DOCUMENT CHANGE REQUEST

DCR number 316	Changes required for: N/A	Originator: Olivier Masson Chief
Date: 2007/02/01	Date sent: 2007/02/01	Organisation: CNES
Status: IMPLEMENTED		

Title:	Contacts Power Crimp-Type and Solder Type for 3401/001 and 3401/002 Connectors		
Number:	3401/040	Issue:	3

Other documents affected:

Page:

Pages 6, 10, 12 and 13 modified.
One new page added.

Paragraph:

Pages 6, 10, 12 and 13 modified.
One new page added.

Original wording:

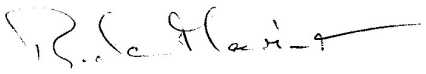
Proposed wording:

See attached draft of the new and modified pages.

Justification:

90 PC and Straight PC power contact ESA qualified requested by European Customers (ETCA for example).

ITT current qualification is valid until August 2007.
We would like to introduce these variantes in our requalification programm.

Attachments:
3401040_p13.pdf, 3401040_p10.pdf, 3401040_p12.pdf, null
Modifications:
and the following:) Page 1, Spec Title: amend to include " ... AND PCB-TYPE FOR ..." 2) Page 6 & 11, Para 1.1 & 2. Amend titles of 3401/001 & 3401/002 to reflect the latest titles. 3) Page 6, Table 1(a). Manufacturer to advised the maximum weights for new Variants 13 to 16. 4) New Figure 2(c). Figure should be in the same format as used in Fig 2(a) & 2(b) i.e. Dimension letter & Table format. Title should be: "FIGURE 2(c) - STRAIGHT AND 90deg PCB TYPE" 5) Page 10, Fig 2(c) should be renumbered: "FIGURE 2(d)"
Approval signature:

Date signed:
2007-02-01

4.3.6 Female Contact Capability (Variants 02, 04, 06, 08, 10, 12, 14, 16)

For the purposes of this test, the pick-up and drop weights shall be as follows.

	Pick-up Weight	Drop Weight
Weight	567gr	85gr
Pin Diameter	3.63mm	3.58mm
Insertion Depth	3.17mm	3.17mm

4.3.7 Oversize Pin Exclusion

Not applicable.

4.3.8 Probe Damage Test

Not applicable.

4.4 MATERIAL AND FINISHES

The materials and finishes shall be as specified herein. Where a definite material is not specified, a material which will enable the contacts specified herein to meet the performace 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 Contact Body

The contacts shall be made of copper base alloy selected from raw materials with a minimum of impurities. The contacts shall be plated as specified in MIL-G-45204, Type II, Grade 'C', gold over copper in accordance with MIL-C-14550. Gold plating thickness shall be 1.27µm minimum over 1µm minimum of copper.

4.5 MARKING

4.5.1 General

The marking of all components delivered to this specification shall be in accordance with the requirements of ESCC Basic Specification No. 21700 and the following subparagraphs. These components being the too small to accommodate the marking as specified hereafter, the marking requirements in full shall accompany each lot of components in its primary package. Such marking shall comprise:-

(a) The ESCC Component Number.

(b) Traceability Information.

(c) Quantity of Components.

4.5.2 The ESCC Component Number

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

340104001B

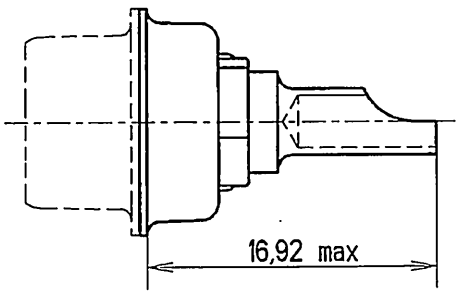
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FIGURE 2 – PHYSICAL DIMENSIONS (CONTINUED)

