

**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, Non-Filtered, Circular and Rectangular.
- (b) ESCC Detail Specification No. [3401/029](#), Connectors Electrical Rectangular Microminiature, based on type MDM.
- (c) ESCC Detail Specification No. [3401/032](#), Accessories for Connectors, Microminiature, [3401/029](#), [3401/077](#) and Connector Savers [3401/041](#).
- (d) ESCC Detail Specification No. [3401/077](#), Connectors, Electrical, Rectangular, Microminiature, Removable Crimp Contacts, Based on Type MDMA.
- (e) A-A-59551, Wire, Electrical, Copper, Uninsulated.
- (f) MIL-DTL-45204, Gold Plating, Electro-deposited.
- (g) MIL-DTL-14550, Copper Plating, Electro-deposited.
- (h) MIL-DTL-83513, Connectors, Electrical, Rectangular, Microminiature, Polarised Shell, Generic Specification for.

**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**

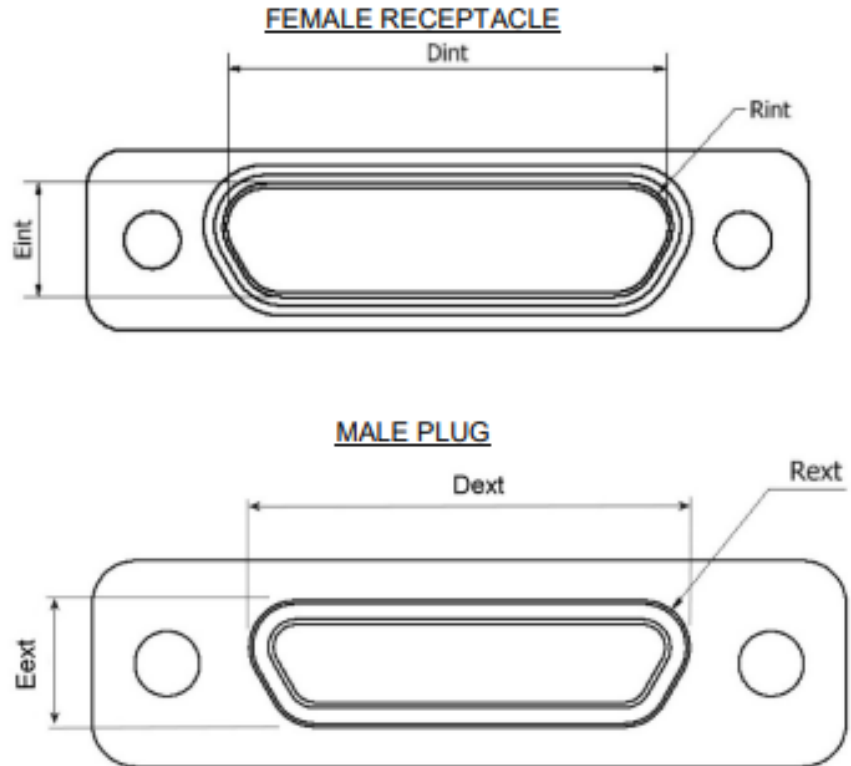
Variant	Shell Size Notes 1, 3	Max. Weight (g) Note 2	Max. Mating Force (N)	Unmating Force (N)	
				Max.	Min.
01	9	4	25	25	1.3
02	15	5.5	42	42	2
03	21	7	58	58	2.9
04	25	8	70	70	3.5
05	31	9.5	86	86	4.3
06	37	10	103	103	5.1
07	51	13.5	142	142	7.1
08	69	19.4	192	192	9.6
09	100	26.7	278	278	13.9
10	51-2R	13.5	142	142	7.1

**NOTES:**

- 1. Contacts are fixed in the connector saver.
- 2. Connector saver with contacts and without screw-locks.
- 3. Variants 08, 09 (shell sizes 69, 100) only apply to ESCC Detail Specification No. [3401/029](#).

