

Datasheet

MIL-C-5015 series connectors

MIL-C-5015 series connectors

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■Brief Introduction

1. According to the structure of MIL-C-5015 series
2. Medium to heavy weight cylindrical
3. Durable, field-proven design
4. Environmental resistant
5. Resilient inserts
6. Operating voltage to 3000 VAC (RMS) at sea level
7. Threaded couplings
8. Single key/keyway shell polarization
9. Cost effective

■Specification

Ambient Temperature Range	-55℃ ~ +125℃	
Frequency	10~2000 Hz、147 m/s ²	
Shock	490 m/s ²	
Durability	≥500 times	
Relative humidity:	95±4% at 40℃	
Insulation resistance	≥5000MΩ	
Withstanding voltage	2000V	
Operating voltage	500V(AC)	700V(DC)

Contact current rating and wire size

Contact size	Jointing of diameter(mm)	Rated current(A)	Wire size(AWG)
16 #	Φ 2.0	13	22 # ~16 #
12 #	Φ 3.0	23	14 # ~12 #
8 #	Φ 5.2	46	10 # ~8 #
4 #	Φ 8.5	80	6 # ~4 #
0 #	Φ 12.0	150	2 # ~0 #

Contact insertion and withdraw force

Contact size	KG		
	Maximum	Average	Minimum
16 #	1.36	0.95	0.11

12 #	2.26	1.58	0.22
8 #	4.53	3.17	0.34
4 #	6.80	4.76	0.45
0 #	9.97	6.35	0.90

Plug and Receptacle picture



■How To Order

MS 3100 A 20 – 27 P W

① ② ③ ④ ⑤ ⑥ ⑦

①: MS—Series Prefix

②: type:3100-wall mounting receptacle

3101-cable connecting receptacle

3102-box mounting receptacle

3106- straight plug

3108- 90 degree plug

③: Service class:A- solid shell for general, non-environmental applications

B-split Shell

C –solid shell for pressurized applications

E –environmental resisting

F environmental resisting with strain relief (MS part number only)

R –lightweight environmental resisting

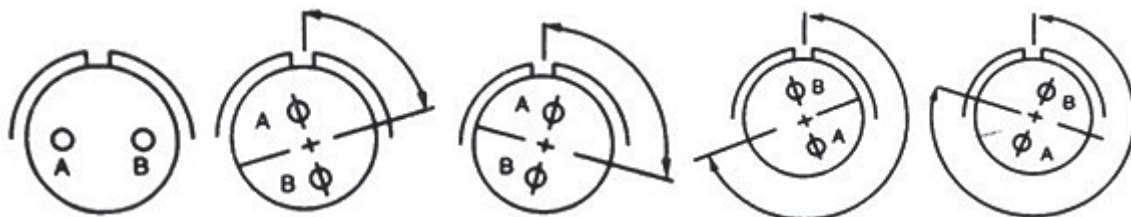
④: Shell size :08-10-12-14-16-18-20-22-24

⑤: Insert arrangement: Please see the figure of insert arrangement

⑥: Contact :P-pin contact ,S-socket contact

⑦: Key: N- normal key; W、X、Y、Z- alternative key

■Contact Arrangements



Insert arrangement	Rank	Number of contacts	Contact specification					Revolving angle			
			0	4	8	12	16	W	X	Y	Z
10S-2	A	1					1				
10SL-3	A	3					3			215	290
12S-3	A	2					2	70	145	215	290
12S-4	D	1					1				
12-5	D	1				1					
14S-2	Instrument	4					4		120	240	
14S-5	Instrument	5					5		110		
14S-6	Instrument	6					6				
14S-7	A	3					3	90	180	270	
14S-9	A	2					2	70	145	215	290
14-3	A	1			1						
16S-1	A	7					7	80			280
16S-3	B	1					1				
16S-4	D	2					2	35	110	250	325
16S-5	A	3					3	70	145	215	290
16S-6	A	3					3	90	180	270	
16S-8	A	5					5		170	265	
16-2	E	1				1					
16-7	A	3			1		2	80	110	250	320
16-9	A	4				2	2	35	110	250	325
16-10	A	3				3		90	180	270	
16-11	A	2				2		35	110	250	325
16-12	A	1		1		2		35	110	250	325
16-13	A	2					10	70	145	215	290
18-1	Instrument	10				2		35	110	250	325
18-3	D	2				4	4	35	110	250	325
18-4	D	4									
18-5	D	3				2	1	80	110	250	280
18-6	D	1									
18-7	B	1			1						

