



**CONNECTORS, ELECTRICAL, FOR PRINTED  
CIRCUIT BOARDS, REMOVABLE CONTACTS,  
CRIMP, WIRE-WRAP, SOLDER AND,  
SAVER  
BASED ON TYPE HE801**

**ESCC Detail Specification No. 3401/016**

**ISSUE 1  
October 2002**



|   |                           |  |                    |
|---|---------------------------|--|--------------------|
|  | ESCC Detail Specification |  | PAGE ii<br>ISSUE 1 |
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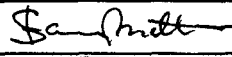
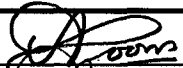
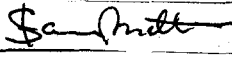

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**space components  
coordination group**

| Issue/Rev.   | Date          | Approved by  |   |
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|              |               | SCCG Chairman  | ESA Director General<br>or his Deputy   |
| Issue 6      | April 1998    |  |  |
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|              |               |  |   |

**DOCUMENTATION CHANGE NOTICE**

| Rev. Letter | Rev. Date | Reference   | CHANGE Item   | Approved DCR No. |
|-------------|-----------|---|---|------------------|
|             |           | This Issue supersedes Issue 5 and incorporates all changes agreed in the following DCRs:- |   |                  |
|             |           | Cover page  |   | None             |
|             |           | DCN   |   | None             |
|             |           | Table 1(a)  | : In Inserts, Plugs and Receptacles, Codes 09 and 21 "Not to be used" and columns 05 and 16 deleted                                   | 221419           |
|             |           |   | : In Guiding and Locking Devices, New Code 80 added   | 221419           |
|             |           |   | : In Intermateability, Inserts and Guiding Devices, Codes 09 and 21 columns deleted horizontally and vertically                       | 221419           |
|             |           |   | : In Intermateability, Inserts and Locking Devices, Codes 09 and 21 columns deleted horizontally and vertically and new Code 80 added | 221419           |
|             |           | Figure 2(a)   | : Code 09, Deleted in toto  | 221419           |
|             |           |   | : Code 12, Dimension "L" amended in the Drawing   | 221418           |
|             |           |   | : Code 15, Dimensions "A" and "B" amended in the Table  | 221418           |
|             |           |   | : Code 17, Contact Locations "52" and "53" replaced by "64" and "65" respectively in the Drawing                                      | 221418           |
|             |           |   | : Code 18, Dimensions "H" and "N" deleted from the Table  | 221418           |
|             |           |   | : Code 20, Dimension "N" deleted from the Table   | 221418           |
|             |           |   | : Code 21, Deleted in toto  | 221419           |
|             |           |   | : Code 24, Dimension "L" amended in the Drawing   | 221418           |
|             |           |   | , Dimension "N" deleted from the Table  | 221418           |
|             |           |   | : Code 25, Dimension "L" amended in the Drawing   | 221418           |
|             |           |   | , Dimension "N" deleted from the Table  | 221418           |
|             |           |   | : Code 56, Subtitle amended to "PLUG ...."  | 221418           |
|             |           |   | : Code 58, Dimension "L" amended in the Drawing   | 221418           |
|             |           |   | : Code 59, Dimension "L" amended in the Drawing   | 221418           |
|             |           |   | , Dimension "N" deleted from the Table  | 221418           |
|             |           |   | : Code 60, Dimension "L" amended in the Drawing   | 221418           |
|             |           |   | : Code 61, Dimension "L" amended in the Drawing   | 221418           |
|             |           |   | , Dimension "M" added to the Drawing  | 221418           |
|             |           |   | , Dimension "N" deleted from the Table  | 221418           |
|             |           |   | : Code 62, Dimension "L" amended in the Drawing   | 221418           |
|             |           |   | , Dimension "M" clarified in the Drawing  | 221418           |
|             |           |   | : Code 63, Dimension "L" amended in the Drawing   | 221418           |
|             |           |   | , Dimension "M" clarified in the Drawing  | 221418           |
|             |           |   | , Dimension "N" deleted from the Table  | 221418           |
|             |           | Figure 2(b)   | : Code 80 added   | 221419           |
|             |           | Figure 2(c)   | : For Solder Contacts, Items 3 and 4 Subtitle amended   | 221419           |
|             |           |   | , Item 3 Table amended  | 221419           |
|             |           | Para. 4.2.2   | : Deviation "(e)" added   | 221419           |
|             |           | Para. 4.3.4   | : Text totally rewritten  | 221419/<br>23887 |
|             |           | Para. 4.5.4.3   | : Last sentence amended   | 221419           |
| 'A'         | Nov. '00  | P1. Cover page  |   | None             |
|             |           | P2. DCN   |   | None             |
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|             |           | P9. Table 1(a)  | : Code No. 81 added to Intermateability Chart, Inserts and Locking Devices  | 221591           |
|             |           | P61A. Figure 2(b)   | : New page added to include Code 81 devices   | 221591           |



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**APPENDICES (Applicable to specific Manufacturers only)**

None

**1. GENERAL****1.1 SCOPE**

This specification details the ratings, physical and electrical characteristics, test and inspection data of Electrical Connectors for Printed Circuit Boards, Removable Contacts, Crimp, Wire-wrap, Solder and Saver, Based on Type HE801. It shall be read in conjunction with:

- ESA/SCC Generic Specification No. 3401, Connectors, Electrical, Non-Filtered, Circular and Rectangular.
- ESA/SCC Detail Specification No. 3401/017, Contacts, Electrical, Crimp, Wire-Wrap, Solder and Saver, for 3401/016 Connectors,

the requirements of which are supplemented herein.

Crimp contacts are delivered separately from the inserts.

Wire-Wrap, solder and saver contacts are delivered mounted in the inserts.

**N.B.**

Saver contacts may be mounted in other plug or receptacle inserts.