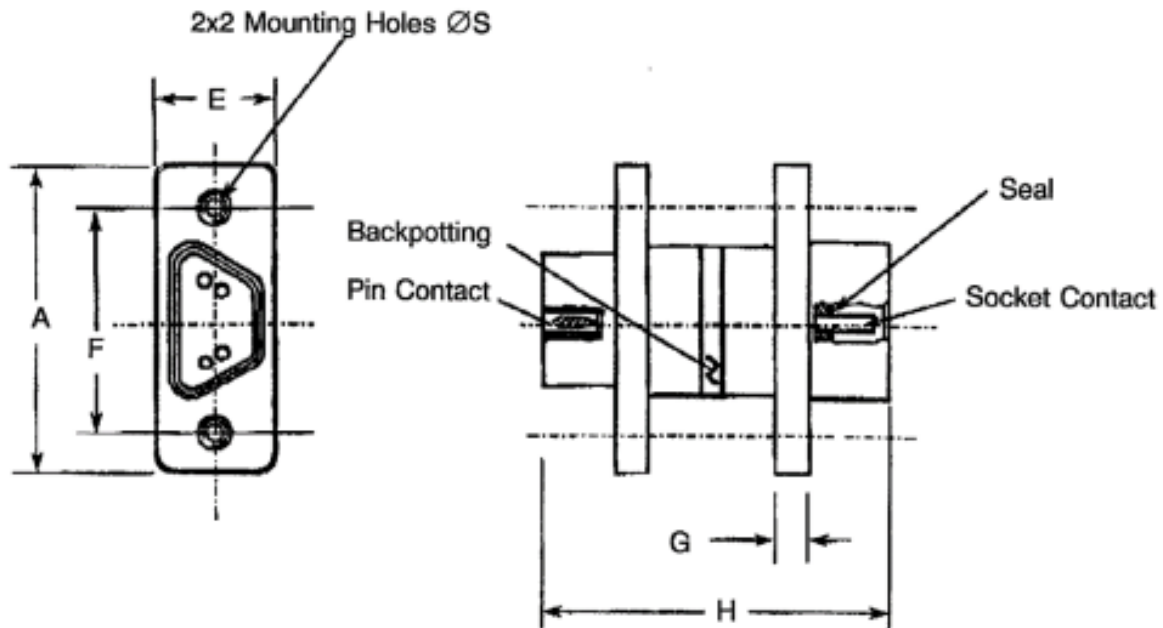
**FIGURE 2 - PHYSICAL DIMENSIONS**

**FIGURE 2.0 – MALE AND FEMALE INTERFACE DIMENSIONS**



Variant	Shell Size	<u>Dint</u> Min	<u>Eint</u> Min	<u>Rint</u> Min	<u>Dext</u> Max	<u>Eext</u> Max	<u>Rext</u> Max
01	9	8.49	4.7	1.704	8.48	4.69	1.699
02	15	12.3	4.7	1.704	12.29	4.69	1.699
03	21	16.11	4.7	1.704	16.1	4.69	1.699
04	25	18.65	4.7	1.704	18.64	4.69	1.699
05	31	22.46	4.7	1.704	22.45	4.69	1.699
06	37	26.27	4.7	1.704	26.26	4.69	1.699
07	51	25	5.8	1.704	24.99	5.78	1.699
08	69	32.67	5.85	1.704	32.61	5.79	1.699
09	100	35.19	6.78	1.704	35.15	6.88	1.699
10	51-2R	35.16	4.7	1.704	35.15	4.69	1.699