18-8	A	8				1	7	70			290
18-9	Instrument	7				2	5	80	110	250	280
18-10	A	4				4			120	240	
18-11	A	5					5		170	200	
18-12	A	6					6	80			280
18-13	A	4			1	3		80	110	250	280
18-14	A	2		1			1	80	110	250	280
18-15	A	4				4			120	240	
18-16	C	1				1					
18-22	D	3					3	70	145	215	290
20-2	D	1	1								
20-3	D	3				3		70	145	215	290
20-4	D	4				4		45	110	250	
20-7	D/A	8					8	80	110	250	280
20-8	Instrument	6			2		4	80	110	250	280
20-9	D/A	8				1	7	80	110	250	280
20-14	A	5			2	3		80	110	250	280
20-15	A	7				7		80			280
20-16	A	9				2	7	80	110	250	280
20-17	A	6				5	1	90	180	270	
20-18	A	9				3	6	35	110	250	325
20-19	A	3				3		90	180	270	
20-20	A	4		1		3					
20-21	A	9				1	8	35	110	250	325
20-22	A	6			3		3	80	110	250	280
20-23	A	2			2			35	110	250	325
20-24	A	4			2		2	35	110	250	325
20-27	A	14					14	35	110	250	325
20-29	A	17					17	80			280
20-33	A	11					11				
22-2	D	3			3			70	145	215	290
22-4	A	4			2	2	2	35	110	250	325
22-5	D	6				2	4	35	110	250	325
22-6	D	3			2		1				
22-7	E	1	1								
22-9	E	3				3		70	145	215	290

22-10	E	4					4	35	110	250	325
22-11	B	2					2	35	110	250	325
22-12	D	5			2		3	80	110	250	280
22-13	D/A	5				4	1	35	110	250	325
22-14	A	19					19	80			280
22-15	E/A	6				5	1	80	110	250	280
22-17	D/A	9				1	8	80	110	250	280
22-18	A/D	8					8	80	110	250	280
22-19	A	14					14	80	110	250	280
22-20	A	9					9	35	110	250	325
22-21	A	3	1				2	80	110	250	280
22-22	A	4			4				110	250	
22-23	D/A	8				8		35		250	
22-27	D/A	9			1		8	80		250	280
22-28	A	7				7		80			280
22-36	A	8				8		90		270	
24-2	D	7				7		80			280
24-4	D	4	1				3	80	110	250	280
24-5	A	16					16	80	110	250	280
24-6	D/A	8				8		80	110	250	280
24-7	A	16				2	14	80	110	250	280
24-10	A	7			7			80			280
24-11	A	9			3	6		35	110	250	325
24-12	A	5		2		3		80	110	250	280
24-16	A	5		2		3		80	110	250	280
24-20	D	11				2	9	80	110	250	280
24-21	D	10			1		9	80	110	250	280

24-22	D	4			4			45	110	250	
24-27	E	7					7	80			
24-28	Instrument	24					24	80	110	250	280
24-80	Instrument	23					23	35	145	240	300

[■Contact Arrangements](#)

Insert arrangement

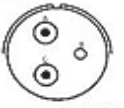
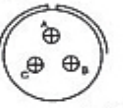
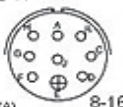
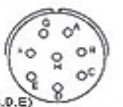
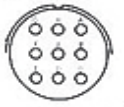
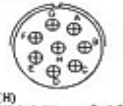
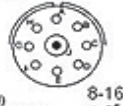
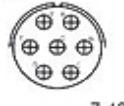
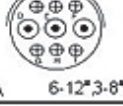
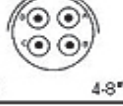
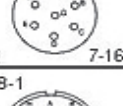
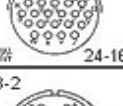
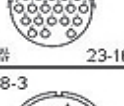
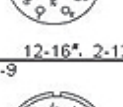
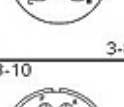
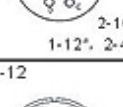
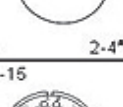
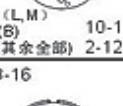
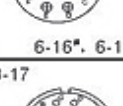
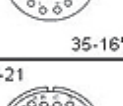
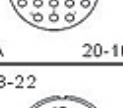
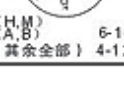
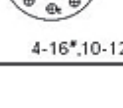
From the direction of pin inserting



