

1. GENERAL

1.1 SCOPE

This specification details the ratings, physical and electrical characteristics, test and inspection data for Lightweight Accessories for Rectangular Connectors (D*M and D*MA). It shall be read in conjunction with ESCC Generic Specification No. 3401, the requirements of which are supplemented herein and ESCC Detail Specifications Nos. 3401/001 and 3401/002.

1.2 COMPONENT TYPE VARIANTS

The type variants of accessories covered by this specification are given in Table 1(a).

1.3 MAXIMUM RATINGS

The maximum ratings, which shall not be exceeded at any time during use or storage, applicable to the accessories specified herein, are given in Table 1(b).

1.4 PARAMETER DERATING INFORMATION

Not applicable.

1.5 PHYSICAL DIMENSIONS

The physical dimensions of the accessories specified herein are shown in Figure 2.

2. APPLICABLE DOCUMENTS

The following documents form part of this specification and shall be read in conjunction with it:

- (a) ESCC Generic Specification No. 3401, Connectors, Electrical, Circular and Rectangular.
- (b) ESCC Detail Specification No. 3401/001, Connectors, Electrical, Rectangular, Miniature, Non-removable Solder and Wire-Wrap-Type Contacts and, Removable Coaxial and Power, Crimp-Type and Solder-Type Contacts, based on Type D*M.
- (c) ESCC Detail Specification No. 3401/002, Connectors, Electrical, Rectangular, Miniature, Removable Crimp Type Contacts and, Removable Coaxial and Power Crimp-Type and Solder-Type Contacts, based on type D*MA.

(d) ESCC Detail Specification No. 3401/085, Fast-Locking Screw Lock Assemblies for Rectangular Connectors 3401/001, 3401/002 and Connector Savers 3401/020, 3401/080.

3. TERMS, DEFINITIONS, ABBREVIATIONS, SYMBOLS AND UNITS

For the purpose of this specification, the terms, definitions, abbreviations, symbols and units specified in ESCC Basic Specification No. 21300 shall apply.

TABLE 1(a) - TYPE VARIANTS

VARIANT	DESCRIPTION		WEIGHT (g)
01	Screw Lock Assembly Brass (Male/hex. hole 2.38 head screw)	With Back Shell	1.5
02	Screw Lock Assembly Brass (Male/hex. hole 2.38 head screw)	With Back Shell	1.5
03	Screw Lock Assembly Stainless Steel (Male/hex. hole 2.38 head screw)	With Back Shell	1.5

VARIANT	DESCRIPTION		WEIGHT (g)
61	Backshell: Lightweight D-SUB Extra-Shorting Can	Size E	8
62	Backshell: Lightweight D-SUB Extra-Shorting Can	Size A	10
63	Backshell: Lightweight D-SUB Extra-Shorting Can	Size B	14
64	Backshell: Lightweight D-SUB Extra-Shorting Can	Size C	20
65	Backshell: Lightweight D-SUB Extra-Shorting Can	Size D	26
66	Screw Lock Assembly Brass (Male/hex. hole 2.0 head screw)	With Back Shell	1.5
67	Screw Lock Assembly Brass (Male/hex. hole 2.0 head screw)	With Back Shell	1.5
68	Screw Lock Assembly Stainless Steel (Male/hex. hole 2.0 head screw)	With Back Shell	1.5
69	Screw Lock Assembly Stainless Steel (Male/hex. hole 2.0 head screw)	With Back Shell	1
70	Screw Lock Assembly Stainless Steel (Male/slotted head screw)		1
71	Screw Lock Assembly Brass (Male/hex. hole head screw)		1
72	Backshell: Lightweight Design with Saddle Clamps for Strain Relief	Size F	37
73	Backshell: Lightweight D-SUB Shorting Can	Size F	30
74	Backshell: EMI Shielded Straight Cable Outlet - Front Mount	Size F	45
75	Backshell: EMI Shielded Straight Cable Outlet - Rear Mount	Size F	45
76	Backshell: Lightweight Shielded Backshell - 90° Longitudinal Right and Left Cable Outlet	Size F	28
77	Backshell: Lightweight Shielded Backshell Straight Cable Outlet	Size F	16.5
78	Backshell: Straight Lightweight Backshell Ultra Elliptical Band Termination	Size F	33
79	Backshell: 45° Lightweight Backshell Ultra Elliptical Band Termination, Right and Left	Size F	40
80	Backshell: Lightweight D-SUB Extra-Shorting Can	Size F	30