**1.2 RANGE OF COMPONENTS**

The different configurations of the connectors and contacts specified herein, guiding and locking devices, compatibilities between inserts and contacts, between inserts and guiding devices and between inserts and locking devices are given in Table 1(a).

**1.3 MAXIMUM RATINGS**

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

**1.4 PARAMETER DERATING INFORMATION**

The applicable derating information for the connectors specified herein is shown in Figure 1.

**1.5 PHYSICAL DIMENSIONS**

The physical dimensions of the connectors, plugs and receptacles, guiding and locking devices specified herein and the contact mounting configurations are shown in Figures 2(a), 2(b) and 2(c).

**2. APPLICABLE DOCUMENTS**

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

- (a) ESA/SCC Generic Specification No. 3401, Connectors, Electrical, Non-Filtered, Circular and Rectangular.
- (b) ESA/SCC Detail Specification No. 3401/017, Contacts, Electrical, Crimp, Wire-Wrap, Solder and Saver for 3401/016 Connectors.

**3. TERMS, DEFINITIONS, ABBREVIATIONS, SYMBOLS AND UNITS**

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



**TABLE 1(a) - RANGE OF COMPONENTS**  
**INSERTS, PLUGS AND RECEPTACLES**

| CODE No. | DESCRIPTION                   | CONTACT INSERTION AND REMOVAL | COMPATIBILITY BETWEEN INSERTS AND CONTACTS |    |                    |    |    |    |    |    |                           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |   |   |   |   |   |   |   |   |  |
|----------|-------------------------------|-------------------------------|--|----|--------------------|----|----|----|----|----|---------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--|---|---|---|---|---|---|---|---|--|
|          |                               |                               | CRIMP CODE No.                             |    | WIRE-WRAP CODE No. |    |    |    |    |    | SOLDER AND SAVER CODE No. |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |   |   |   |   |   |   |   |   |  |
|          |                               |                               | 04   | 15 | 10                 | 11 | 21 | 22 | 01 | 02 | 03                        | 06 | 07 | 08 | 12 | 13 | 14 | 17 | 18 | 19 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |   |  |   |   |   |   |   |   |   |   |  |
| 01       | Plug 2 rows 17 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  |   |  | X | X | X | X | X | X | X |   |  |
| 02       | Plug 2 rows 29 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 03       | Plug 2 rows 41 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 04       | Plug 2 rows 53 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 05       | Plug 2 rows 65 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 06       | Plug 2 rows 65 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 07       | Plug 2 rows 84 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 08       | Plug 2 rows 96 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 09       | Not to be used                | Rear & Front                  |  |    |                    |    |    |    |    |    |                           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |   |   |   |   |   |   |   |   |  |
| 10       | Plug 2 rows 120 cts           | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 11       | Not to be used                |                               |  |    |                    |    |    |    |    |    |                           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |   |   |   |   |   |   |   |   |  |
| 12       | Plug 3 rows 160 cts           | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 13       | Receptacle 2 rows 17 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 14       | Receptacle 2 rows 29 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 15       | Receptacle 2 rows 41 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 16       | Receptacle 2 rows 53 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 17       | Receptacle 2 rows 65 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 18       | Receptacle 2 rows 65 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 19       | Receptacle 2 rows 84 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 20       | Receptacle 2 rows 96 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 21       | Not to be used                | Rear & Front                  |  |    |                    |    |    |    |    |    |                           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |   |   |   |   |   |   |   |   |  |
| 22       | Receptacle 2 rows 120 cts     | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 23       | Not to be used                |                               |  |    |                    |    |    |    |    |    |                           |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |   |   |   |   |   |   |   |   |  |
| 24       | Receptacle 3 rows 160 cts     | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 25       | Receptacle 3 rows 160 cts (1) | Front                         |  |    |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 56       | Plug 2 rows 72 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 57       | Receptacle 2 rows 72 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 58       | Plug 3 rows 62 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 59       | Receptacle 3 rows 62 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 60       | Plug 3 rows 80 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 61       | Receptacle 3 rows 80 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 62       | Plug 3 rows 98 cts            | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 63       | Receptacle 3 rows 98 cts      | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |
| 64       | Plug 3 rows 160 cts shrouded  | Rear                          | X  | X  |                    | X  | X  | X  | X  |    |                           | X  | X  | X  | X  |    |    | X  | X  | X  | X  | X  | X  | X  | X  | X  | X  | X |  |   | X | X | X | X | X | X | X |  |

**NOTES**

1. Not to be used for new design. Replace by Code 24.





**TABLE 1(a) - RANGE OF COMPONENTS (CONTINUED)**

GUIDING AND LOCKING DEVICES

| CODE No.       | DESCRIPTION    | For thick PCB (mm)   | For connectors 2 or 3 rows | For all (X) inserts or code 25 |    |
|----------------|----------------|--|----------------------------|--------------------------------|----|
| GUIDING DEVICE | 26             | Unpolarised male guide<br>Transverse mounting                | 1.6                        | 2                              | X  |
|                | 27             | Unpolarised male guide<br>Transverse mounting                | 1.6                        | 3                              | X  |
|                | 28             | Unpolarised male guide<br>Vertical mounting                  | -                          | 2 or 3                         | X  |
|                | 29             | Unpolarised female guide<br>Vertical mounting                | -                          | 2 or 3                         | X  |
|                | 30             | Unpolarised female guide<br>Vertical mounting                | -                          | 3                              | 25 |
|                | 31             | Unpolarised male guide<br>Transverse mounting                | -                          | 2                              | X  |
|                | 32             | Unpolarised female guide<br>Transverse mounting              | -                          | 2                              | X  |
|                | 33             | Polarised male guide<br>Transverse mounting                  | 1.6                        | 2                              | X  |
|                | 34             | Polarised male guide<br>Transverse mounting                  | 1.6                        | 3                              | X  |
|                | 35             | Polarised male guide<br>Vertical mounting                    | -                          | 2 or 3                         | X  |
|                | 36             | Polarised female guide<br>Vertical mounting (on ends/centre) | -                          | 2 or 3                         | X  |
|                | 37             | Polarised female guide<br>Vertical mounting (on ends)        | -                          | 3                              | 25 |
|                | 38             | Polarised female guide<br>Vertical mounting (on centre)      | -                          | 3                              | 25 |
|                | 39             | Polarised male guide<br>Vertical mounting                    | -                          | 3                              | 25 |
|                | 40             | Polarised male guide<br>Transverse mounting                  | -                          | 2                              | X  |
|                | LOCKING DEVICE | 42   | Rotating jack socket lock  | -                              | 3  |
| 43             |                | Non rotating jack screw lock<br>Transverse mounting          | 1.6                        | 3                              | X  |
| 44             |                | Non rotating jack screw lock<br>Vertical mounting            | -                          | 3                              | 25 |