	10SL-3	10S-2	10SL-4			
10SL	 A 3-16'	 A 1-16' (1-16S)	 A 2-16'			
12	 D 1-12'	 A 2-16'	 D 1-16'			
14S	 仪器 4-16'	 仪器 5-16'	 仪器 6-16'	 A 3-16'	 A 2-16'	 A 1-8'
16S	 A 7-16'	 B 1-16'	 D 2-16'	 A 3-16'	 A 3-16'	 A 5-16'
16	 E 1-12'	 A 2-16', 1-8'	 A 2-16', 2-12'	 A 3-12'	 A 2-12'	 A 1-4'
	 A 2-12#					
18	 A, B, C, F, G 仪器 (其余全部) 10-16'	 D 2-12'	 D 4-16'	 D 1-16', 2-12'	 D 1-4'	 B 1-8'
	 A 7-16', 1-12'	 仪器 5-16', 2-12'	 D 4-12'	 A 5-12'	 A 6-16'	 A 3-12', 1-8'
	 A 1-4', 1-16'	 A 4-12'	 C 1-12'	 D 3-16'		
20	 D 1-0'	 D 3-12'	 D 4-12'	 D(A, B, G, H) A(其余全部) 8-16'	 仪器 4-16', 2-8'	 D(H) A(其余全部) 7-16' 1-12'
	 A 3-12', 2-8'	 A 7-12'	 A 7-16', 2-12'	 A 1-16', 5-12'	 A 6-16', 3-12'	 A 3-8'
	 A 3-12', 1-4'	 A 8-16', 1-12'	 A 3-16', 3-8'	 A 2-8'	 A 2-16', 2-8'	 A 14-16'
	 A 17-16'	 A 11-16'				

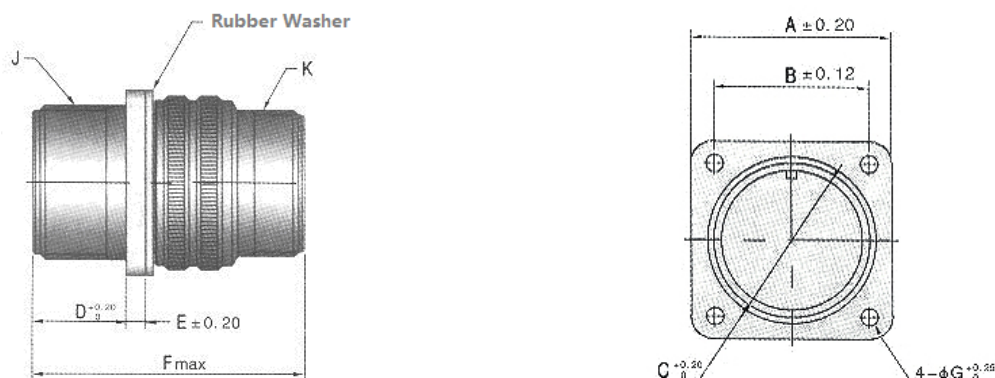
From the direction of pin inserting



22	22-2		D	3-8*
	22-4		A	4-16*
	22-5		D	4-16*, 2-12*
	22-6		D	1-16*, 2-8*
	22-7		E	1-0*
	22-9		E	3-12*
	22-10		E	4-16*
	22-11		B	2-16*
	22-12		D	3-16*, 2-8*
	22-13		D(A, B) A(其余全部)	1-16*, 4-12*
24	22-14		A	19-16*
	22-15		E(D) A(其余全部)	1-16*, 5-12*
	22-17		D(A) A(其余全部)	8-16*, 1-12*
	22-18		A(C, D, E) D(其余全部)	8-16*
	22-19		A	14-16*
	22-20		A	9-16*
	22-21		A	2-16*, 1-10*
	22-22		A	4-8*
	22-23		D(H) A(其余全部)	8-12*
	22-27		D(J) A(其余全部)	8-16*, 1-8*
28	22-28		A	7-12*
	22-36		D(H) A(其余全部)	8-12*
	24-2		D	7-12*
	24-4		D	3-16*, 1-0*
	24-5		A	16-16*
	24-6		D(A, G, H) A(其余全部)	8-12*
	24-7		A	14-16*, 2-12*
	24-10		A	7-8*
	24-11		A	6-12*, 3-6*
	24-12		A	3-12*, 2-4*
28	24-16		D(A, B, F, G) A(其余全部)	3-16*, 3-12*, 1-8*
	24-20		D	9-16*, 2-12*
	24-21		D	9-16*, 1-8*
	24-22		D	4-8*
	24-27		E	7-16*
	24-28		仪器	24-16*
	24-80		仪器	23-16*
	28-1		D(A, E, J) A(其余全部)	6-12*, 3-8*
	28-2		D	12-16*, 2-12*
	28-3		E	3-8*
28	28-4		E(G, P, S) D(其余全部)	7-16*, 2-12*
	28-5		D	2-16*, 1-12*, 2-4*
	28-7		A	2-4*
	28-8		E(L, M) D(B) A(其余全部)	10-16*, 2-12*
	28-9		D	6-16*, 6-12*
	28-10		D(G) A(其余全部)	3-12*, 2-8*, 2-4*
	28-11		A	18-16*, 4-12*
	28-12		A	26-16*
	28-15		A	35-16*
	28-16		A	20-16*
28	28-17		B(R) D(MNP) A(其余全部)	15-16*
	28-18		C(M) A(A, B) 仪器(C, D, E, F) D(其余全部)	12-16*
	28-19		S(H, M) D(A, B) A(其余全部)	6-16*, 4-12*
	28-20		A	4-16*, 10-12*
	28-21		A	37-16*
	28-22		D	3-16*, 3-4*
	28-23		仪器	3-8*(屏蔽)

