For Class A, E/F, R]*

Contact Size 20 ○ 16 ● 12 ⊕ 8 ◒ 4 ⊕ 0 ⊕

1 CONTACT



Insert number	12S-4	12-5	14-3	14S-4
No. of contacts	1	1	1	1
Contact size	16	12	8	16
Service rating	D	D	A	D

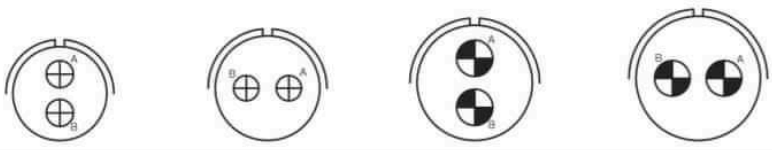


Insert number	16-12	20-2	22-7
No. of contacts	1	1	1
Contact size	4	0	0
Service rating	A	D	E

2 CONTACT



Insert number	10SL-4	12S-3	14S-9	16S-4
No. of contacts	2	2	2	2
Contact size	16	16	16	16
Service rating	A	A	A	D



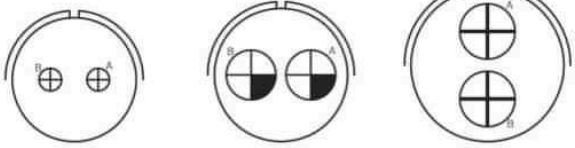
Insert number	16-11	18-3	20-23	22-1
No. of contacts	2	2	2	2
Contact size	12	12	8	8
Service rating	A	D	A	D

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CONTACT ARRANGEMENTS *(Continued)*

Contact Size

20 ○ 16 ● 12 ⊕ 8 ◒ 4 ⊕ 0 ⊕

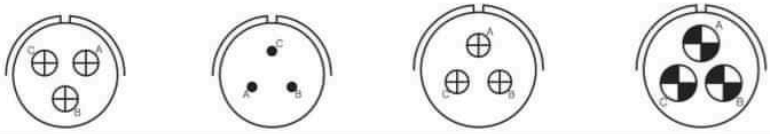


Insert number	22-8	24-9	32-5
No. of contacts	2	2	2
Contact size	12	4	0
Service rating	E	A	D

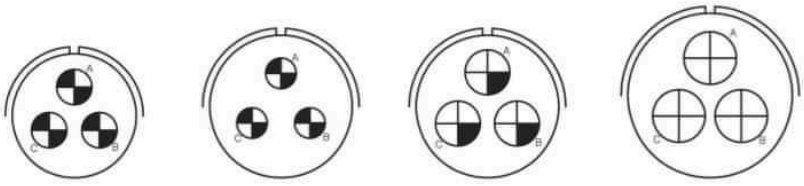
3 CONTACT



Insert number	10SL-3	14S-1	16S-5	16-10
No. of contacts	3	3	3	3
Contact size	16	16	16	12
Service rating	A	A	A	A



Insert number	18-21	18-22	20-3	20-19
No. of contacts	3	3	3	3
Contact size	12	16	12	8
Service rating	A	D	D	A



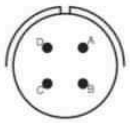
Insert number	22-2	28-3	28-6	36-4
No. of contacts	3	3	3	3
Contact size	8	8	4	0
Service rating	D	E	D	D(A) A(B,C)

CONTACT ARRANGEMENTS *(Continued)*

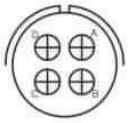
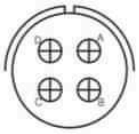
Contact Size 20 ○ 16 ● 12 ⊕ 8 ◕ 4 ⊕ 0 ⊕

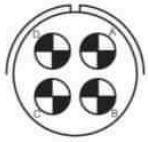
4 CONTACT



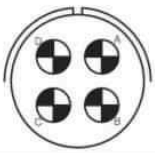
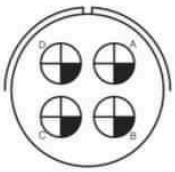
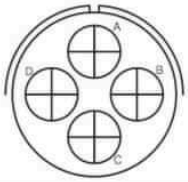



Insert number	12SA10	14S-2	16-9	18-4
No. of contacts	4	4	4	4
Contact size	16	16	2-16, 2-12	16
Service rating	INST	INST	A	D



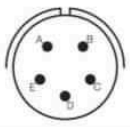
Insert number	18-10	20-4	20-24	22-22
No. of contacts	4	4	4	4
Contact size	12	12	2-16, 2-8	8
Service rating	A	D	A	A

Insert number	24-22	32-17	36-5
No. of contacts	4	4	4
Contact size	8	4	0
Service rating	D	D	A

5 CONTACT



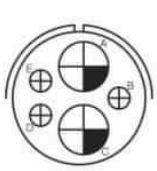
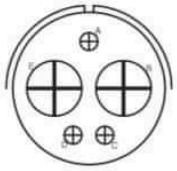
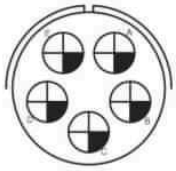
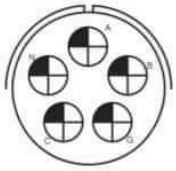
Insert number	14s-5	16s-8	18-11	18-20
No. of contacts	5	5	5	5
Contact size	16	16	12	16
Service rating	INST	A	A	A

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CONTACT ARRANGEMENTS *(Continued)*

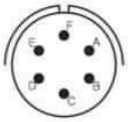
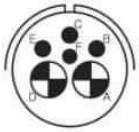
Contact Size

20 ○ 16 ● 12 ⊕ 8 ◕ 4 ⊕ 0 ⊕

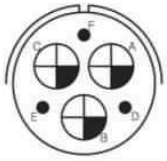
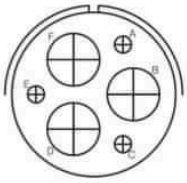





Insert number	24-12	32-1	32-63	32A5
No. of contacts	5	5	5	5
Contact size	3-12, 2-4	3-12, 2-0	4	4
Service rating	A	E(A) D(B,C,D,E)	D	D

6 CONTACT

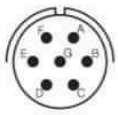
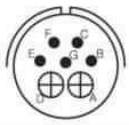
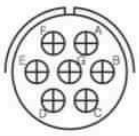





Insert number	14S-6	18-12	20-8	20-17
No. of contacts	6	6	6	6
Contact size	16	16	4-16, 2-8	1-16, 5-12
Service rating	INST	A	INST	A

Insert number	20-22	28-22	36-3
No. of contacts	6	6	6
Contact size	3-16, 3-8	3-16, 3-4	12-3, 3-0
Service rating	A	D	D

7 CONTACT

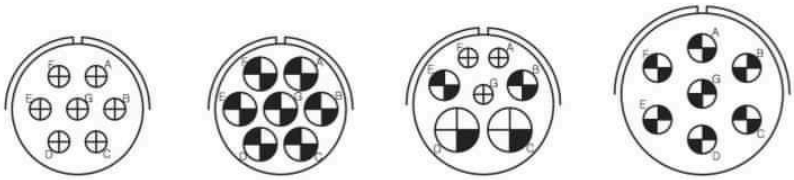





Insert number	14SA7	16s-1	18-9	20-15
No. of contacts	7	7	7	7
Contact size	16	16	5-16, 2-12	12
Service rating	INST	A	INST	A