| CODE No.       | DESCRIPTION    | For thick PCB (mm)  | For connectors 2 or 3 rows                           | For all (X) inserts or code 25 |        |
|----------------|----------------|---|--|--------------------------------|--------|
| LOCKING DEVICE | 45             | Rotating jack socket lock                                     | -  | 2 or 3                         | X      |
|                | 46             | Non rotating jack screw lock<br>Vertical mounting             | -  | 2 or 3                         | X      |
|                | 47             | Rotating jack screw lock<br>with polarised guide              | -  | 2 or 3                         | X      |
|                | 48             | Jack socket lock/ polarised guide<br>Transverse mounting      | 1.6  | 2                              | X      |
|                | 49             | Jack socket lock/ polarised guide<br>Transverse mounting      | 1.6  | 3                              | X      |
|                | 50             | Jack socket lock/ polarised guide<br>Vertical mounting        | -  | 2 or 3                         | X      |
|                | 51             | Rotating jack screw lock<br>with polarised guide              | -  | 2                              | X      |
|                | 52             | Jack screw lock<br>Transverse mounting                        | -  | 2                              | X      |
|                | 53             | Jack screw lock<br>Vertical mounting                          | -  | 2 or 3                         | X      |
|                | GUIDING DEVICE | 54  | Polarised female guide<br>Vertical floating mounting | -                              | 2 or 3 |
| 55             |                | Polarised male guide<br>Vertical floating mounting            | -  | 2 or 3                         | X      |
| 71             |                | Unpolarised male guide<br>Transverse mounting                 | 2.4  | 2                              | X      |
| 72             |                | Polarised male guide<br>Transverse mounting                   | 2.4  | 2                              | X      |
| LOCKING DEVICE | 73             | Non rotating jack screw lock<br>Transverse mounting           | 2.4  | 2                              | X      |
| GUIDING DEVICE | 74             | Polarised female guide<br>Transverse mounting                 | -  | 3                              | X      |
|                | 75             | Unpolarised female guide<br>Transverse mounting               | -  | 3                              | X      |
|                | 76             | Polarised male guide<br>Transverse mounting                   | 2.4<br>3.2   | 3                              | X      |
|                | 77             | Unpolarised male guide<br>Transverse mounting                 | 2.4<br>3.2   | 3                              | X      |
|                | LOCKING DEVICE | 78  | Rotating jack socket lock                            | -                              | 2 or 3 |
| 79             |                | Jack socket lock with polarised<br>guide                      | 1.6  | 2                              | X      |
| 80             |                | Jack socket lock with polarised<br>guide<br>Vertical mounting | -  | 2 or 3                         | X      |
| 81             |                | Rotating jack screw lock with<br>polarised guide              | -  | 2 or 3                         | X      |



**TABLE 1(a) - RANGE OF COMPONENTS (CONTINUED)**

INTERMATEABILITY CHART, INSERTS AND GUIDING DEVICES

- Compatible
- Compatible only when used in centre of insert
- Compatible only when used on end of insert
- Mateable

|  |  |  |  |  |  |  |  |  |  |  |  |                               |            |         |      |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|-------------------------------|------------|---------|------|-----------------|--------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  | Reading Way<br>↑<br>↓                        |  |  |  |  |  | 63                            | RECEPTACLE | INSERTS |      |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 61                            |            |         | PLUG |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 59                            |            |         |      | GUIDING DEVICES |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 57                            |            |         |      |                 | FEMALE |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 25                            |            |         |      |                 |        | Code |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 24                            |            |         |      |                 |        |      | Code |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 22                            |            |         |      |                 |        |      |      | Code |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 20                            |            |         |      |                 |        |      |      |      | Code |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 19                            |            |         |      |                 |        |      |      |      |      | Code |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 18                            |            |         |      |                 |        |      |      |      |      |      | Code |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 17                            |            |         |      |                 |        |      |      |      |      |      |      | Code |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 16                            |            |         |      |                 |        |      |      |      |      |      |      |      | Code |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 15                            |            |         |      |                 |        |      |      |      |      |      |      |      |      | Code |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 14                            | Code       |         |      |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 13                            |            | Code    |      |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 64                            |            |         | Code |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 62                            |            |         |      | Code            |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 60                            |            |         |      |                 | Code   |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 58                            |            |         |      |                 |        | Code |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 56                            |            |         |      |                 |        |      | Code |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 12                            |            |         |      |                 |        |      |      | Code |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 10                            |            |         |      |                 |        |      |      |      | Code |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 08                            |            |         |      |                 |        |      |      |      |      | Code |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 07                            |            |         |      |                 |        |      |      |      |      |      | Code |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 06                            |            |         |      |                 |        |      |      |      |      |      |      | Code |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 05                            |            |         |      |                 |        |      |      |      |      |      |      |      | Code |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 04                            | Code       |         |      |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 03                            |            | Code    |      |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 02                            |            |         | Code |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 01                            |            |         |      | Code            |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 31                            |            |         |      |                 | Code   |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 28                            |            |         |      |                 |        | Code |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 77                            |            |         |      |                 |        |      | Code |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 71                            |            |         |      |                 |        |      |      | Code |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 27                            |            |         |      |                 |        |      |      |      | Code |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 26                            |            |         |      |                 |        |      |      |      |      | Code |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 55                            |            |         |      |                 |        |      |      |      |      |      | Code |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 40                            |            |         |      |                 |        |      |      |      |      |      |      | Code |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 39                            |            |         |      |                 |        |      |      |      |      |      |      |      | Code |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 35                            | Code       |         |      |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 76                            |            | Code    |      |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 72                            |            |         | Code |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 34                            |            |         |      | Code            |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 33                            |            |         |      |                 | Code   |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 63 61 59 57 25 24 22 20 19 18 17 16 15 14 13 |  |  |  |  |  | 64 62 60 58 56 12 10 08 07 06 05 04 03 02 01 |  |  |  |  |  | 75 32 30 29 54 74 41 38 37 36 |            |         |      |                 |        | Code |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RECEPTACLE                                   |  |  |  |  |  |  |  |  |  |  |  |                               |            |         |      |                 |        |      | PLUG |      |      |      |      |      |      |      |  |  |  |  |  | GUIDING DEVICES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| INSERTS                                      |  |  |  |  |  |  |  |  |  |  |  |                               |            |         |      |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  | FEMALE          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ← Reading Way →                              |  |  |  |  |  |  |  |  |  |  |  |                               |            |         |      |                 |        |      |      |      |      |      |      |      |      |      |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**NOTES**