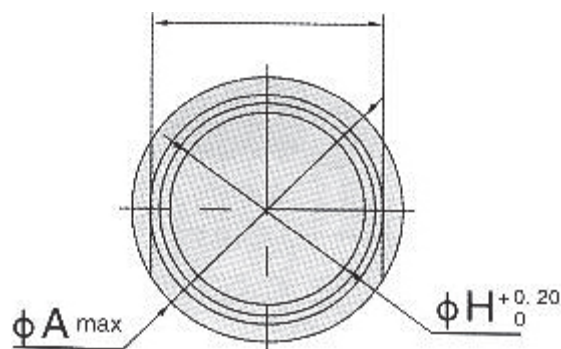
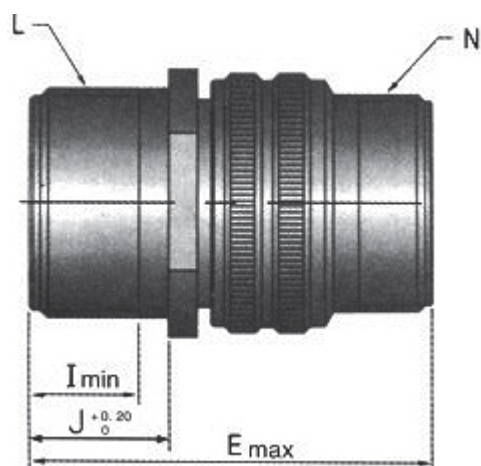
■Product Outline Dimensions

MS3100



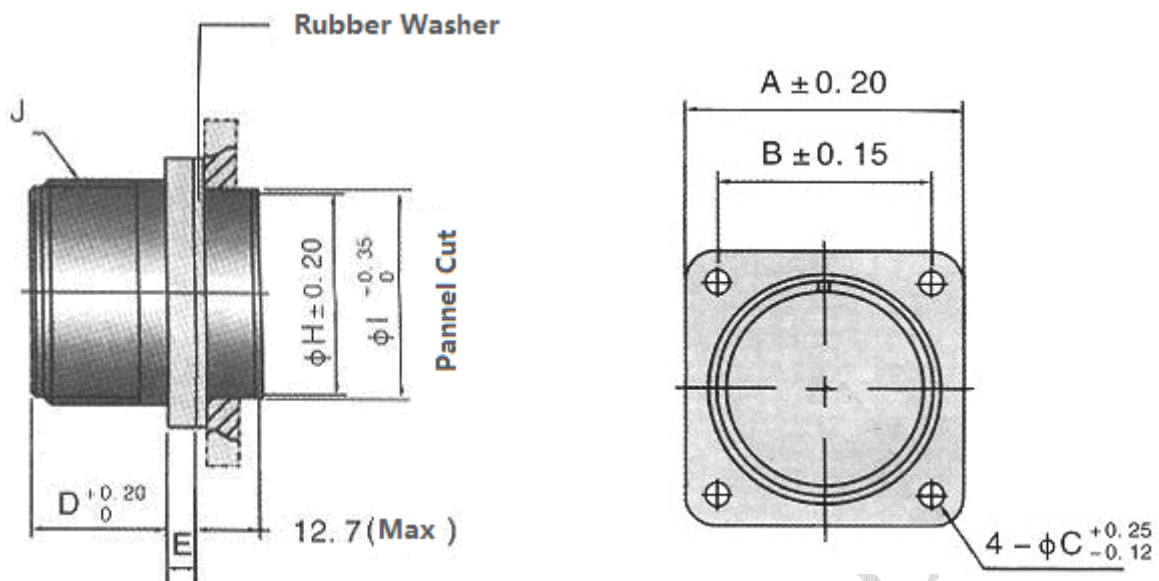
Shell size	A	B	Φ C	D	E	F	Φ G	J	K
10S	25.40	18.26	11.6	14.3	3.00	38.88	3.05	5 / 8 -24 UNEF -2A	1 / 2 -28 UNEF -2A
10SL	25.40	18.26	11.6	14.3	3.00	38.88	3.05	5 / 8 -24 UNEF -2A	5 / 8 -24 UNEF -2A
12S	27.79	20.62	14.4	14.3	3.00	42.87	3.05	3 / 4 -20 UNEF -2A	5 / 8 -24 UNEF -2A
12	27.79	20.62	14.4	19.05	3.00	52.37	3.05	3 / 4 -20 UNEF -2A	5 / 8 -24 UNEF -2A
14S	30.18	23.01	17.45	14.3	3.00	42.87	3.05	7 / 8 -20 UNEF -2A	3 / 4 -20 UNEF -2A
14	30.18	23.01	17.45	19.05	3.00	52.37	3.05	7 / 8 -20 UNEF -2A	3 / 4 -20 UNEF -2A
16S	32.54	24.61	20.75	14.3	3.00	42.87	3.05	1-20 UNEF -2A	7 / 8 -20 UNEF -2A
16	32.54	24.61	20.75	19.05	3.00	52.37	3.05	1-20 UNEF -2A	7 / 8 -20 UNEF -2A
18	32.54	26.97	23.9	19.05	4.00	52.37	3.05	1 1 / 8 -18 UNEF -2A	1-20 UNEF -2A
20	38.10	29.36	26.95	19.05	4.00	55.57	3.05	1 1 / 4 -18 UNEF -2A	1 3 / 16 -18 UNEF -2A
22	41.28	31.75	30.15	19.05	4.00	55.57	3.05	1 3 / 8 -18 UNEF -2A	1 3 / 16 -18 UNEF -2A
24	44.45	34.93	33.3	20.63	4.00	58.72	3.73	1 1 / 2 -18 UNEF -2A	1 7 / 16 -18 UNEF -2A
28	50.80	39.67	38.9	20.63	4.00	58.72	3.73	1 3 / 4 -18 UNEF -2A	1 7 / 16 -18 UNEF -2A