CONTACT ARRANGEMENTS *(Continued)*

Contact Size

20 ○ 16 ● 12 ⊕ 8 ◒ 4 ⊕ 0 ⊕

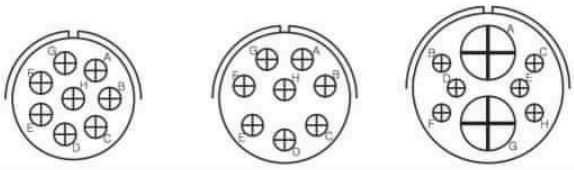


Insert number	24-2	24-10	28-10	36-77
No. of contacts	7	7	7	7
Contact size	12	8	3-12, 2-8, 2-4	4
Service rating	D	A	D(G) A(A,B,C,D,E,F)	D

8 CONTACT

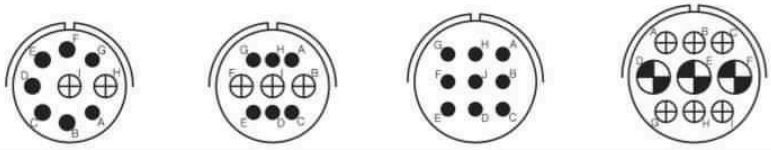


Insert number	16s-01	18-8	20-7	22-18
No. of contacts	8	8	8	8
Contact size	16	7-16, 1-12	16	16
Service rating	A	A	D(A,B,G,H) A(All others)	D(All others) A(C,D,E)



Insert number	22-23	24-6	32-15
No. of contacts	8	8	8
Contact size	12	12	6-12, 2-0
Service rating	D(H) A(All others)	D(A,G,H) A(All others)	D

9 CONTACT



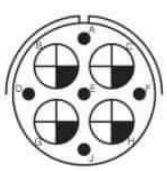
Insert number	20-16	20-18	22-20	24-11
No. of contacts	9	9	9	9
Contact size	7-16, 2-12	6-16, 3-12	16	6-12, 3-8
Service rating	A	A	A	A

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CONTACT ARRANGEMENTS *(Continued)*

Contact Size

20 ○ 16 ● 12 ⊕ 8 ◕ 4 ◕ 0 ⊕



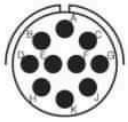


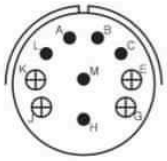
Insert number	28A16	32-3
No. of contacts	9	9
Contact size	5-16, 4-4	4-16, 2-12, 2-4, 1-0
Service rating	A(E) INST(All others)	D

10 CONTACT





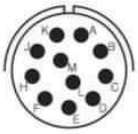


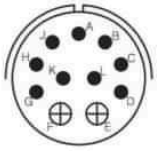


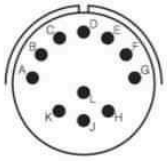
Insert number	14SA10	18-1	18-19	28-19
No. of contacts	10	10	10	10
Contact size	20	16	16	6-16, 4-12
Service rating	INST	A(B,C,F,G) INST(All others)	A	D(A,B) B(H,M) A(All others)

11 CONTACT



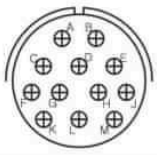


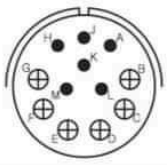


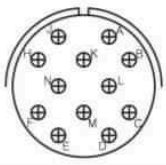


Insert number	20-31	20-33	24-20	28-14
No. of contacts	11	11	11	6
Contact size	16	16	9-16, 2-12	16
Service rating	A	A	D	D

12 CONTACT





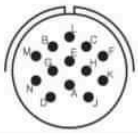


Insert number	24B24	28-9	28-51
No. of contacts	12	12	12
Contact size	12	6-16, 6-12	12
Service rating	A	D	D

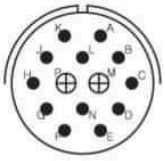
CONTACT ARRANGEMENTS *(Continued)*

Contact Size 20 ○ 16 ● 12 ⊕ 8 ◕ 4 ⊕ 0 ⊕

13 CONTACT

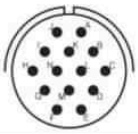


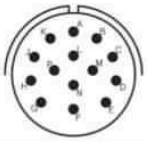
Insert number	20-11	20-27	22-19
No. of contacts	13	14	14
Contact size	16	16	16
Service rating	INST	A	A

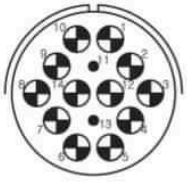


Insert number	28-2	28-20	36-78
No. of contacts	14	14	14
Contact size	12-16, 2-12	4-16, 10-12	2-16, 12-8
Service rating	D	A	D

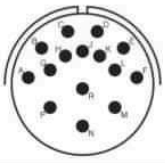
14 CONTACT





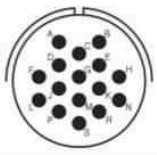


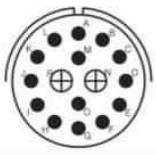
15 CONTACT



Insert number	28-17	24-5	24-7
No. of contacts	15	16	16
Contact size	16	16	14-16, 2-12
Service rating	B(R) D(M,N,P) A(All others)	A	A

16 CONTACT





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CONTACT ARRANGEMENTS *(Continued)*

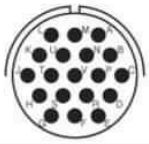
Contact Size 20 ○ 16 ● 12 ⊕ 8 ◕ 4 ⊕ 0 ⊕

17 CONTACT



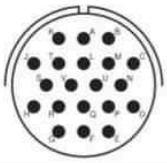
Insert number	20–29
No. of contacts	17
Contact size	16
Service rating	A

19 CONTACT



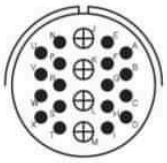
Insert number	22–14
No. of contacts	19
Contact size	16
Service rating	A

20 CONTACT



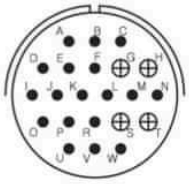
Insert number	28–16
No. of contacts	20
Contact size	16
Service rating	A

22 CONTACT

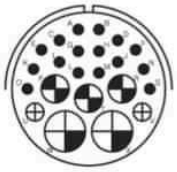


Insert number	28–11
No. of contacts	22
Contact size	18–16, 4–12
Service rating	A

23 CONTACT

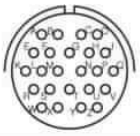


Insert number	36–1
No. of contacts	22
Contact size	18–16, 4–12
Service rating	D

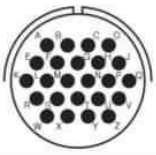


Insert number	32–6
No. of contacts	23
Contact size	16–16, 2–12, 3–8, 2–4
Service rating	A

24 CONTACT

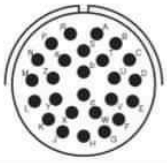


Insert number	20A24
No. of contacts	24
Contact size	20
Service rating	INST



Insert number	24–28
No. of contacts	24
Contact size	16
Service rating	INST

26 CONTACT

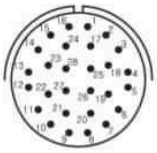


Insert number	28–12
No. of contacts	26
Contact size	16
Service rating	A

CONTACT ARRANGEMENTS *(Continued)*

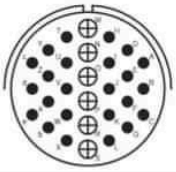
Contact Size 20 ○ 16 ● 12 ⊕ 8 ◕ 4 ⊕ 0 ⊕

28 CONTACT



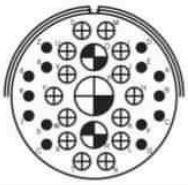
Insert number	24A28
No. of contacts	28
Contact size	16
Service rating	INST

30 CONTACT



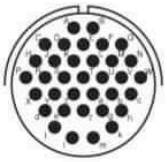
Insert number	32-8
No. of contacts	30
Contact size	24-16, 6-12
Service rating	A