FIGURE 2.1 - CONNECTOR SAVER DIMENSIONS

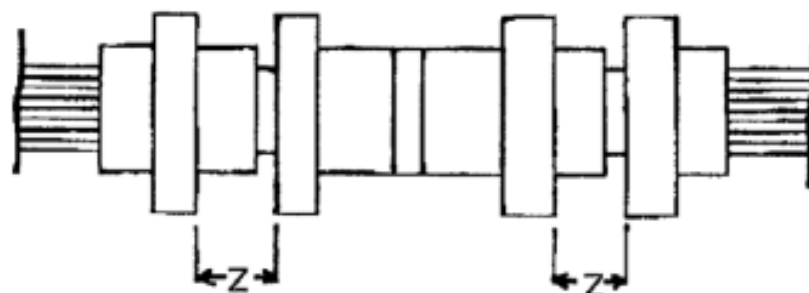


Variant	Size	A	E	F		G		H	$\varnothing S$	
		Max.	Max.	Min.	Max.	Min.	Max.	Typical	Min.	Max.
01	09	19.94	7.82	14.22	14.48	2.23	2.49	22.86	2.23	2.44
02	15	23.75	7.82	18.03	18.29	2.23	2.49	22.86	2.23	2.44
03	21	27.56	7.82	21.84	22.1	2.23	2.49	22.86	2.23	2.44
04	25	30.1	7.82	24.38	24.64	2.23	2.49	22.86	2.23	2.44
05	31	33.91	7.82	28.19	28.45	2.23	2.49	22.86	2.23	2.44
06	37	37.72	7.82	32	32.26	2.23	2.49	22.86	2.23	2.44
07	51	36.45	8.92	30.73	30.99	2.23	2.49	22.86	2.23	2.44
08	69	44.07	8.92	38.35	38.61	2.23	2.49	22.86	2.23	2.44
09	100	55.12	10.01	45.59	45.85	2.23	2.49	22.86	3.73	3.86
10	51-2R	46.61	7.82	40.89	41.15	2.23	2.49	22.86	2.23	2.44

**NOTES:**

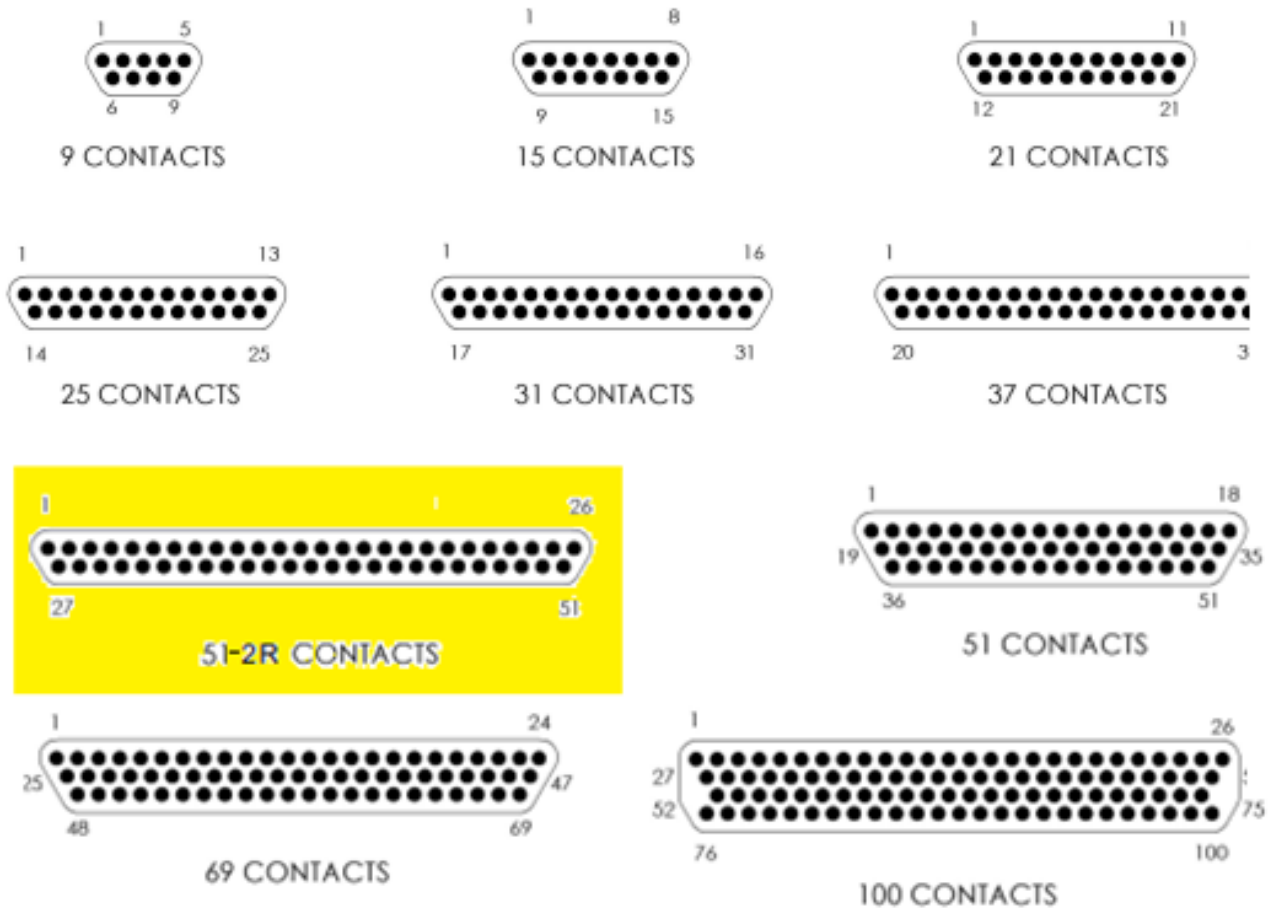
1. All dimensions are in millimetres.