MS3101



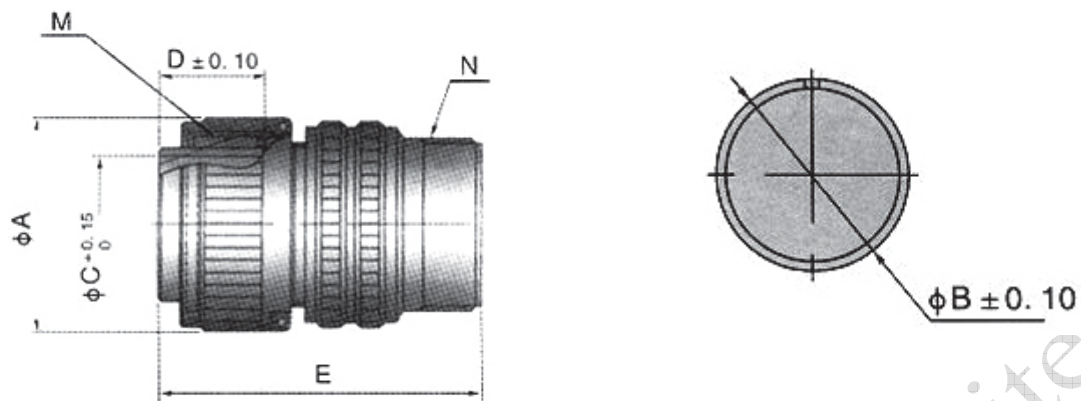
Shell size	Φ A	E	Φ H	I	J	L Screw thread	N Screw thread
10S	24.61	38.88	11.6	9.53	14.3	5 / 8 -24 UNEF -2A	1 / 2 -28 UNEF -2A
10SL	24.61	38.88	11.6	9.53	14.3	5 / 8 -24 UNEF -2A	5 / 8 -24 UNEF -2A
12S	26.97	42.87	14.4	9.53	14.3	3 / 4 -20 UNEF -2A	5 / 8 -24 UNEF -2A
12	26.97	52.37	14.4	15.88	19.05	3 / 4 -20 UNEF -2A	5 / 8 -24 UNEF -2A
14S	29.36	42.87	17.45	9.53	14.3	7 / 8 -20 UNEF -2A	3 / 4 -20 UNEF -2A
14	29.36	52.37	17.45	15.88	19.05	7 / 8 -20 UNEF -2A	3 / 4 -20 UNEF -2A
16S	31.75	42.87	20.75	9.53	14.3	1-20 UNEF -2A	7 / 8 -20 UNEF -2A
16	31.75	52.37	20.75	15.88	19.05	1-20 UNEF -2A	7 / 8 -20 UNEF -2A
18	34.13	52.37	23.9	15.88	19.05	1 1 / 8 -18 UNEF -2A	1-20 UNEF -2A
20	37.31	55.57	26.95	15.88	19.05	1 1 / 4 -18 UNEF -2A	1 3 / 16 -18 UNEF -2A
22	40.48	55.57	30.15	15.88	19.05	1 3 / 8 -18 UNEF -2A	1 3 / 16 -18 UNEF -2A
24	43.66	58.72	33.3	15.88	20.63	1 1 / 2 -18 UNEF -2A	1 7 / 16 -18 UNEF -2A
28	50.01	58.72	38.9	15.88	20.63	1 3 / 4 -18 UNEF -2A	1 7 / 16 -18 UNEF -2A