31 CONTACT



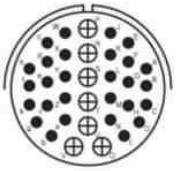
Insert number	36-9
No. of contacts	31
Contact size	14-16, 14-12, 2-8, 1-4
Service rating	A

35 CONTACT



Insert number	28-15
No. of contacts	35
Contact size	16
Service rating	A

37 CONTACT

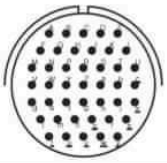


Insert number	32-7
No. of contacts	35
Contact size	28-16, 7-12
Service rating	A(all others) INST(A,B,h,j)



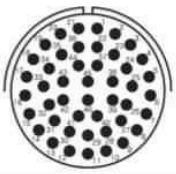
Insert number	28-21
No. of contacts	37
Contact size	16
Service rating	A

43 CONTACT



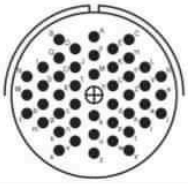
Insert number	28A51
No. of contacts	43
Contact size	16
Service rating	A

46 CONTACT



Insert number	32-73
No. of contacts	46
Contact size	16
Service rating	A

47 CONTACT



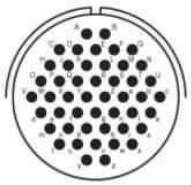
Insert number	36-8
No. of contacts	47
Contact size	46-16, 1-12
Service rating	A

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CONTACT ARRANGEMENTS *(Continued)*

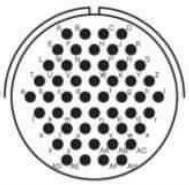
Contact Size 20 ○ 16 ● 12 ⊕ 8 ◕ 4 ⊕ 0 ⊕

48 CONTACT



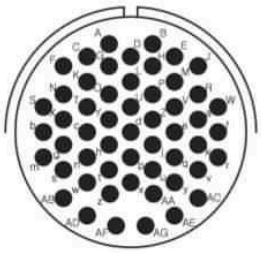
Insert number	36-10
No. of contacts	48
Contact size	16
Service rating	A

52 CONTACT



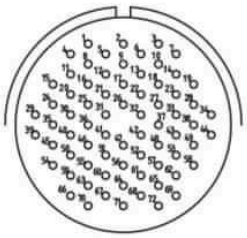
Insert number	36-52
No. of contacts	52
Contact size	16
Service rating	A

54 CONTACT



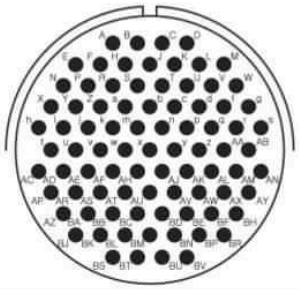
Insert number	32A10 & 32-22
No. of contacts	54
Contact size	16
Service rating	A

72 CONTACT



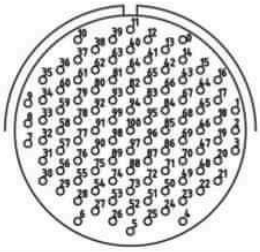
Insert number	28-72
No. of contacts	72
Contact size	20
Service rating	INST

85 CONTACT



Insert number	40-56
No. of contacts	16
Contact size	85
Service rating	A

101 CONTACT



Insert number	32-101
No. of contacts	101
Contact size	20
Service rating	INST

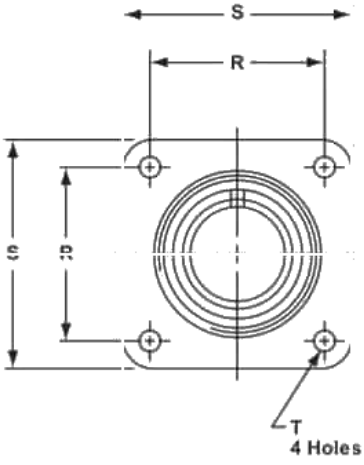


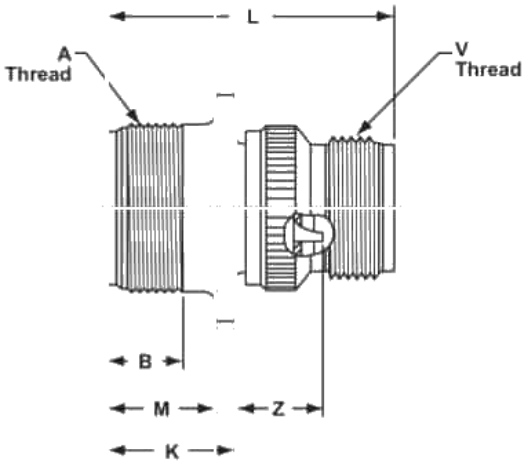
CUSTOM CABLE ASSEMBLIES

With more than 30 years experience in the interconnect and cable assembly business, MILSPECWEST is your best choice for high quality, competitive cable assemblies, including MIL-DTL-5015 style harnesses.

Contact sales@milspecwest.com or call (888) 428-2188 for an immediate response to any of your cable assembly requirements.

WALL MOUNT RECEPTACLE - MSW3100A *(General Duty)*



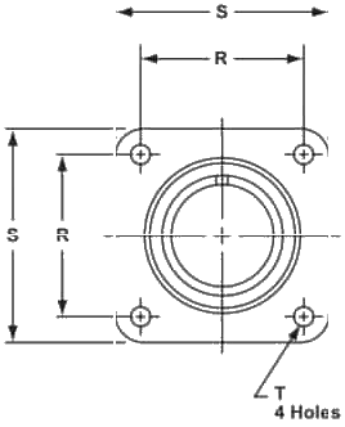


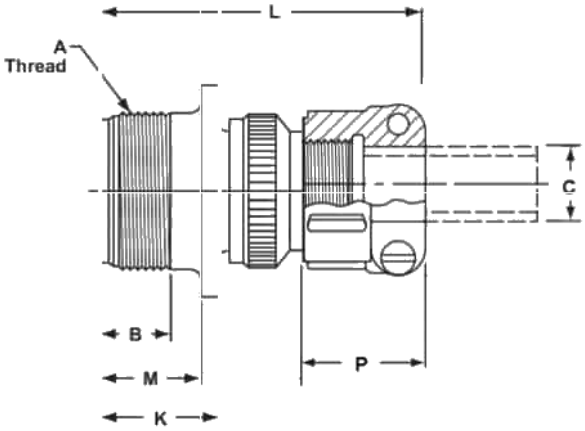


Shell size	A Thread Class 2A	B Min. Full Thread	K +.020 -.010	L ±.030	M +.010 -.000	R ±.005	S ±.031	T Dia. +.004 -.002	V Thread Class 2A	Z +.050 -.060
8S	.5000-28UNEF	.391	.672	1.391	.562	.594	.875	.120	.5000-28UNEF	.422
10S	.6250-24 UNF	.391	.672	1.468	.562	.719	1.000	.120	.5000-28UNEF	.422
10SL	.6250-24 UNF	.391	.672	1.468	.562	.719	1.000	.120	.6250-24NEF	.422
12S	.7500-20UNEF	.450	.672	1.468	.562	.812	1.094	.120	.6250-24NEF	.422
12	.7500-20UNEF	.625	.860	1.843	.750	.812	1.094	.120	.6250-24NEF	.672
14S	.8750-20UNEF	.450	.672	1.468	.562	.906	1.188	.120	.7500-20UNEF	.422
14	.8750-20UNEF	.625	.860	1.843	.750	.906	1.188	.120	.7500-20UNEF	.672
16S	1.0000-20UNEF	.450	.672	1.468	.562	.969	1.281	.120	.8750-20UNEF	.422
16	1.0000-20UNEF	.625	.860	1.843	.750	.969	1.281	.120	.8750-20UNEF	.672
18	1.1250-18NEF	.625	.891	1.938	.750	1.063	1.375	.120	1.0000-20UNEF	.641*
20	1.2500-18NEF	.625	.891	1.844	.750	1.156	1.500	.120	1.1875-18NEF	.641*
22	1.3750-18NEF	.625	.891	1.938	.750	1.250	1.625	.120	1.1875-18NEF	.641*
24	1.5000-18NEF	.625	.953	1.969	.812	1.375	1.750	.147	1.4375-18NEF	.578*
28	1.7500-18NS	.625	.953	2.188	.812	1.562	2.000	.147	1.4375-18NEF	.578*
32	2.0000-18NS	.625	1.031	2.157	.875	1.750	2.250	.173	1.7500-18NS	.500*
36	2.2500-16UN	.625	1.031	2.219	.875	1.938	2.500	.173	2.0000-18NS	.500*