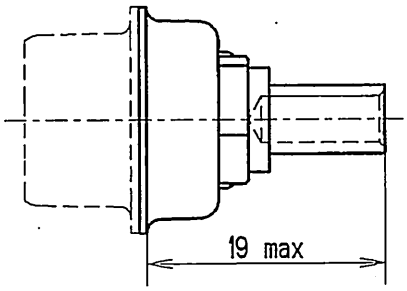
FIGURE 2(c) - PROTRUSION AND RECESS

MAXIMUM PROTRUSION OF CONTACTS RELATIVE TO REAR OF SHELL FLANGE

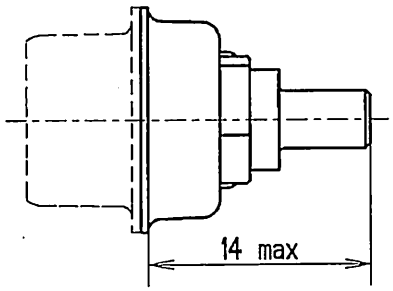
Variants 01 to 06



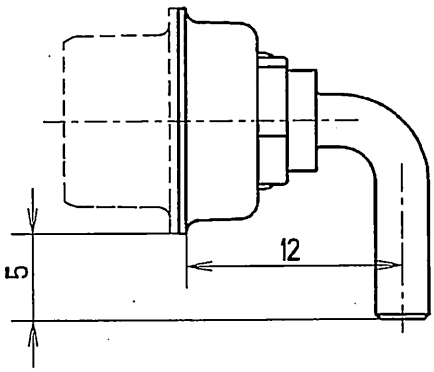
Variants 07 to 12



Variants 13 & 14

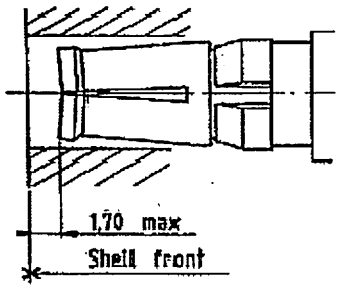


Variants 15 & 16

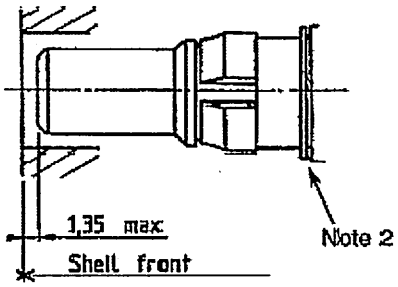


MAXIMUM RECESS OF CONTACTS RELATIVE TO FRONT OF SHELL

Even-numbered Variants



Odd-numbered Variants



NOTES

1. All dimensions are in millimetres.
2. The washer is optional (no change of the insert: the assembling dimension is compensated on the contact).

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4.3 MECHANICAL REQUIREMENTS

4.3.1 Dimension Check

The dimensions of the contacts specified herein shall be verified in accordance with the requirements set out in Para. 9.11 of ESCC Generic Specification No. 3401 and shall conform to those shown in Figure 2.

4.3.2 Weight

The maximum weight of the contacts specified herein shall be as specified in Table 1(a).

4.3.3 Crimp Tensile Strength or Pull Test

4.3.3.1 Crimp Tensile Strength (Variants 07 to 12)

The contacts shall be crimped to stranded wire of the appropriate size as shown below. The contact and the wire shall be separated from each other, using a tensile strength machine. The values of the force at separation of the contact and wire and the method of failure shall be recorded and shall be in accordance with the following values:

Variant	Wire Size (AWG)	Minimum Value of Tensile Strength (daN)
07/08	8	>50
09/10	10	>50
11/12	12 - 14	>30

i.e. "pull-out", "break in crimp", "break in wire".

4.3.3.2 Pull Test (Variants 01 to 06)

The contacts shall be soldered to stranded wire of the appropriate size shown in Table 1(a) of this specification. The wire shall break before the solder. If the solder breaks before the wire, examine the solder pot for incomplete covering.

4.3.4 Gold Plate Thickness

The thickness of the gold plate deposited on the contacts specified herein shall be checked and meet the requirements of Subpara. 4.4.1. Measurements shall be performed on active parts as specified in Figure 2.

4.3.5 Contact Insertion and Withdrawal Forces ((Variants 02, 04, 06, 08, 10, 12, 14, 16)

The contact insertion and withdrawal forces of the female contacts shall be as specified hereunder.

	Maximum Diameter Test Pin 3.532(+0-0.0025) mm	Minimum Diameter Test Pin 3.581(+0.0025-0) mm

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