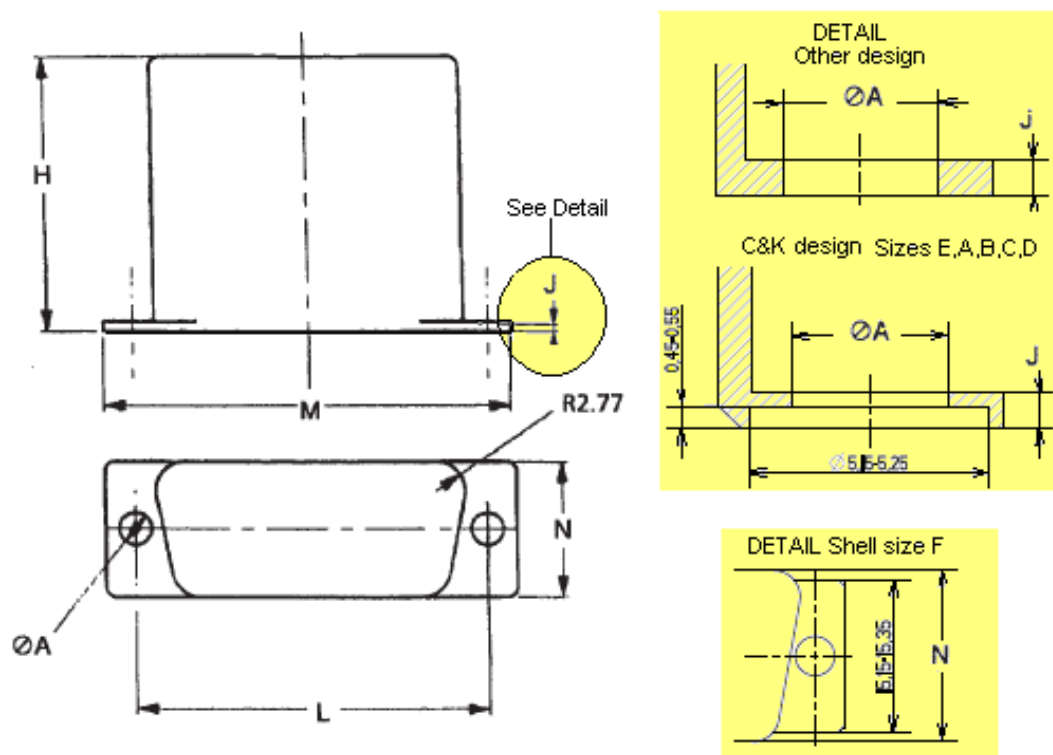
TABLE 1(b) - MAXIMUM RATINGS

No.	Characteristic	Symbol	Maximum Ratings		Unit	Remarks
1	Operating Temperature Range	T_{op}	-55 to +125 (1)		°C	T_{amb}
2	Storage Temperature Range	T_{stg}	-55 to +125 (1)		°C	
3	Torque Value for Screws	T_{qe}	BRASS 3.3	S.S. 4.4	cm.daN	For Male

FIGURE 1 - PARAMETER DERATING INFORMATION

Not applicable.