All dimensions are in inches

WALL MOUNT RECEPTACLE - MSW3100E/F/R *(Environmental)*





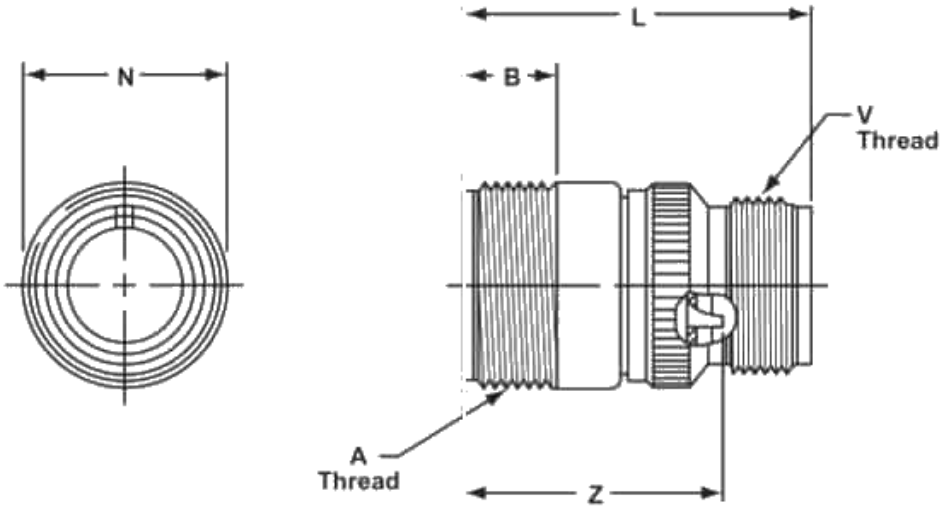


Shell size	A Thread Class 2A	B Min. Full Thread	K +.020 -.010	L Max.	M +.010 -.000	P +.031 -.031	R ±.005	S ±.010	T Dia. +.004 -.002	C Min. Cable Clearance
10SL	.6250-24UNEF	.391	.672	2.129	.562	.795	.719	1.000	.120	.3125
12S	.7500-20UNEF	.450	.672	2.129	.562	.795	.812	1.094	.120	.3125
12	.7500-20UNEF	.625	.860	2.129	.750	.795	.812	1.094	.120	.3125
14S	.8750-20UNEF	.450	.672	2.201	.562	.850	.906	1.188	.120	.4375
14	.8750-20UNEF	.625	.860	2.524	.750	.850	.906	1.188	.120	.4375
16S	1.0000-20UNEF	.450	.672	2.201	.562	.920	.969	1.281	.120	.5625
16	1.0000-20UNEF	.625	.860	2.524	.750	.920	.969	1.281	.120	.5625
18	1.1250-18UNEF	.625	.891	2.596	.750	.920	1.063	1.375	.120	.6250
20	1.2500-18UNEF	.625	.891	2.654	.750	.927	1.156	1.500	.120	.7500
22	1.3750-18UNEF	.625	.891	2.654	.750	.927	1.250	1.625	.120	.7500
24	1.5000-18UNEF	.625	.953	2.885	.812	1.015	1.375	1.750	.147	.9375
28	1.7500-18UNS	.625	.953	2.885	.812	1.015	1.562	2.000	.147	.9375
32	2.0000-18UNS	.625	1.031	2.943	.875	1.095	1.750	2.250	.173	1.2500
36	2.2500-16UN	.625	1.031	2.943	.875	1.156	1.938	2.500	.173	1.3750

All dimensions are in inches

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IN-LINE RECEPTACLE - MSW3101A *(General Duty)*

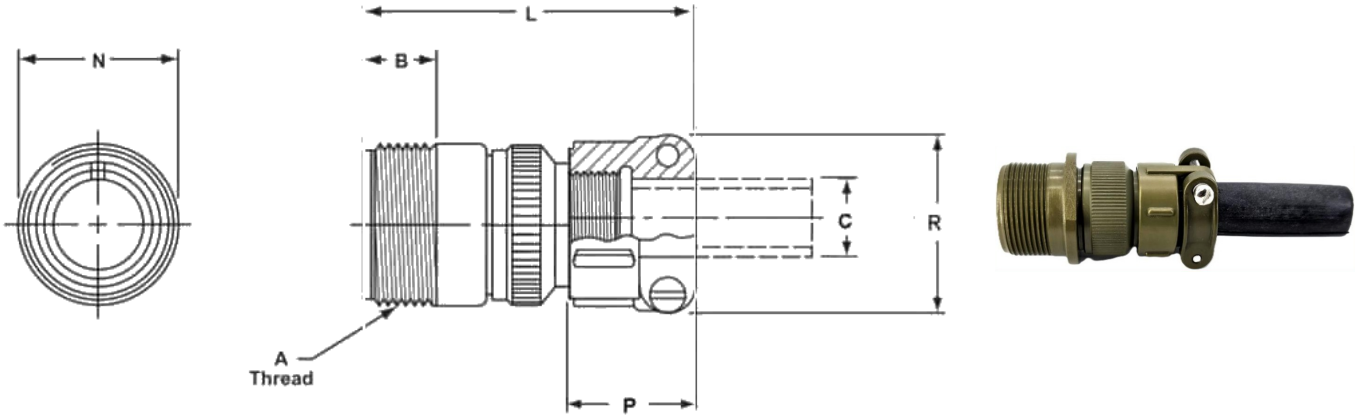




Shell size	A Thread Class 2A	B Min. Full Thread	L ±.030	N Dia. Max.	V Thread Class 2A	Z ±.040
8S	.5000-28UNEF	.406	1.390	.532	.5000-28UNEF	1.094
10S	.6250-24NEF	.406	1.468	.628	.5000-28UNEF	1.094
10SL	.6250-24NEF	.406	1.468	.755	.6250-24NEF	1.094
12S	.7500-20UNEF	.422	1.468	.755	.6250-24NEF	1.094
12	.7500-20UNEF	.656	1.843	.755	.6250-24NEF	1.532
14S	.8750-20UNEF	.391	1.468	.882	.7500-20UNEF	1.094
14	.8750-20UNEF	.625	1.843	.882	.7500-20UNEF	1.532
16S	1.0000-20UNEF	.391	1.468	1.010	.8750-20UNEF	1.094
16	1.0000-20UNEF	.625	1.843	1.010	.8750-20UNEF	1.532
18	1.1250-18NEF	.625	1.938	1.137	1.0000-20UNEF	1.532*
20	1.2500-18NEF	.625	1.844	1.264	1.1875-18NEF	1.532*
22	1.3750-18NEF	.625	1.938	1.392	1.1875-18NEF	1.532*
24	1.5000-18NEF	.625	1.969	1.519	1.4375-18NEF	1.532*
28	1.7500-18NS	.625	2.188	1.774	1.4375-18NEF	1.532*
32	2.0000-18NS	.625	2.157	1.996	1.7500-18NS	1.532*
36	2.2500-16UN	.625	2.219	2.251	2.0000-18NS	1.532*