MS3102



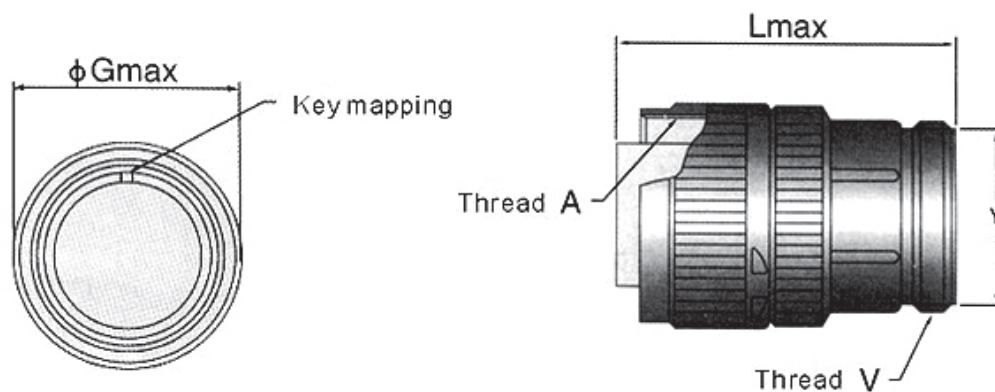
Shell size	A	B	Φ C	D	E	Φ H (HMS3102)	Φ I (HMS3102)	Φ H (HMS3102E)	Φ I (HMS3102E)	J Screw thread
10S	24.61	11.17	8.21	13.49	38.88	16.66	17.47	14	14.8	5 / 8 -24 UNEF -2A
10SL	24.61	11.33	9.6	13.49	38.88	16.66	17.47	16	16.8	5 / 8 -24 UNEF -2A
12S	26.97	14.10	11.43	13.49	42.87	19.35	20.62	17	17.8	3 / 4 -20 UNEF -2A
12	29.36	14.10	11.43	18.26	52.37	19.35	20.62	17	17.8	3 / 4 -20 UNEF -2A
14S	29.36	17.15	13.37	13.49	42.87	23.01	23.83	21	21.8	7 / 8 -20 UNEF -2A
14	29.36	17.15	13.37	18.26	52.37	23.01	23.83	21	21.8	7 / 8 -20 UNEF -2A
16S	31.75	20.45	16.54	13.49	42.87	26.21	26.97	24	24.8	1-20 UNEF -2A
16	31.75	20.45	16.54	18.26	52.37	26.21	26.97	24	24.8	1-20 UNEF -2A
18	34.13	23.62	19.72	18.26	52.37	29.36	30.18	25.1	26	1 1 / 8 -18 UNEF -2A
20	37.31	26.67	23.68	18.26	55.57	32.56	33.32	29.3	30	1 1 / 4 -18 UNEF -2A
22	40.48	29.85	26.07	18.26	55.57	35.71	36.53	32.1	33	1 3 / 8 -18 UNEF -2A
24	43.66	33.02	29.24	18.26	58.72	38.91	39.67	37	37.8	1 1 / 2 -18 UNEF -2A
28	50.01	39.61	34.80	18.26	58.72	45.26	46.02	43	43.8	1 3 / 4 -18 UNEF -2A