FIGURE 2.2 - CONTACT POSITION  
FIGURE 2.2.1 - MOUNTING CONDITION



**FIGURE 3 - CONTACT ARRANGEMENTS**

FRONT VIEW OF MALE INSERT - USE MIRROR VIEW FOR FEMALE INSERT

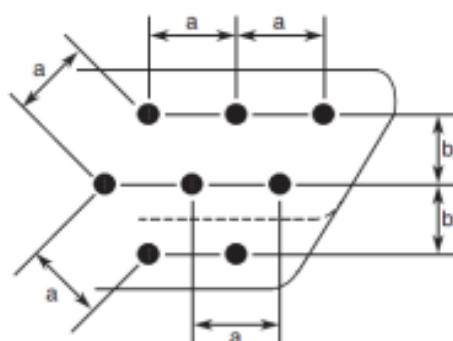


**NOTES:**

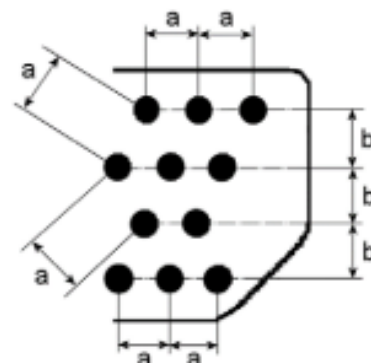
1. Only the outside contact cavities on each row are identified in the drawing, the remainder follow sequentially. Contact numbers are shown outside the insert for readability.

CONTACT CENTRES

9 to 69 Contacts (2 Rows / 3 Rows)



100 Contacts (4 Rows)



**NOTES:**

1. a = Distance between contact centres: 1.27mm (typical).
2. b = Distance between rows: 1.09mm (typical).

## 4.5 MARKING

### 4.5.1 General

The marking of components delivered to this specification shall be in accordance with the requirements of ESCC Basic Specification No. 21700 and the following paragraphs. When the component is too small to accommodate all of the marking specified, as much as space permits shall be marked and the marking information, in full, shall accompany the component in its primary package.

The information to be marked and the order of precedence shall be as follows:

- (a) The ESCC Component Number.
- (b) Characteristics.
- (c) Traceability Information.

### 4.5.2 The ESCC Component Number

Each component shall bear the ESCC Component Number which shall be constituted and marked as follows:

Example: 340104101B

- Detail Specification Number: 3401041
- Type Variant (See Table 1(a)): 01
- Testing Level: B

### 4.5.3 Characteristics

The characteristics to be marked in the following order of precedence are:

- (a) Shell Size.
- (b) Type of Contact.

The information shall be constituted and marked as follows (example): 9PS

- Shell size: 9
- Type of Contact: PS

#### 4.5.3.1 *Shell Size*

Shell size shall be designated by the number of contacts. Specified numbers are: 9, 15, 21, 25, 31, 37, 51, 51-2R, 69 and 100.

#### 4.5.3.2 *Type of Contact*

The contact types shall be indicated by the following code letters:

Code Letter	Contact Type
PS	Male/Female

### 4.5.4 Traceability Information

Traceability information shall be marked in accordance with the requirements of ESCC Basic Specification No. 21700.

## 4.6 ELECTRICAL MEASUREMENTS

### 4.6.1 Electrical Measurements at Room Temperature

The parameters to be measured in respect of electrical characteristics are scheduled in Table 2. Unless otherwise specified, the measurements shall be performed at  $T_{amb} = +22 \pm 3$  °C.