All dimensions are in inches

IN-LINE RECEPTACLE - MSW3101E/F/R *(Environmental)*

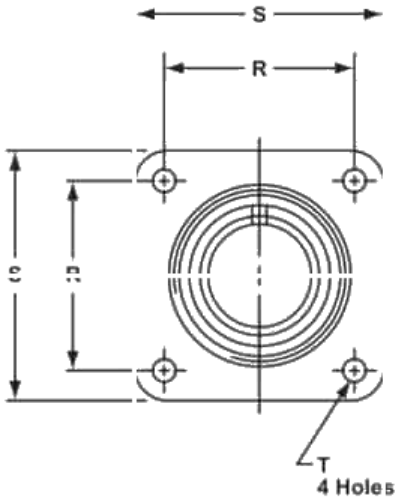


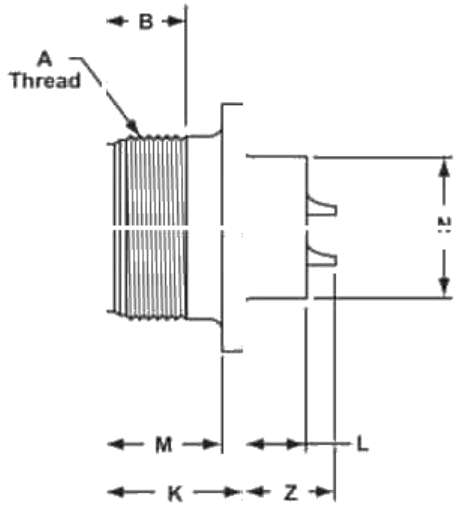
Shell size	A Thread Class 2A	B Min. Full Thread	L ±.030	N Dia. Max.	P +.031 -.031	R Dia. Max.
10SL	.6250-24NEF	.406	1.468	.755	.795	.842
12S	.7500-20UNEF	.422	1.468	.755	.795	.842
12	.7500-20UNEF	.656	1.843	.755	.795	.842
14S	.8750-20UNEF	.391	1.468	.882	.850	.995
14	.8750-20UNEF	.625	1.843	.882	.850	.995
16S	1.0000-20UNEF	.391	1.468	1.010	.920	1.120
16	1.0000-20UNEF	.625	1.843	1.010	.920	1.120
18	1.1250-18NEF	.625	1.938	1.137	.920	1.216
20	1.2500-18NEF	.625	1.844	1.264	.927	1.403
22	1.3750-18NEF	.625	1.938	1.392	.927	1.403
24	1.5000-18NEF	.625	1.969	1.519	1.015	1.683
28	1.7500-18NS	.625	2.188	1.774	1.015	1.683
32	2.0000-18NS	.625	2.157	1.996	1.095	2.050
36	2.2500-16UN	.625	2.219	2.251	1.156	2.245

All dimensions are in inches

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BOX MOUNT RECEPTACLE - MSW3102A *(General Duty)*



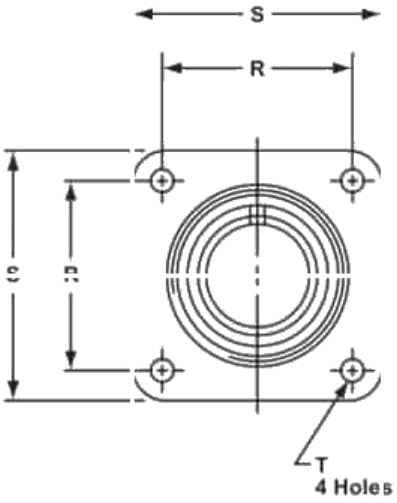


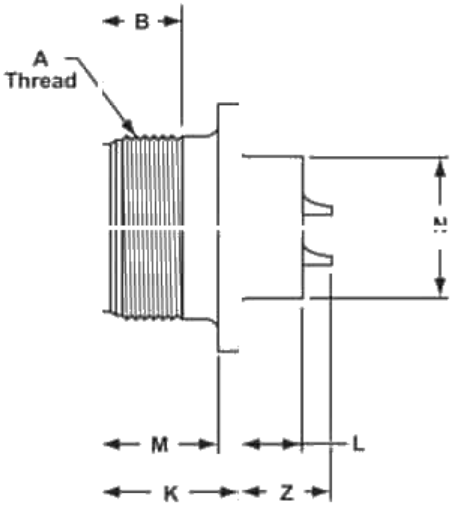


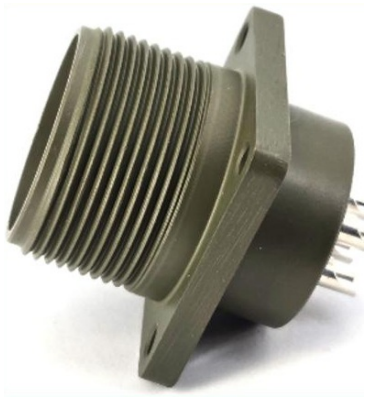
Shell size	A Thread Class 2A	B Min. Full Thread	K +.020 -.010	L +.000 -.010	M +.010 -.000	N Dia. +.010 -.000	R ±.005	S ±.031	T Dia. +.004 -.002	Z +.050 -.060
8S	.5000-28UNEF	.391	.672	.297	.562	.375	.594	.875	.120	.422
10S	.6250-24NEF	.391	.672	.297	.562	.500	.719	1.000	.120	.422
10SL	.6250-24NEF	.391	.672	.297	.562	.625	.719	1.000	.120	.422
12S	.7500-20UNEF	.450	.672	.297	.562	.625	.812	1.094	.120	.422
12	.7500-20UNEF	.625	.860	.484	.750	.625	.812	1.094	.120	.672
14S	.8750-20UNEF	.450	.672	.297	.562	.750	.906	1.188	.120	.422
14	.8750-20UNEF	.625	.860	.484	.750	.750	.906	1.188	.120	.672
16S	1.0000-20UNEF	.450	.672	.297	.562	.875	.969	1.281	.120	.422
16	1.0000-20UNEF	.625	.860	.484	.750	.875	.969	1.281	.120	.672
18	1.1250-18NEF	.625	.891	.453	.750	1.000	1.062	1.375	.120	.641*
20	1.2500-18NEF	.625	.891	.453	.750	1.125	1.156	1.500	.120	.641*
22	1.3750-18NEF	.625	.891	.453	.750	1.250	1.250	1.625	.120	.641*
24	1.5000-18NEF	.625	.953	.453	.812	1.375	1.375	1.750	.147	.578
28	1.7500-18NS	.625	.953	.453	.812	1.625	1.562	2.000	.147	.578*
32	2.0000-18NS	.625	1.031	.438	.875	1.875	1.750	2.250	.173	.500*
36	2.2500-16UN	.625	1.031	.438	.875	2.062	1.938	2.500	.173	.500*