MS3106A



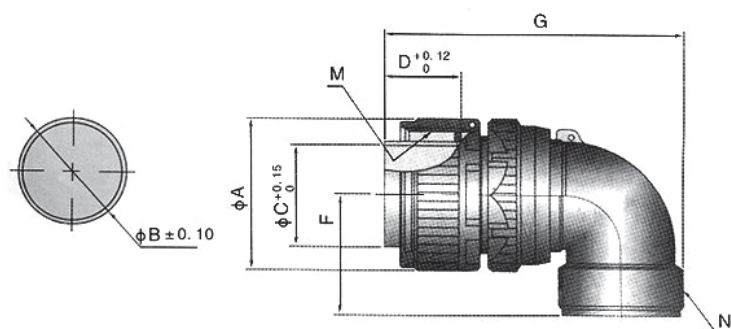
Shell size	ϕA	ϕB	ϕC	D	E	M Screw thread	N Screw thread
8S	21.43	9.3	6.41	13.49	37.30	1 / 2 -28 UNEF-2B	1 / 2 -28 UNEF -2A
10S	24.61	11.17	8.21	13.49	38.88	5 / 8 -24 UNEF-2B	1 / 2 -28 UNEF -2A
10SL	24.61	11.33	9.6	13.49	38.88	5 / 8 -24 UNEF-2B	5 / 8 -24 UNEF -2A
12S	26.97	14.10	11.43	13.49	42.87	3 / 4 -20 UNEF-2B	5 / 8 -24 UNEF -2A
12	29.36	14.10	11.43	18.26	52.37	3 / 4 -20 UNEF-2B	5 / 8 -24 UNEF -2A
14S	29.36	17.15	13.37	13.49	42.87	7 / 8 -20 UNEF-2B	3 / 4 -20 UNEF -2A
14	29.36	17.15	13.37	18.26	52.37	7 / 8 -20 UNEF-2B	3 / 4 -20 UNEF -2A
16S	31.75	20.45	16.54	13.49	42.87	1-20 UNEF-2B	7 / 8 -20 UNEF -2A
16	31.75	20.45	16.54	18.26	52.37	1-20 UNEF-2B	7 / 8 -20 UNEF -2A
18	34.13	23.62	19.72	18.26	52.37	1 1 / 8 -18 UNEF-2B	1-20 UNEF -2A
20	37.31	26.67	23.68	18.26	55.57	1 1 / 4 -18 UNEF-2B	1 3 / 16 -18 UNEF -2A
22	40.48	29.85	26.07	18.26	55.57	1 3 / 8 -18 UNEF-2B	1 3 / 16 -18 UNEF -2A
24	43.66	33.02	29.24	18.26	58.72	1 1 / 2 -18 UNEF-2B	1 7 / 16 -18 UNEF -2A
28	50.01	39.61	34.80	18.26	58.72	1 3 / 4 -18 UNEF-2B	1 7 / 16 -18 UNEF -2A

MS3106B



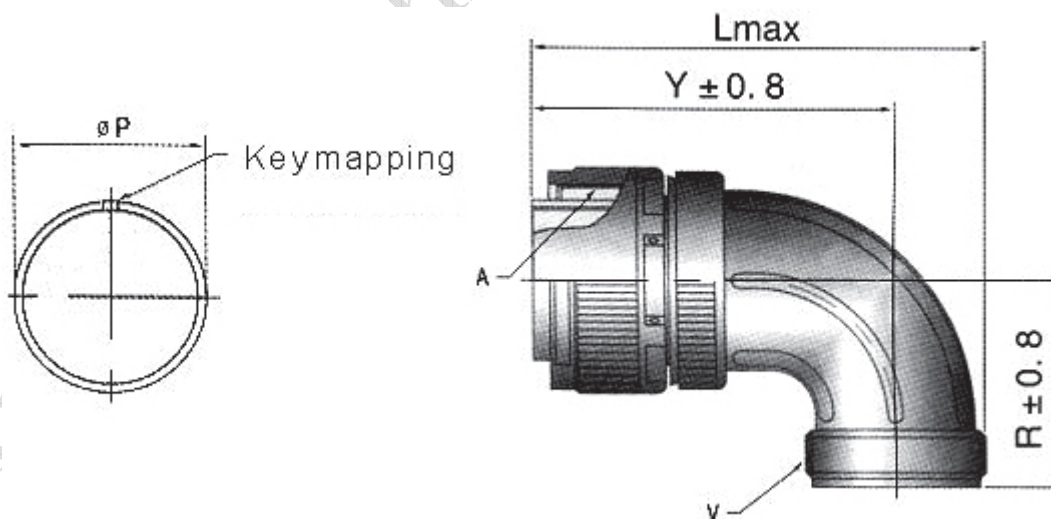
Shell size	G	L	A	V
8S	21.43	37.30	1 / 2 -28 UNEF-2B	1 / 2 -28 UNEF -2A
10S	24.61	38.88	5 / 8 -24 UNEF-2B	1 / 2 -28 UNEF -2A
10L	24.61	38.88	5 / 8 -24 UNEF-2B	5 / 8 -24 UNEF -2A
12S	26.97	42.87	3 / 4 -20 UNEF-2B	5 / 8 -24 UNEF -2A
12	26.97	52.37	3 / 4 -20 UNEF-2B	5 / 8 -24 UNEF -2A
14S	29.36	42.87	7 / 8 -20 UNEF-2B	3 / 4 -20 UNEF -2A
14	29.36	52.37	7 / 8 -20 UNEF-2B	3 / 4 -20 UNEF -2A
16S	31.75	42.87	1-20 UNEF-2B	7 / 8 -20 UNEF -2A
16	31.75	52.37	1-20 UNEF-2B	7 / 8 -20 UNEF -2A
18	34.13	52.37	1 1 / 8 -18 UNEF-2B	1-20 UNEF -2A
20	37.31	55.57	1 1 / 4 -18 UNEF-2B	1 3 / 16 -18 UNEF -2A
22	40.48	55.57	1 3 / 8 -18 UNEF-2B	1 3 / 16 -18 UNEF -2A
24	43.66	58.72	1 1 / 2 -18 UNEF-2B	1 7 / 16 -18 UNEF -2A
28	50.01	58.72	1 3 / 4 -18 UNEF-2B	1 7 / 16 -18 UNEF -2A

