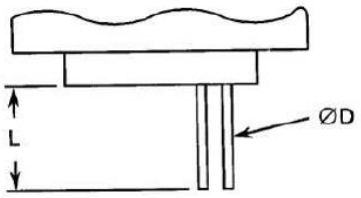
FIGURE 2.4 - UNINSULATED SOLID WIRES



Wire Size (AWG)	25
Max Diameter D (mm)	0.51
Min Diameter D (mm)	0.4
Max Weight (g/m)	1.6
Min. Length L	See Para. 4.5.3.3

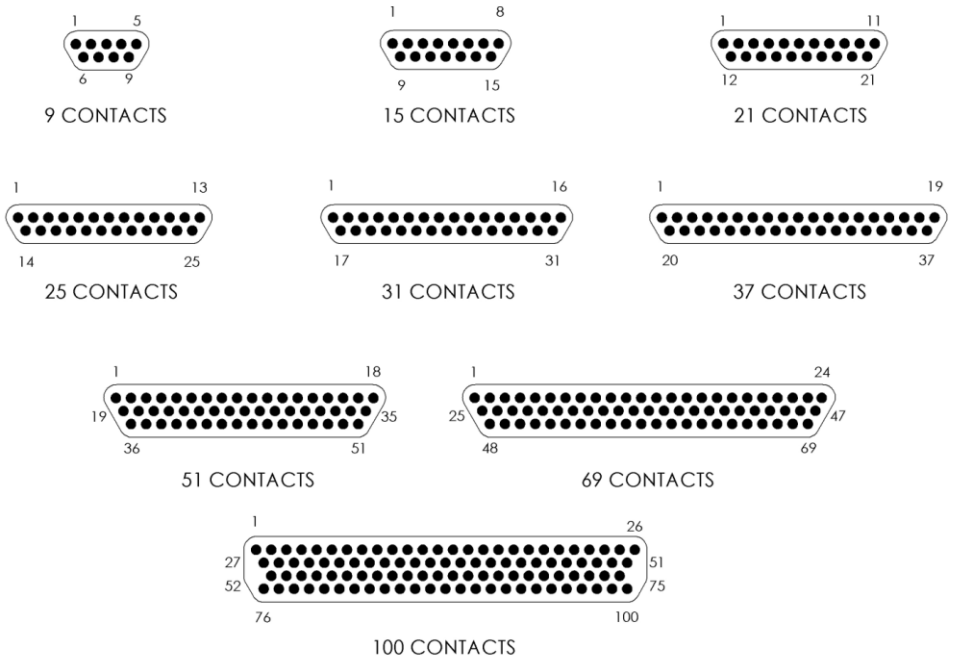
Commented [SJ1]: Editorial change: the gold plating thickness details are moved to Para. 4.4.6

FIGURE 2.5 - INSULATED WIRES

		ESCC 3901/002		ESCC 3901/013		ESCC 3901/012	
		Wire Size (AWG)					
		26	28	26	28	26	28
Conductor Characteristics	Maximum Diameter (mm)	0.53	0.43	0.5	0.42	0.53	0.38
	Nominal Cross-section (mm^2)	0.15	0.1	0.14	0.1	0.15	0.089
Wire Characteristics	Maximum Diameter (mm)	0.78	0.68	0.89	0.82	0.86	0.7
	Maximum Weight (g/m)	1.93	1.23	2.3	1.8	2.11	1.35
	Colour	Black	Brown	Natural	Blue	Red	White
	Minimum Length	See Para. 4.5.3.3					

FIGURE 3 - CONTACT ARRANGEMENTS

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

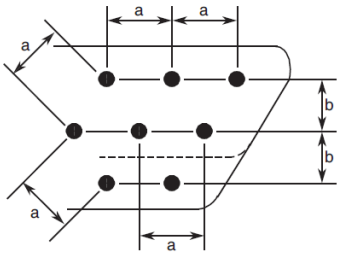


NOTES:

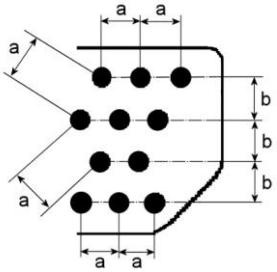
1. Only the outside contact cavities on each row are identified in the drawing, the remainder follow sequentially. Contact numbers are shown outside the insert for readability.

CONTACT CENTRES

9 to 69 Contacts (2 Rows / 3 Rows)



100 Contacts (4 Rows)



Commented [SJ2]: Editorial changes, ref. email from C&K (Olivier Masson) 4/10/2018. Addition of 4 row drawing for contact centres.