All dimensions are in inches

BOX MOUNT RECEPTACLE - MSW3102E/R *(Environmental)*





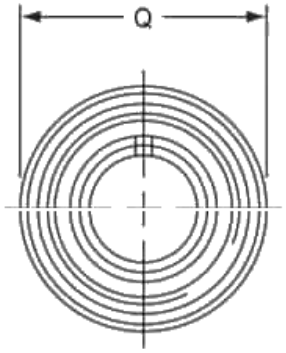


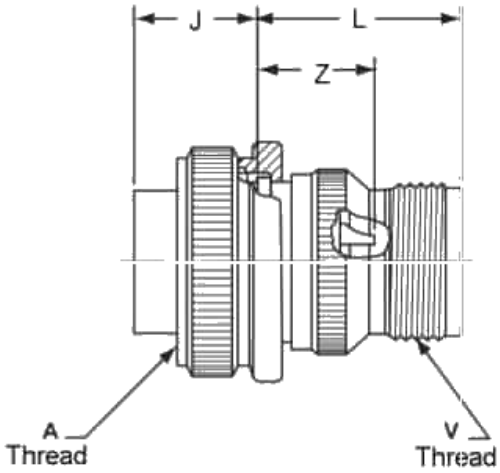
Shell size	A Thread Class 2A	B Min. Full Thread	K +.020 -.010	L +.000 -.010	M +.010 -.000	N Dia. +.010 -.000	R ±.005	S ±.031	T Dia. +.004 -.002	Z +.050 -.060
8S	.5000-28UNEF	.391	.672	.297	.562	.375	.594	.875	.120	.422
10S	.6250-24NEF	.391	.672	.297	.562	.500	.719	1.000	.120	.422
10SL	.6250-24NEF	.391	.672	.297	.562	.625	.719	1.000	.120	.422
12S	.7500-20UNEF	.450	.672	.297	.562	.625	.812	1.094	.120	.422
12	.7500-20UNEF	.625	.860	.484	.750	.625	.812	1.094	.120	.672
14S	.8750-20UNEF	.450	.672	.297	.562	.750	.906	1.188	.120	.422
14	.8750-20UNEF	.625	.860	.484	.750	.750	.906	1.188	.120	.672
16S	1.0000-20UNEF	.450	.672	.297	.562	.875	.969	1.281	.120	.422
16	1.0000-20UNEF	.625	.860	.484	.750	.875	.969	1.281	.120	.672
18	1.1250-18NEF	.625	.891	.453	.750	1.000	1.062	1.375	.120	.641*
20	1.2500-18NEF	.625	.891	.453	.750	1.125	1.156	1.500	.120	.641*
22	1.3750-18NEF	.625	.891	.453	.750	1.250	1.250	1.625	.120	.641*
24	1.5000-18NEF	.625	.953	.453	.812	1.375	1.375	1.750	.147	.578
28	1.7500-18NS	.625	.953	.453	.812	1.625	1.562	2.000	.147	.578*
32	2.0000-18NS	.625	1.031	.438	.875	1.875	1.750	2.250	.173	.500*
36	2.2500-16UN	.625	1.031	.438	.875	2.062	1.938	2.500	.173	.500*

All dimensions are in inches

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STRAIGHT PLUG - MSW3106A *(General Duty)*



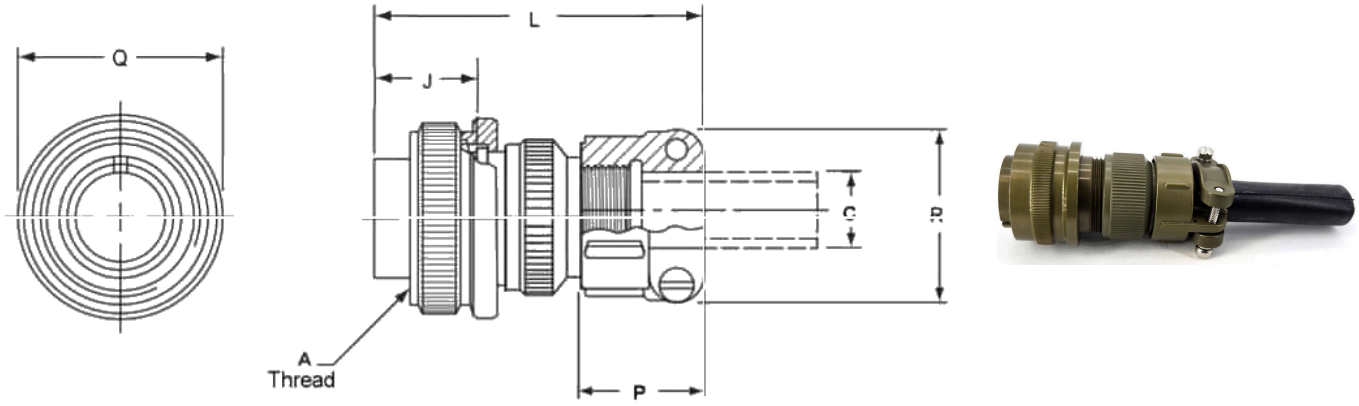




Shell size	A Thread Class 2B	J ±.005	L ±.030	Q Dia. Max.	V Thread Class 2A	Z ±.045
8S	.5000-28UNEF	.531	.859	.741	.5000-28UNEF	.562
10S	.6250-24NEF	.531	.937	.869	.5000-28UNEF	.562
10SL	.6250-24NEF	.531	.937	.946	.6250-24NEF	.562
12S	.7500-20UNEF	.531	.937	.995	.6250-24NEF	.562
12	.7500-20UNEF	.719	1.124	.995	.6250-24NEF	.812
14S	.8750-20UNEF	.531	.937	1.123	.7500-20UNEF	.562
14	.8750-20UNEF	.719	1.124	1.123	.7500-20UNEF	.812
16S	1.0000-20UNEF	.531	.937	1.250	.8750-20UNEF	.562
16	1.0000-20UNEF	.719	1.124	1.250	.8750-20UNEF	.812
18	1.1250-18NEF	.719	1.219	1.333	1.0000-20UNEF	.812*
20	1.2500-18NEF	.719	1.125	1.461	1.1875-18NEF	.812*
22	1.3750-18NEF	.719	1.219	1.588	1.1875-18NEF	.812*
24	1.5000-18NEF	.719	1.251	1.715	1.4375-18NEF	.812*
28	1.7500-18NS	.719	1.470	1.968	1.4375-18NEF	.812*
32	2.0000-18NS	.719	1.439	2.209	1.7500-18NS	.812*
36	2.2500-16UN	.719	1.500	2.463	2.0000-18NS	.812*

All dimensions are in inches

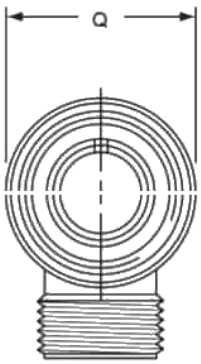
STRAIGHT PLUG - MSW3106E/F/R *(Environmental)*