1. Instructions for reading Table on Page 10.



**TABLE 1(a) - RANGE OF COMPONENTS (CONTINUED)**

INTERMATEABILITY CHART, INSERTS AND LOCKING DEVICES


- Compatible
- Compatible only when used on end of insert
- Mateable

|             |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|-------------|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|------------|---------|--|------|
| Reading Way | 63 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | RECEPTACLE | INSERTS |  |      |
|             | 61 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 59 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 57 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 25 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 24 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 22 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 20 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 19 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 18 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 17 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 16 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 15 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 14 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 13 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 64 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  | PLUG |
|             | 62 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 58 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
|             | 56 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
| 12          |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
| 10          |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
| 08          |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
| 07          |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
| 06          |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
| 05          |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
| 04          |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
| 03          |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
| 02          |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |
| 01          |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |            |         |  |      |

|             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |    |    |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |                           |      |
|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|----|----|----|----|----|----|----|----|----|------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|---------------------------|------|
| 63          | 61 | 59 | 57 | 25 | 24 | 22 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 64   | 62 | 60 | 58 | 56 | 12 | 10 | 08 | 07 | 06 | 05                     | 04 | 03 | 02 | 01 | 80 | 79 | 78 | 53 | 52 | 50 | 49 | 48 | 45 | 42 | Code | LOCKING DEVICES<br>FEMALE | MALE |
| RECEPTACLE  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | PLUG |    |    |    |    |    |    |    |    |    | LOCKING DEVICES FEMALE |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |                           |      |
| INSERTS     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |    |    |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |                           |      |
| Reading Way |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |    |    |    |    |    |    |    |    |    |                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |                           |      |

**NOTES**

- Instructions for reading Table on Page 10.


|  |  |                                      |   |
|--|--|--------------------------------------|---|
|  | <p style="text-align: center;">ESA/SCC Detail Specification<br/>No. 3401/016</p> | <p style="text-align: center;">-</p> | <p style="text-align: right;">PAGE 10<br/>ISSUE 6</p> |
|--|--|--------------------------------------|---|

**TABLE 1(a) - RANGE OF COMPONENTS (CONTINUED)**

**READING EXAMPLE FOR THE COMPATIBILITY TABLES OF INSERTS AND GUIDING AND LOCKING DEVICES**


Having, for instance, 120 contacts, 2-row connectors, the plug is identified as code 10 and the receptacle is identified as code 22 (see Table 1(a) Range of Components - Intermateability Chart - Inserts and guiding devices), you wish to have male guiding devices mounted on your plug.

Male guiding devices appear on the right hand lower side of the table, so you would read the table horizontally to find which of the male guides may be mounted on plug code 10 (bottom centre) : you look for a device with

a  or a  for end guides, you have the possibility to mount male guides codes 33, 72, 35, 40 or 55.

a  for centre guides, you have the possibility to mount male devices code 26, 71, 28 or 31.


You now need to find the female guides that may be mounted on the opposite receptacle and also that mate with the above male guides that may be mounted on the plug.

Female guiding devices appear at the bottom right hand side of the table. Reading the table vertically upwards, you will find a  which indicates mateability with the opposite guide.

For female end guides, codes 36 and 41 mate with all the male guides mentioned above, codes 37 and 38 only mate with code 35, code 74 mates with 35 and 55, code 54 mates with codes 35, 40 and 55.

For female centre guides, codes 74, 30 and 75 mate with code 28, codes 29 and 32 mate with codes 26, 71, 28 and 31.

Are these codes compatible with receptacle code 22 (Top right of table)?

Where you have identified a mating possibility (  ), read the table vertically upwards to arrive at receptacle code 22.

You see that you may use female devices 36, 41 or 54 on the end of the receptacle and 29 or 32 for the centre.

The same reading method applies to locking devices.