MS3108A



Shell size	ΦA	ΦB	ΦC	D	F	G	M Screw thread	N Screw thread
8S	21.43	9.3	6.41	13.49	23.77	44.45	1 / 2 -28 UNEF-2B	1 / 2 -28 UNEF -2A
10S	24.61	11.17	8.21	13.49	25.40	44.45	5 / 8 -24 UNEF-2B	1 / 2 -28 UNEF -2A
10SL	24.61	11.33	9.6	13.49	25.40	46.02	5 / 8 -24 UNEF-2B	5 / 8 -24 UNEF -2A
12S	26.97	14.10	11.43	13.49	26.97	50.80	3 / 4 -20 UNEF-2B	5 / 8 -24 UNEF -2A
12	26.97	14.10	11.43	18.26	26.97	57.15	3 / 4 -20 UNEF-2B	5 / 8 -24 UNEF -2A
14S	29.36	17.15	13.37	13.49	28.57	53.97	7 / 8 -20 UNEF-2B	3 / 4 -20 UNEF -2A
14	29.36	17.15	13.37	18.26	28.57	58.72	7 / 8 -20 UNEF-2B	3 / 4 -20 UNEF -2A
16S	31.75	20.45	16.54	13.49	30.17	60.32	1-20 UNEF-2B	7 / 8 -20 UNEF -2A
16	31.75	20.45	16.54	18.26	30.17	65.07	1-20 UNEF-2B	7 / 8 -20 UNEF -2A
18	34.13	23.62	19.72	18.26	33.32	68.27	1 1 / 8 -18 UNEF-2B	1-20 UNEF -2A
20	37.31	26.67	23.68	18.26	34.92	76.98	1 1 / 4 -18 UNEF-2B	1 3 / 16 -18 UNEF -2A
22	40.48	29.85	26.07	18.26	34.92	86.51	1 3 / 8 -18 UNEF-2B	1 3 / 16 -18 UNEF -2A
24	43.66	33.02	29.24	18.26	39.67	86.51	1 1 / 2 -18 UNEF-2B	1 7 / 16 -18 UNEF -2A
28	50.01	38.61	34.80	18.26	39.67	93.98	1 3 / 4 -18 UNEF-2B	1 7 / 16 -18 UNEF -2A

MS3108B



Shell size	L	P	R	Y	A Screw thread	V Screw thread
8S	44.45	21.43	23.77	38.1	1 / 2 -28 UNEF-2B	1 / 2 -28 UNEF -2A
10S	44.45	24.61	25.4	38.1	5 / 8 -24 UNEF-2B	5 / 8 -28 UNEF -2A

10SL	46.02	24.61	25.4	38.1	5 / 8 -24 UNEF-2B	5 / 8 -24 UNEF -2A
12S	50.08	26.97	26.97	42.87	3 / 4 -20 UNEF-2B	5 / 8 -24 UNEF -2A
12	57.15	26.97	26.97	49.22	3 / 4 -20 UNEF-2B	5 / 8 -24 UNEF -2A
14S	53.97	29.36	28.57	44.45	7 / 8 -20 UNEF-2B	3 / 4 -20 UNEF -2A
14	58.72	29.36	28.57	49.22	7 / 8 -20 UNEF-2B	3 / 4 -20 UNEF -2A
16S	60.32	31.75	30.17	49.22	1-20 UNEF-2B	7 / 8 -20 UNEF -2A
16	65.07	31.75	30.17	53.97	1-20 UNEF-2B	7 / 8 -20 UNEF -2A
18	68.27	34.13	33.32	55.57	1 1 / 8 -18 UNEF-2B	1-20 UNEF -2A
20	76.98	37.31	34.92	61.92	1 1 / 4 -18 UNEF-2B	1 3 / 16 -18 UNEF -2A
22	86.51	40.48	34.92	61.92	1 3 / 8 -18 UNEF-2B	1 3 / 16 -18 UNEF -2A
24	86.51	43.66	39.67	68.27	1 1 / 2 -18 UNEF-2B	1 7 / 16 -18 UNEF -2A
28	93.98	50.01	39.67	68.27	1 3 / 4 -18 UNEF-2B	1 7 / 16 -18 UNEF -2A