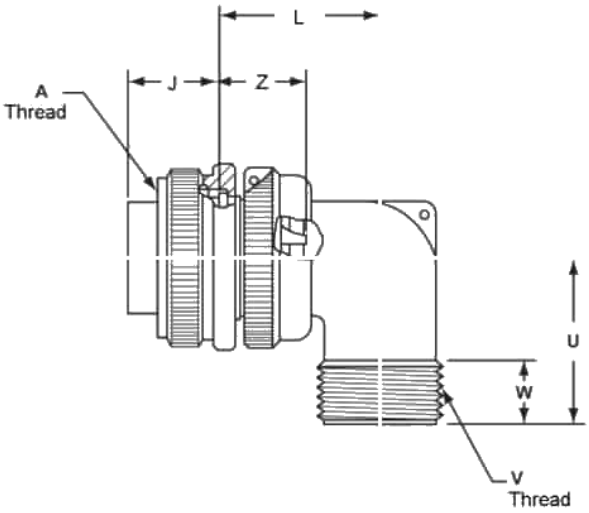


Shell size	A Thread Class 2B	J ±.005	L Max.	Q Dia. Max.	P +.031 -.031	R ±.005	C Min. Cable Clearance
10SL	.6250-24NEF	.531	2.129	.946	.795	.719	.3125
12S	.7500-20UNEF	.531	2.129	.995	.795	.812	.3125
12	.7500-20UNEF	.719	2.129	.995	.795	.812	.3125
14S	.8750-20UNEF	.531	2.201	1.123	.850	.906	.4375
14	.8750-20UNEF	.719	2.254	1.123	.850	.906	.4375
16S	1.0000-20UNEF	.531	2.201	1.250	.920	.969	.5625
16	1.0000-20UNEF	.719	2.524	1.250	.920	.969	.5625
18	1.1250-18NEF	.719	2.596	1.333	.920	1.063	.6250
20	1.2500-18NEF	.719	2.654	1.461	.927	1.156	.7500
22	1.3750-18NEF	.719	2.654	1.588	.927	1.250	.7500
24	1.5000-18NEF	.719	2.885	1.715	1.015	1.375	.9375
28	1.7500-18NS	.719	2.885	1.968	1.015	1.562	.9375
32	2.0000-18NS	.719	2.943	2.209	1.095	1.750	1.2500
36	2.2500-16UN	.719	2.943	2.463	1.156	1.938	1.3750

All dimensions are in inches

RIGHT ANGLE PLUG - MSW3108A *(General Duty)*



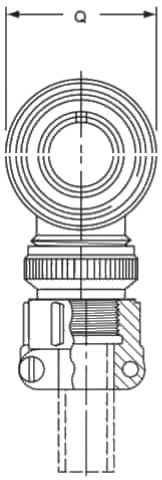


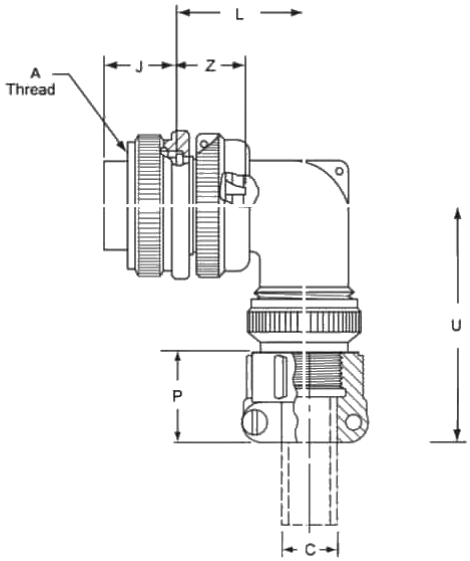


Shell size	A Thread Class 2B	J ±.005	L Max.	Q Dia. Max.	U Max.	V Thread Class 2A	W	Z ±.045
8S	.5000-28UNEF	.531	.896	.741	.750	.5000-28UNEF	.375	.562
10S	.6250-24NEF	.531	.927	.869	.750	.5000-28UNEF	.375	.562
10SL	.6250-24NEF	.531	.951	.946	.875	.6250-24NEF	.375	.562
12S	.7500-20UNEF	.531	.956	.995	.875	.6250-24NEF	.375	.562
12	.7500-20UNEF	.719	1.143	.995	.875	.6250-24NEF	.375	.812
14S	.8750-20UNEF	.531	1.120	1.123	1.000	.7500-20UNEF	.375	.562
14	.8750-20UNEF	.719	1.207	1.123	1.000	.7500-20UNEF	.375	.812
16S	1.0000-20UNEF	.531	1.146	1.250	1.062	.8750-20UNEF	.375	.562
16	1.0000-20UNEF	.719	1.332	1.250	1.062	.8750-20UNEF	.375	.812
18	1.1250-18NEF	.719	1.395	1.333	1.188	1.0000-20UNEF	.375	.812*
20	1.2500-18NEF	.719	1.645	1.461	1.250	1.1875-18NEF	.375	.812*
22	1.3750-18NEF	.719	1.645	1.588	1.312	1.1875-18NEF	.375	.812*
24	1.5000-18NEF	.719	1.896	1.715	1.438	1.4375-18NEF	.375	.812*
28	1.7500-18NS	.719	1.896	1.968	1.500	1.4375-18NEF	.375	.812*
32	2.0000-18NS	.719	2.118	2.209	1.750	1.7500-18NS	.438	.812*
36	2.2500-16UN	.719	2.176	2.463	1.875	2.0000-18NS	.500	.812*

All dimensions are in inches

RIGHT ANGLE PLUG - MSW3108E/F/R *(Environmental)*



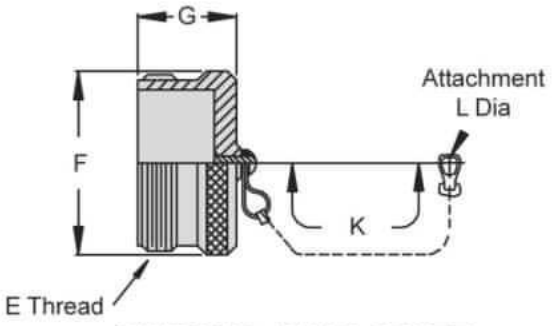




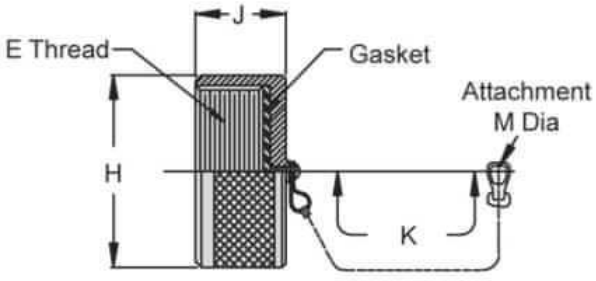
Shell size	A Thread Class 2B	J ±.005	L Max.	Q Dia. Max.	U Max.	V Thread Class 2A	W	Z ±.045
10SL	.6250-24NEF	.531	.951	.946	.875	.6250-24NEF	.375	.562
12S	.7500-20UNEF	.531	.956	.995	.875	.6250-24NEF	.375	.562
12	.7500-20UNEF	.719	1.143	.995	.875	.6250-24NEF	.375	.812
14S	.8750-20UNEF	.531	1.120	1.123	1.000	.7500-20UNEF	.375	.562
14	.8750-20UNEF	.719	1.207	1.123	1.000	.7500-20UNEF	.375	.812
16S	1.0000-20UNEF	.531	1.146	1.250	1.062	.8750-20UNEF	.375	.562
16	1.0000-20UNEF	.719	1.332	1.250	1.062	.8750-20UNEF	.375	.812
18	1.1250-18NEF	.719	1.395	1.333	1.188	1.0000-20UNEF	.375	.812*
20	1.2500-18NEF	.719	1.645	1.461	1.250	1.1875-18NEF	.375	.812*
22	1.3750-18NEF	.719	1.645	1.588	1.312	1.1875-18NEF	.375	.812*
24	1.5000-18NEF	.719	1.896	1.715	1.438	1.4375-18NEF	.375	.812*
28	1.7500-18NS	.719	1.896	1.968	1.500	1.4375-18NEF	.375	.812*
32	2.0000-18NS	.719	2.118	2.209	1.750	1.7500-18NS	.438	.812*
36	2.2500-16UN	.719	2.176	2.463	1.875	2.0000-18NS	.500	.812*