NOTES:

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

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. 3401/032, Accessories for Connectors, Microminiature, 3401/029, 3401/077 and Connector Savers 3401/041.
(c) ESCC Detail Specification No. 3401/087, Lightweight Accessories for Rectangular, Microminiature Connectors, 3401/029 and 3401/077.
(d) ESCC Detail Specification No. 3901/002, Polyimide Insulated Wires and Cables, Low Frequency, 600V, -100 to +200°C.
(e) ESCC Detail Specification No. 3901/012, Extruded, Cross-linked Fluoropolymer Insulated Wires and Cables on Silver-Plated Copper Conductor, Low Frequency, 600V, -100 to +200°C.
(f) ESCC Detail Specification No. 3901/013, PTFE Insulated Wires and Cables, 600V, -100 to +200°C.
(g) A-A-59551, Wire, Electrical, Copper (Uninsulated).
(h) MIL-DTL-45204, Gold Plating, Electro-deposited.
(i) SAE-AMS 2418, Copper Plating.
(j) MIL-DTL-83513, Connectors Electrical, Rectangular, Microminiature, Polarised Shell, General Specification for.

Commented [SJ3]: Editorial change, ref. email from C&K (Olivier Masson) 04/10/2018. A-A-59551 is the official replacement for the obsolete QQ-W-343.

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.

4 REQUIREMENTS

4.1 GENERAL

The complete requirements for procurement of the connectors specified herein are stated in this specification and ESCC Generic Specification No. 3401. Deviations from the Generic Specification, applicable to this specification only, are listed in Para. 4.2.

Deviations from the applicable Generic Specification and this Detail Specification, formally agreed with specific Manufacturers on the basis that the alternative requirements are equivalent to the ESCC requirements and do not affect the components' reliability, are listed in the appendices attached to 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 Shells

Shells shall be made of aluminium alloy. Variant 01 shall have a minimum plating thickness of 25.4µm of electroless nickel. The plating for Variant 02 shall be 0.7µm minimum of gold with 25.4µm minimum of electroless nickel underplating.

4.4.2 Inserts

Inserts shall be made of glass fibre-filled diallylphthalate resin or suitable thermoplastic material.

4.4.3 Contacts

4.4.3.1 Female Contacts

The contact body material and finish shall either be copper alloy with an underplate of 1µm minimum of copper to SAE-AMS 2418, gold plated with 1.27µm minimum of gold Type 2 Grade C of MIL-DTL-45204, or Type N2 with underplating in accordance with Para 3.3 note 3(b) of ESCC Basic Specification No. 23500. Measurement of thickness shall be performed at a distance of 1.5mm from the engagement end.

4.4.3.2 Male Contacts

The contact body and the bundle material and finish shall either be copper alloy with an underplate of 1µm minimum of copper to SAE-AMS 2418, gold plated with 1.27µm minimum of gold Type 2 Grade C of MIL-DTL-45204, or Type M2 with underplating in accordance with Para 3.3 note 3(b) of ESCC Basic Specification No. 23500. Measurement of thickness shall be performed at a distance of 1.5mm from the engagement end.

4.4.4 Interfacial Seals

Interfacial seals shall be made of silicon base rubber.

4.4.5 Insulated Wires

Wire materials and finishes shall be in accordance with the requirements specified in Para. 4.4 of ESCC Detail Specifications No. 3901/002, 3901/012 and 3901/013.

4.4.6 Uninsulated Solid Wire

Uninsulated solid wire material and finish shall either be copper alloy in accordance with Type S as specified in A-A-59551, gold-plated in accordance with Class 00 (i.e. thickness 0.5µm minimum) Grade C or D as specified in MIL-DTL-45204, or Type A14 (except the thickness of the gold-plating shall be 0.25µm minimum) in accordance with ESCC Basic Specification No. 23500.

Commented [SJ4]: Editorial change, ref. email from C&K (Olivier Masson) 04/10/2018. A-A-59551 is the official replacement for the obsolete QQ-W-343.

Commented [SJ5]: Editorial change: Text added for clarification purposes (also the gold plating thickness details are removed from Figure 2.4)

4.4.7 Rear Potting

Rear potting shall be made of epoxy resin. For connectors Type FR136, Type FR136A and Type FR139, the rear container shall be made from glass-fibre filled diallylphthalate resin or suitable thermoplastic material.