FIGURE 2(c)- LIGHTWEIGHT D-SUB SHORTING CAN

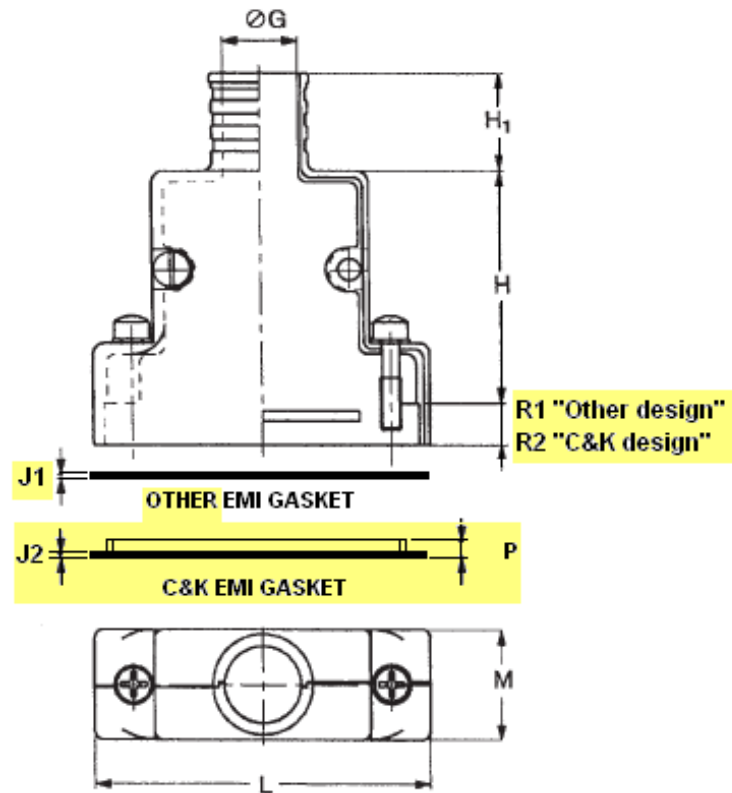


Shell Size	Variant	ØA		H	J	L		M		N	
		MIN	MAX			MIN	MAX	MIN	MAX	MIN	MAX
E	10	3.92	4.04	25.4	0.9	24.86	25.12	30.18	30.94	12.32	13.08
A	11	3.92	4.04	25.4	0.9	33.19	33.45	38.51	39.27	12.32	13.08
B	12	3.92	4.04	25.4	0.9	46.91	47.17	52.4	53.16	12.32	13.08
C	13	3.92	4.04	25.4	0.9	63.37	63.63	68.66	69.42	12.32	13.08
D	14	3.92	4.04	25.4	0.9	60.98	61.24	66.29	67.05	15.09	15.85
F	73	3.92	4.04	25.4	0.9	63.37	63.63	68.94	69.7	17.09	17.85

NOTES:

1. All dimensions are in millimetres.

FIGURE 2(d) - EMI SHIELDED BACKSHELL - STRAIGHT CABLE OUTLET

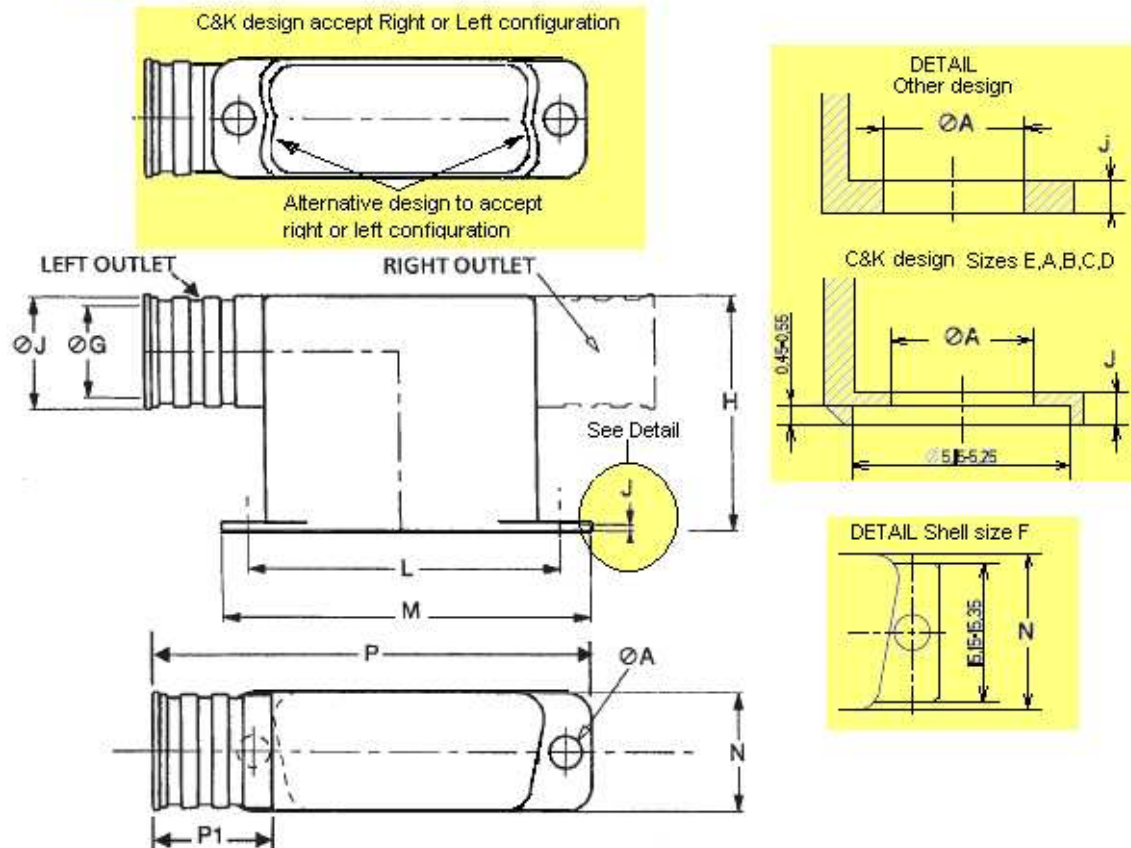


Shell Size	Variant		ØG		H MAX.	H ₁	J1	J2		M		P MAX
	FRONT MOUNT	REAR MOUNT	MIN	MAX				MIN	MAX	MIN	MAX	
E	15	20	6.48	6.98	33.02	12.7	0.51	0.55	0.65	15.73	16.23	2.2
A	16	21	9.65	10.15	33.02	12.7	0.51	0.55	0.65	15.73	16.23	2.2
B	17	22	10.29	10.79	38.61	12.7	0.51	0.55	0.65	15.73	16.23	2.2
C	18	23	10.29	10.79	38.61	12.7	0.51	0.55	0.65	15.73	16.23	2.2
D	19	24	13.08	13.58	38.61	12.7	0.51	0.55	0.65	18.45	19.04	2.2
F	74	75	15.15	15.65	38.61	12.7	0.51	0.55	0.65	20.55	21.05	2.2

Shell Size	Variant		L		R1				R2			
	FRONT MOUNT	REAR MOUNT	MIN	MAX	FRONT MOUNT		REAR MOUNT		FRONT MOUNT		REAR MOUNT	
					MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
E	15	20	34.78	35.28	7.61	7.87	6.19	6.45	7.75	7.8	5.25	5.3
A	16	21	43.11	43.61	7.61	7.87	6.19	6.45	7.75	7.8	5.25	5.3
B	17	22	57	57.5	7.61	7.87	6.19	6.45	7.75	7.8	5.25	5.3
C	18	23	73.28	73.78	7.61	7.87	6.19	6.45	7.75	7.8	5.25	5.3
D	19	24	70.89	71.39	7.61	7.87	6.19	6.45	7.75	7.8	5.25	5.3
F	74	75	73.25	73.75	7.61	7.87	6.19	6.45	7.75	7.8	5.25	5.3

NOTES:

1. All dimensions are in millimetres.

FIGURE 2(e) - LIGHTWEIGHT SHIELDED BACKSHELL -90 ° LONGITUDINAL CABLE OUTLET


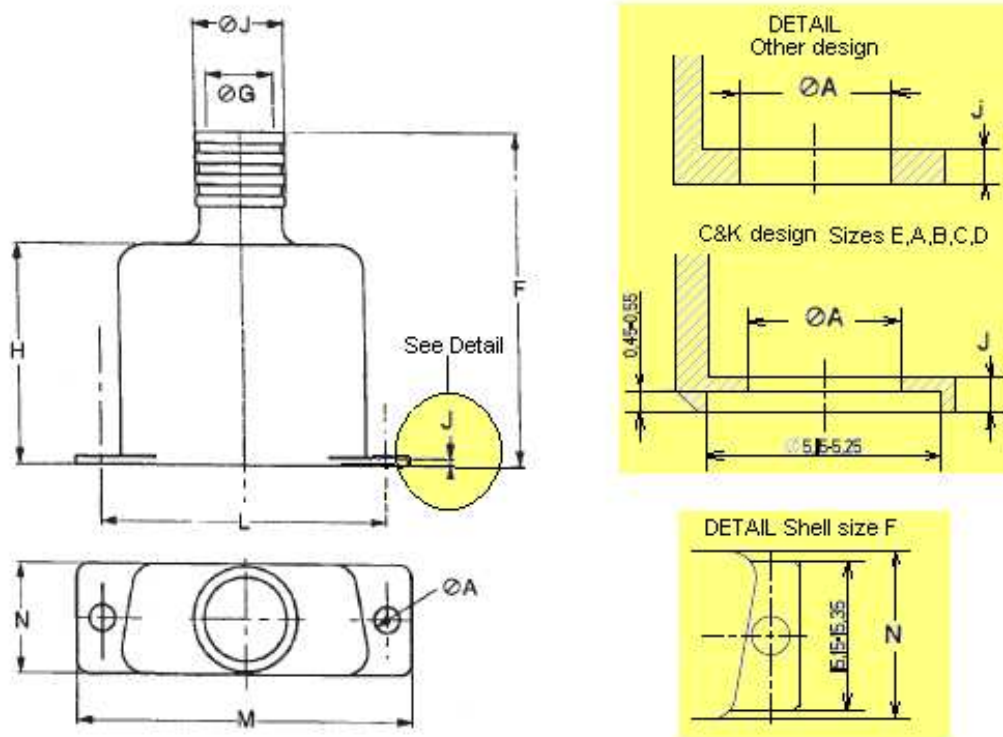
Shell Size	Variant		ØA		ØG		ØJ		H	
	Right Outlet	Left Outlet	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
E	25	30	3.91	4.03	6.47	7.23	8.51	9.26	24.64	26.16
A	26	31	3.91	4.03	9.65	10.41	11.88	12.44	24.64	26.16
B	27	32	3.91	4.03	10.28	11.04	12.32	13.08	24.64	26.16
C	28	33	3.91	4.03	10.28	11.04	12.32	13.08	24.64	26.16
D	29	34	3.91	4.03	13.05	13.81	15.08	15.84	24.64	26.16
F	76	76	3.91	4.03	15.05	15.81	17.08	17.84	34.64	36.16

Shell Size	Variant		J	L		M		N		P	P1
	Right Outlet	Left Outlet		MIN	MAX	MIN	MAX	MIN	MAX	MAX	
E	25	30	0.89	24.86	25.12	30.18	30.94	12.32	13.08	41.1	15
A	26	31	0.89	33.19	33.45	38.51	39.27	12.32	13.08	49.5	15
B	27	32	0.89	46.91	47.17	62.4	63.16	12.32	13.08	83.2	15
C	28	33	0.89	63.37	63.63	68.66	69.42	12.32	13.08	91	15
D	29	34	0.89	60.98	61.25	66.29	67.16	15.09	15.85	77.2	15
F	76	76	0.89	63.37	63.63	68.94	69.70	17.09	17.85	80.4	15

NOTES:

1. All dimensions are in millimetres.

FIGURE 2(f) - LIGHTWEIGHT SHIELDED BACKSHELL - STRAIGHT CABLE OUTLET



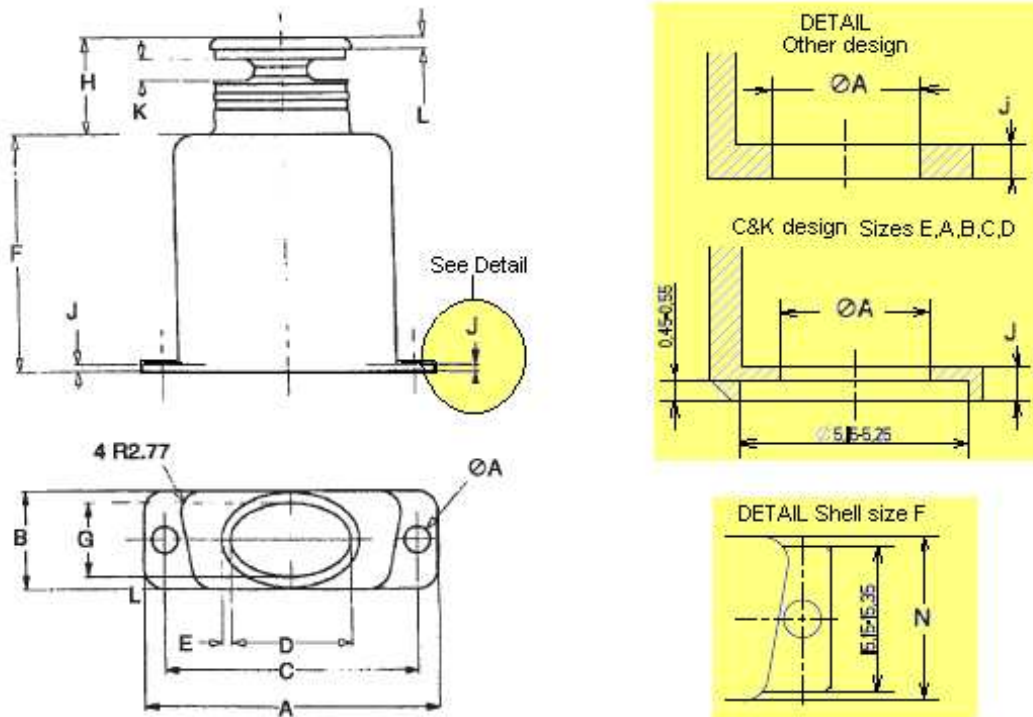
Shell Size	Variant	ØA		ØG		ØJ		F	H	J
		MIN	MAX	MIN	MAX	MIN	MAX			
E	35	3.91	4.03	6.47	7.23	8.51	9.27	38.10	25.4	0.89
A	36	3.91	4.03	9.65	10.41	11.68	12.44	38.10	25.4	0.89
B	37	3.91	4.03	10.28	11.04	12.32	13.08	38.10	25.4	0.89
C	38	3.91	4.03	10.28	11.04	12.32	13.08	38.10	25.4	0.89
D	39	3.91	4.03	13.05	13.81	15.08	15.84	38.10	25.4	0.89
F	77	3.91	4.03	15.05	15.81	17.08	17.84	38.10	25.4	0.89

Shell Size	Variant	L		M		N	
		MIN	MAX	MIN	MAX	MIN	MAX
E	35	24.86	25.12	30.18	30.94	12.32	13.08
A	36	33.19	33.45	38.51	39.27	12.32	13.08
B	37	46.91	47.17	52.4	53.16	12.32	13.08
C	38	63.37	63.63	68.66	69.42	12.32	13.08
D	39	60.98	61.25	66.29	67.16	15.09	15.85
F	77	63.37	63.63	68.94	69.7	17.09	17.85

NOTES:

1. All dimensions are in millimetres.

FIGURE 2(i) STRAIGHT LIGHTWEIGHT BACKSHELL ULTRA ELLIPTICAL BAND TERMINATION



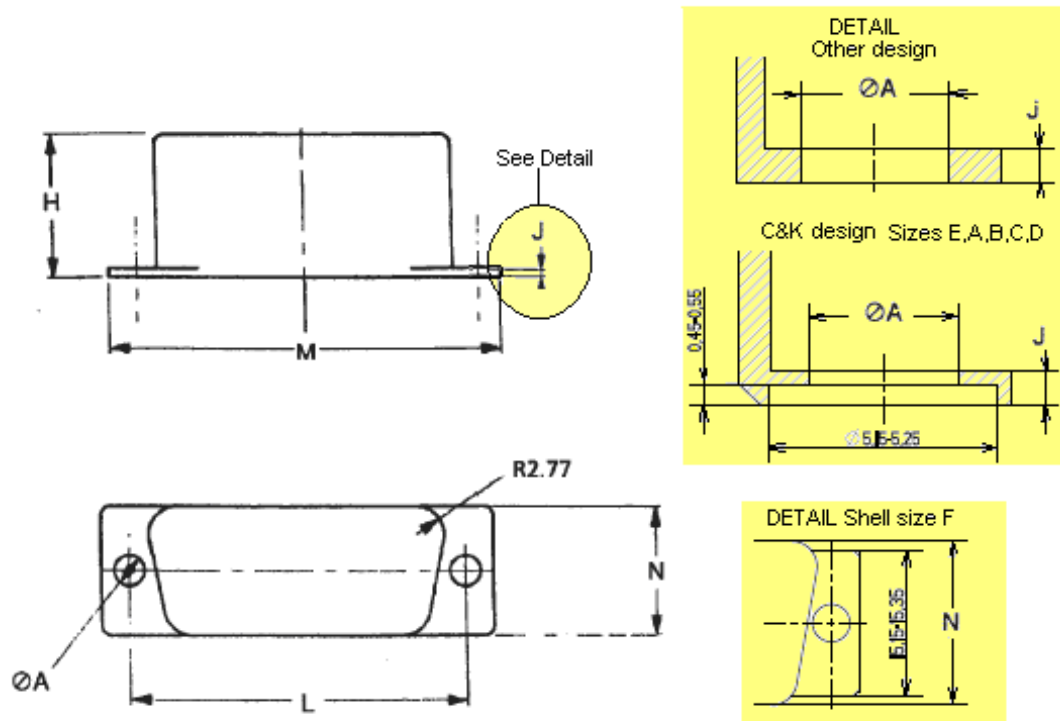
Shell Size	Variant	ØA		A		B		C		D	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
E	46	3.91	4.03	30.16	30.94	12.32	13.08	24.86	25.12	12.32	13.08
A	47	3.91	4.03	38.51	39.27	12.32	13.08	33.19	33.45	15.49	16.25
B	48	3.91	4.03	52.4	53.16	12.32	13.08	46.89	47.17	18.67	19.43
C	49	3.91	4.03	66.66	69.42	12.32	13.08	63.37	63.63	25.02	25.78
D	50	3.91	4.03	66.29	67.05	15.09	15.85	60.98	61.24	21.84	22.6
F	78	3.91	4.03	68.94	69.7	17.09	17.85	63.37	63.63	31.62	32.38

Shell Size	Variant	E	F	G	H	J	K	L
E	46	1.52	30.48	9.53	12.67	0.9	2.77	1.52
A	47	1.52	30.48	9.53	12.67	0.9	2.77	1.52
B	48	1.52	30.48	9.53	12.67	0.9	2.77	1.52
C	49	1.52	30.48	9.53	12.67	0.9	2.77	1.52
D	50	1.52	30.48	12.3	12.67	0.9	2.77	1.52
F	78	1.52	30.48	14.3	12.67	0.9	2.77	1.52

NOTES:

- All dimensions are in millimetres.