All dimensions are in inches

PROTECTIVE COVERS



MW25042 Plug Cover



MW25043 Receptacle Cover

Shell size	E Thread	F Dia. Max.	G Max.	H Max.	J Max.	K Attachment Length	L Dia. Min.	M Dia. Min.
8	1/2-28 UNEF	.562 (14.3)	.656 (16.7)	.688 (17.5)	.469 (11.9)	4.00 (101.6)	.151 (3.8)	.135 (3.4)
10	5/8-24 UNEF	.687 (17.4)	.656 (16.7)	.815 (20.7)	.469 (11.9)	4.00 (101.6)	.151 (3.8)	.135 (3.4)
12	3/4-20 UNEF	.812 (20.6)	.844 (21.4)	1.000 (25.4)	.469 (11.9)	4.50 (114.3)	.151 (3.8)	.135 (3.4)
14	7/8-20 UNEF	.937 (23.8)	.844 (21.4)	1.125 (28.6)	.469 (11.9)	4.50 (114.3)	.151 (3.8)	.135 (3.4)
16	1-20 UNEF	1.062 (27.0)	.844 (21.4)	1.188 (30.2)	.469 (11.9)	4.50 (114.3)	.151 (3.8)	.135 (3.4)
18	1 1/8-18 UNEF	1.187 (30.1)	.844 (21.4)	1.344 (34.1)	.469 (11.9)	4.50 (114.3)	.151 (3.8)	.135 (3.4)
20	1 1/4-18 UNEF	1.312 (33.3)	.844 (21.4)	1.469 (37.3)	.469 (11.9)	5.00 (127.0)	.182 (4.6)	.135 (3.4)
22	1 3/8-18 UNEF	1.437 (36.5)	.844 (21.4)	1.594 (40.5)	.469 (11.9)	5.00 (127.0)	.182 (4.6)	.135 (3.4)
24	1 1/2-18 UNEF	1.562 (39.7)	.844 (21.4)	1.719 (43.7)	.469 (11.9)	5.50 (139.7)	.182 (4.6)	.166 (4.2)
28	1 3/4-18 UNS	1.812 (46.0)	.844 (21.4)	1.969 (50.0)	.531 (13.5)	7.75 (196.9)	.182 (4.6)	.166 (4.2)
32	2-18 UNS	2.062 (52.4)	.844 (21.4)	2.219 (56.4)	.531 (13.5)	7.75 (196.9)	.213 (5.4)	.182 (4.6)
36	2 1/4-16 UN	2.312 (58.7)	.844 (21.4)	2.469 (62.7)	.531 (13.5)	7.75 (196.9)	.213 (5.4)	.182 (4.6)

Dimensions in inches (mm)

Cover Part Numbering

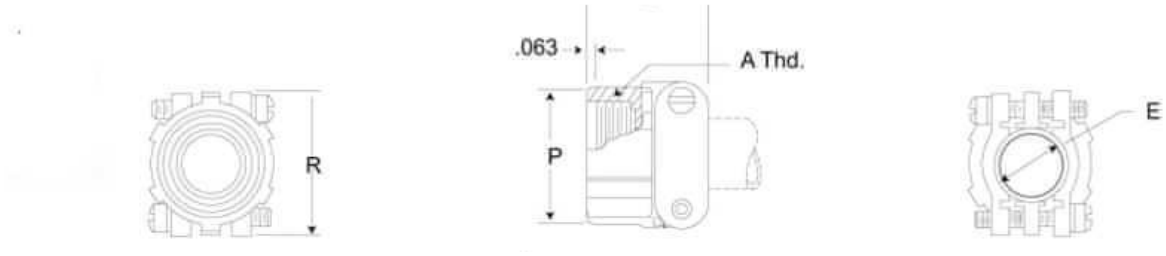
MW25043	24	DA
Cover Style	Shell Size	Finish

Cover Style: MW25042 – Plug Cover | MW25043 – Receptacle Cover

Shell Size: 10 – 36

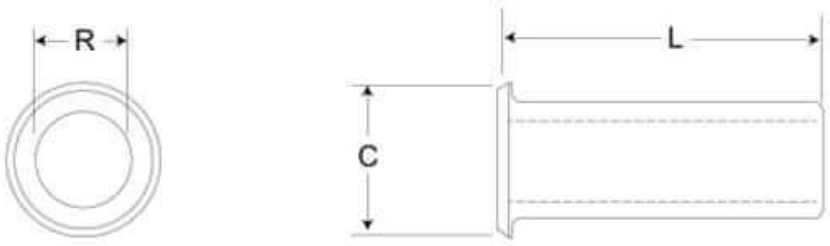
Finish: D – Cadmium Olive Drab | DA – Black Anodize

MS3057 CABLE CLAMP



Part Number	Fits Shell Size	Accommodates MS Bushings	E Min.	E Max.	L ±.031 (0.79)	P ±.031 (0.79)	R ±.031 (0.79)	A Thread
MS3057-4A	10SL, 12S, 12	MS3420-4	.140 (3.56)	.312 (7.92)	.812 (20.62)	.812 (20.62)	.875 (22.22)	5/8-24UNEF-2B
MS3057-6A	14S, 14	MS3420-6	.195 (4.95)	.438 (11.13)	.875 (22.22)	.969 (24.61)	1.062 (26.97)	3/4-20UNEF-2B
MS3057-8A	16S, 16	MS3420-8	.255 (6.48)	.562 (14.27)	.938 (23.83)	1.094 (27.79)	1.156 (29.36)	7/8-20UNEF-2B
MS3057-10A	18	MS3420-10	.285 (7.24)	.625 (15.88)	.938 (23.83)	1.188 (30.18)	1.250 (31.75)	1-20UNEF-2B
MS3057-12A	20, 22	MS3420-12	.350 (8.89)	.750 (19.05)	.938 (23.83)	1.375 (34.92)	1.496 (37.31)	1-3/16-18UNEF-2B
MS3057-16A	24, 28	MS3420-16,12	.468 (11.89)	.938 (23.83)	1.031 (26.19)	1.656 (42.06)	1.688 (42.88)	1-7/16-18UNEF-2B
MS3057-20A	32	MS3420-20,16	.664 (16.87)	1.250 (31.75)	1.094 (27.79)	2.031 (51.59)	2.031 (51.59)	1-3/4-18UNS-2B
MS3057-24A	36	MS3420-24,20	.694 (17.63)	1.375 (34.92)	1.156 (29.36)	2.219 (56.36)	2.281 (57.94)	2-18UNS-2B

MS3420 BUSHING



MS Part Number	Fits Shell Size	C ±.016 (0.41)	L ±.031 (0.79)	R ±.016 (0.41)
MS3420-3	8S-10S	.379 (9.63)	2.875 (73.02)	.130 (3.30)
MS3420-4	10SL, 12S, 12	.505 (12.83)	2.750 (69.85)	.200 (5.59)
MS3420-6	14S, 14	.619 (15.72)	2.625 (66.68)	.312 (7.92)
MS3420-8	16S, 16	.744 (18.90)	2.500 (63.50)	.437 (11.10)
MS3420-10	18	.869 (22.07)	2.375 (60.32)	.562 (14.27)
MS3420-12	20, 22	1.064 (27.03)	2.250 (57.15)	.625 (15.88)
MS3420-16	24, 28	1.314 (33.38)	2.125 (53.98)	.750 (19.05)
MS3420-20	32	1.596 (40.54)	2.000 (50.80)	.937 (23.80)
MS3420-24	36	1.847 (46.91)	1.875 (47.62)	1.250 (31.75)
MS3420-28	40	2.085 (52.96)	1.750 (44.45)	1.375 (34.92)
MS3420-32	44	2.335 (59.31)	1.625 (41.28)	1.624 (41.25)
MS3420-40	48	2.835 (72.01)	1.500 (38.10)	1.874 (47.60)

Dimensions in inches (mm)