FIGURE 2(k) - LIGHTWEIGHT D-SUB EXTRA SHORTING CAN

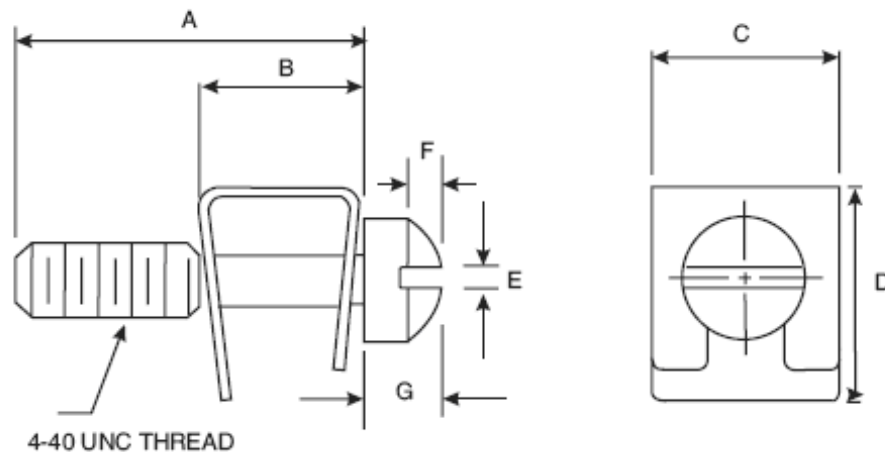


Shell Size	Variant	ØA		H	J	L		M		N	
		MIN.	MAX.			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
E	61	3.92	4.04	12.67	0.9	24.86	25.12	30.18	30.94	12.32	13.08
A	62	3.92	4.04	12.67	0.9	33.19	33.45	38.51	39.27	12.32	13.08
B	63	3.92	4.04	12.67	0.9	46.91	47.17	52.4	53.16	12.32	13.08
C	64	3.92	4.04	12.67	0.9	63.37	63.63	68.56	69.42	12.32	13.08
D	65	3.92	4.04	12.67	0.9	60.98	61.24	66.29	67.05	15.09	15.85
F	80	3.92	4.04	12.67	0.9	63.63	68.56	68.94	69.7	17.09	17.85

NOTES:

- All dimensions are in millimetres.

**FIGURE 2(l) - MALE SCREW LOCK ASSEMBLY
SLOTTED HEAD**



4.2.2 Deviations from Final Production Tests (Chart II)

Only the following tests shall be performed:

- (a) Para. 9.5, Magnetism
- (b) Para. 4.4, Marking.
- (c) Para. 9.6, Dimension Check.
- (d) Para. 9.7, External Visual Inspection. The magnification shall be X3.

4.2.3 Deviations from Burn-in and Electrical Measurements (Chart III)

Not applicable.

4.2.4 Deviations from Qualification Tests (Chart IV)

Not applicable.

4.2.5 Deviations from Lot Acceptance Tests (Chart V)

Not applicable.

4.3 MECHANICAL REQUIREMENTS

4.3.1 Dimension Check

The dimensions of the accessories specified herein shall be verified in accordance with the requirements set out in Para. 9.6 of ESCC Generic Specification No. 3401 and shall conform to those shown in Figure 2 of this specification.

4.3.2 Weight

The maximum weight of the accessories specified herein shall be as shown in Table 1(a) of this specification.

4.3.3 Torque Value

The torque value to be used for tightening the screws of the accessories specified herein shall be as mentioned in Table 1(b) of this specification.

4.4 MATERIALS AND FINISHES

The materials and finishes shall be as specified herein. Where a definite material is not specified, a material which will enable the components specified herein to meet the performance requirements of this specification shall be used. Acceptance or approval of any constituent material does not guarantee acceptance of the finished product.

4.4.1 Screw Lock Assemblies (Male and Female)

~~Potting shells and back shells:~~

Material shall be brass plated with gold (0.7µm minimum) over copper (1µm minimum) or passivated stainless steel.

4.4.2 Lightweight Backshell

Shell and Clamps (if applicable) : Material shall be aluminium alloy plated with gold (0.7µm minimum) over **Nickel (20 µm minimum)**

Screws : Material shall be brass plated with gold (0,7 µm minimum) over copper (1 µm minimum)