When the customer does not specify any guiding or locking device, the connectors shall be delivered with the following devices:-

PLUGS are equipped with male devices

- On the ends of 2 row plug      code 33
- On the centre of 2 row plug    code 26
- On the ends of 3 row plug      code 34
- On the centre of 3 row plug    code 27

RECEPTACLES are equipped with female devices

- On the ends                        code 36
- On the centre                    code 29



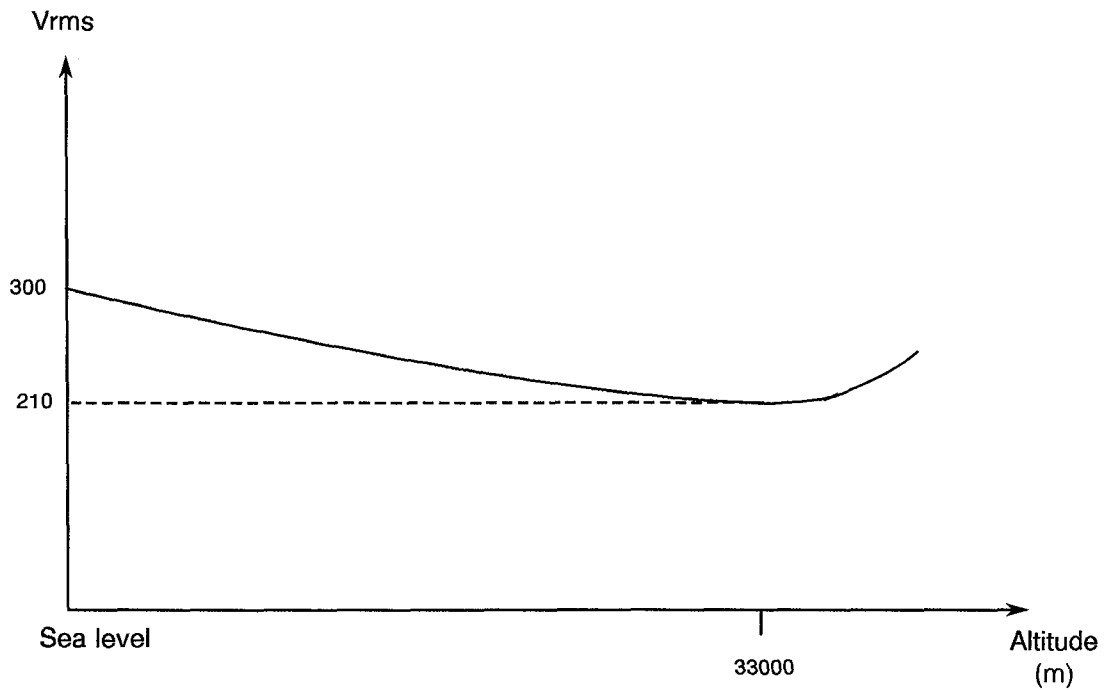
**TABLE 1(b) - MAXIMUM RATINGS**

| NO. | CHARACTERISTIC              | SYMBOL           | MAXIMUM RATING | UNIT | REMARKS |
|-----|-----------------------------|------------------|----------------|------|---------|
| 1   | Working Voltage Sea Level   | V                | 300            | Vrms | Note 1  |
| 2   | Rated Current               | I                | 5.0            | A    |         |
| 3   | Operating Temperature Range | T <sub>op</sub>  | -55 to +125    | °C   |         |
| 4   | Storage Temperature Range   | T <sub>stg</sub> | -55 to +125    | °C   |         |
| 5   | Soldering Temperature       | T <sub>sol</sub> | +260           | °C   | Note 2  |

**NOTES**

1. Between contacts.
2. Duration 10 seconds maximum and the same contact shall not be resoldered until 3 minutes have elapsed.

**FIGURE 1 - PARAMETER DERATING INFORMATION**



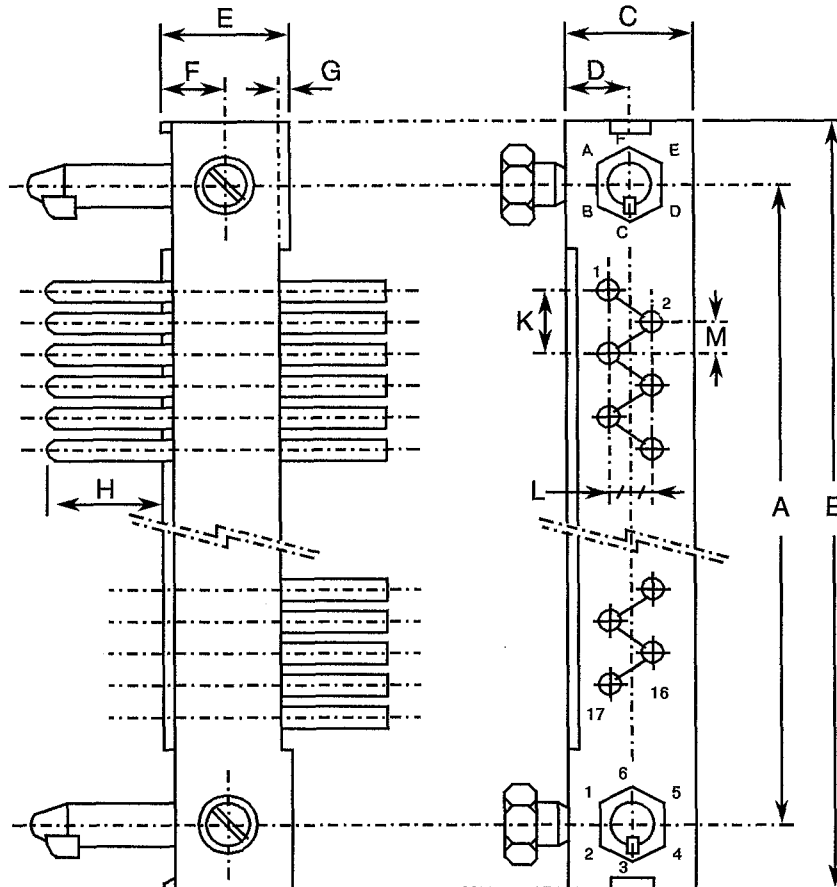
Working Voltage versus Altitude



**FIGURE 2 - PHYSICAL DIMENSIONS**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES**

**CODE 01 - PLUG, 2 ROWS, 17 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 30.33       | 30.63 |
| B      | 38.00       | 38.50 |
| C      | 6.30        | 6.40  |
| D      | 3.10        | 3.30  |
| E      | 7.75        | 8.05  |
| F      | 3.80        | 4.00  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |

**NOTES**

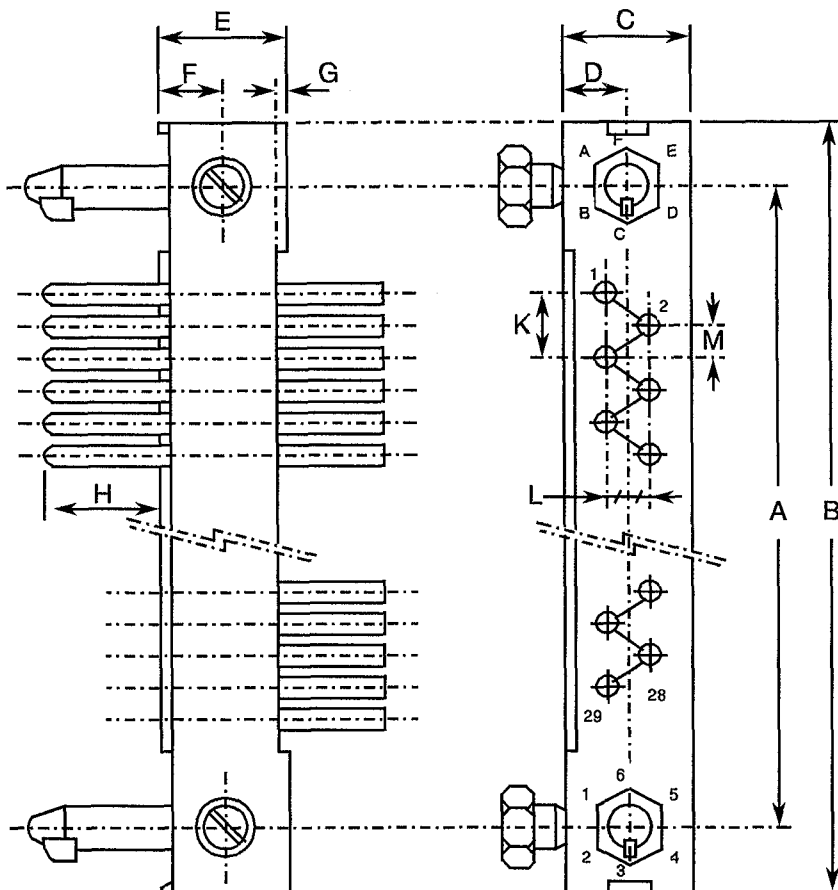
1. Weight: 2.3g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS (CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 02 - PLUG, 2 ROWS, 29 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 45.57       | 45.87 |
| B      | 53.20       | 53.70 |
| C      | 6.30        | 6.40  |
| D      | 3.10        | 3.30  |
| E      | 7.75        | 8.05  |
| F      | 3.80        | 4.00  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |

**NOTES**

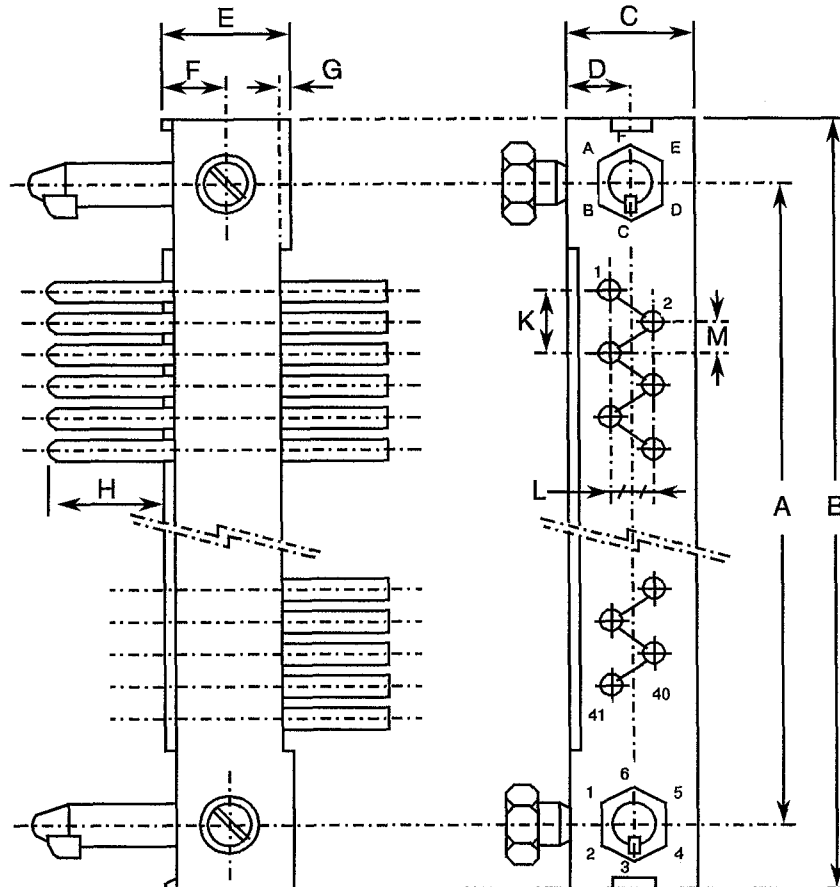
- Weight: 3.1g.
- Orientation of labelling of contacts and guiding devices is not a true representation.
- The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS (CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 03 - PLUG, 2 ROWS, 41 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 60.81       | 61.11 |
| B      | 68.50       | 69.00 |
| C      | 6.30        | 6.40  |
| D      | 3.10        | 3.30  |
| E      | 7.75        | 8.05  |
| F      | 3.80        | 4.00  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |

**NOTES**

1. Weight: 3.8g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

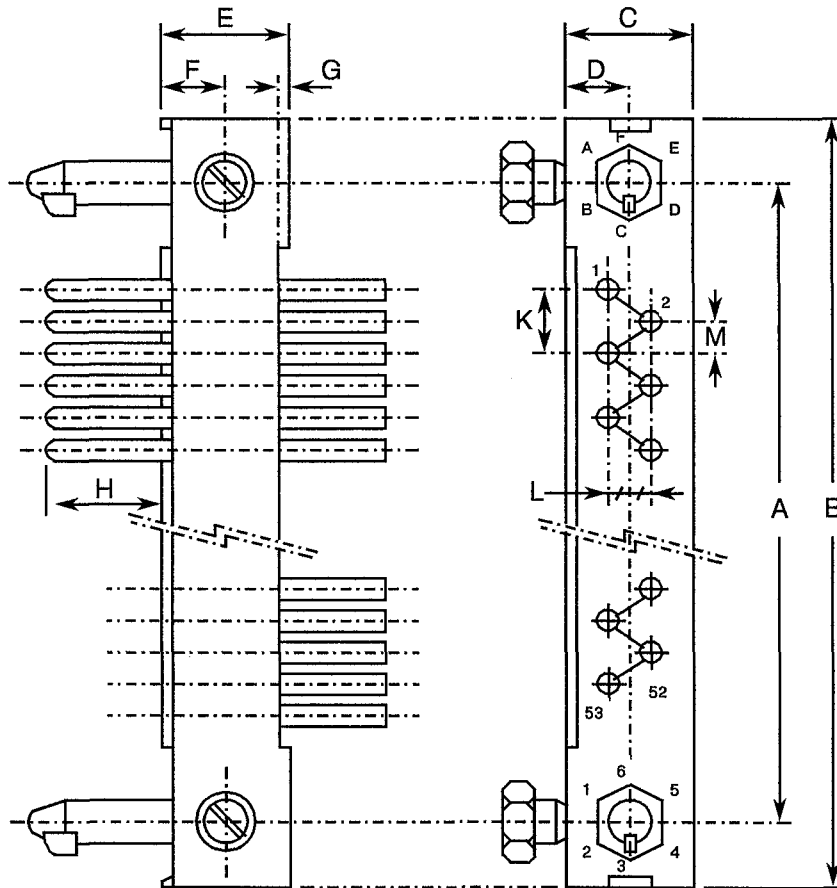




**FIGURE 2 - PHYSICAL DIMENSIONS (CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 04 - PLUG, 2 ROWS, 53 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 76.05       | 76.35 |
| B      | 83.70       | 84.20 |
| C      | 6.30        | 6.40  |
| D      | 3.10        | 3.30  |
| E      | 7.75        | 8.05  |
| F      | 3.80        | 4.00  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |

**NOTES**

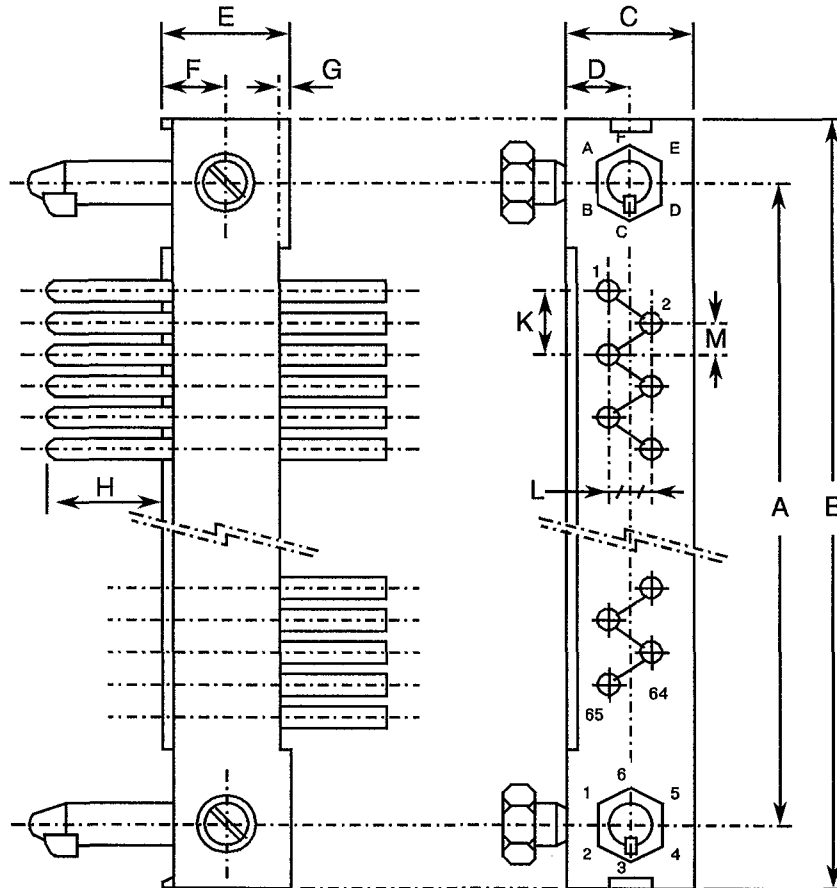
1. Weight: 4.7g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS (CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 05 - PLUG, 2 ROWS, 65 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 91.29       | 91.59 |
| B      | 99.00       | 99.50 |
| C      | 6.30        | 6.40  |
| D      | 3.10        | 3.30  |
| E      | 7.75        | 8.05  |
| F      | 3.80        | 4.00  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |

**NOTES**

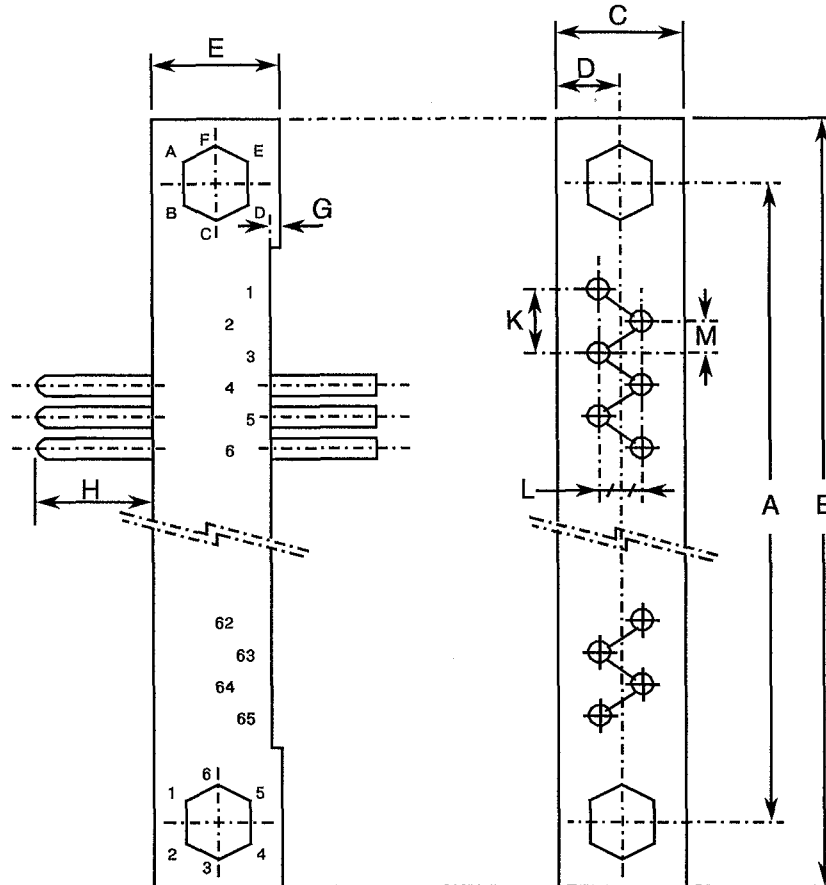
1. Weight: 5.5g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 06 - PLUG, 2 ROWS, 65 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 91.29       | 91.59 |
| B      | 99.00       | 99.50 |
| C      | 6.30        | 6.40  |
| D      | 3.10        | 3.30  |
| E      | 7.45        | 7.75  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |

**NOTES**

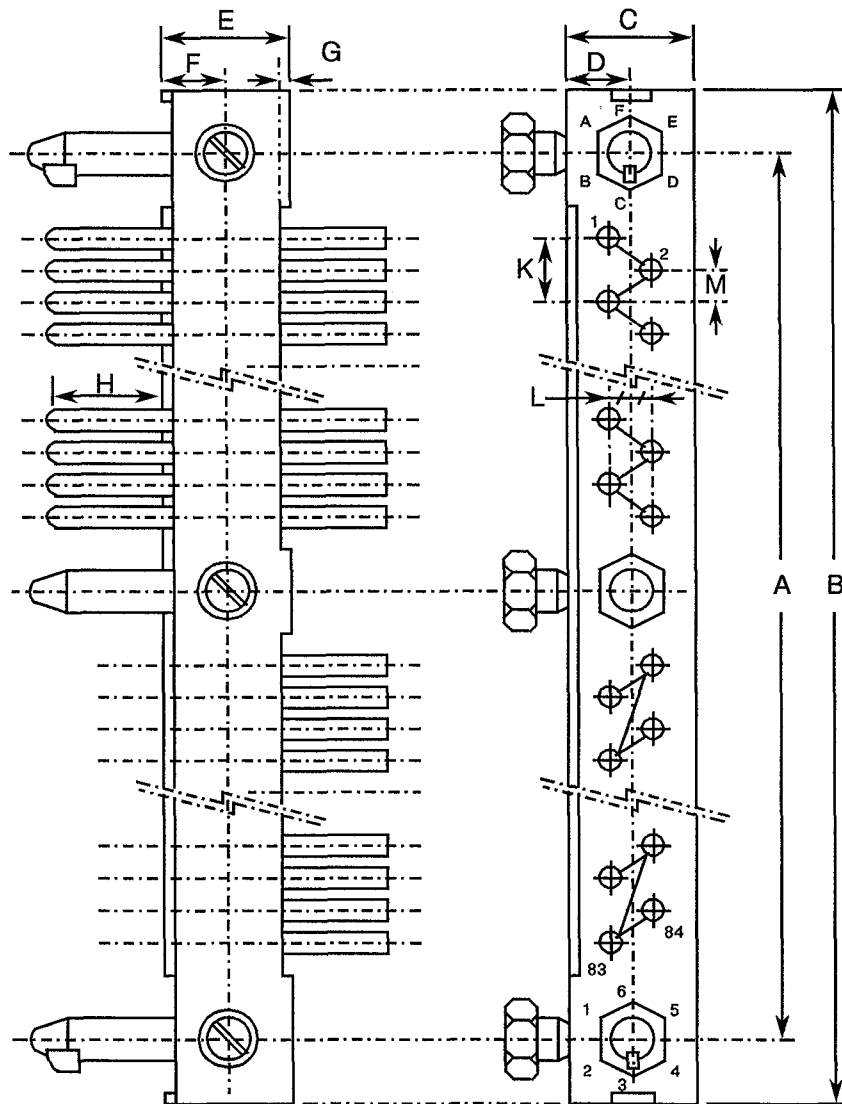
1. Weight: 5.5g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The side of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 07 - PLUG, 2 ROWS, 84 CONTACTS**



| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 121.77      | 122.07 |
| B      | 129.40      | 129.90 |
| C      | 6.30        | 6.40   |
| D      | 3.10        | 3.30   |
| E      | 7.75        | 8.05   |
| F      | 3.80        | 4.00   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |

**NOTES**

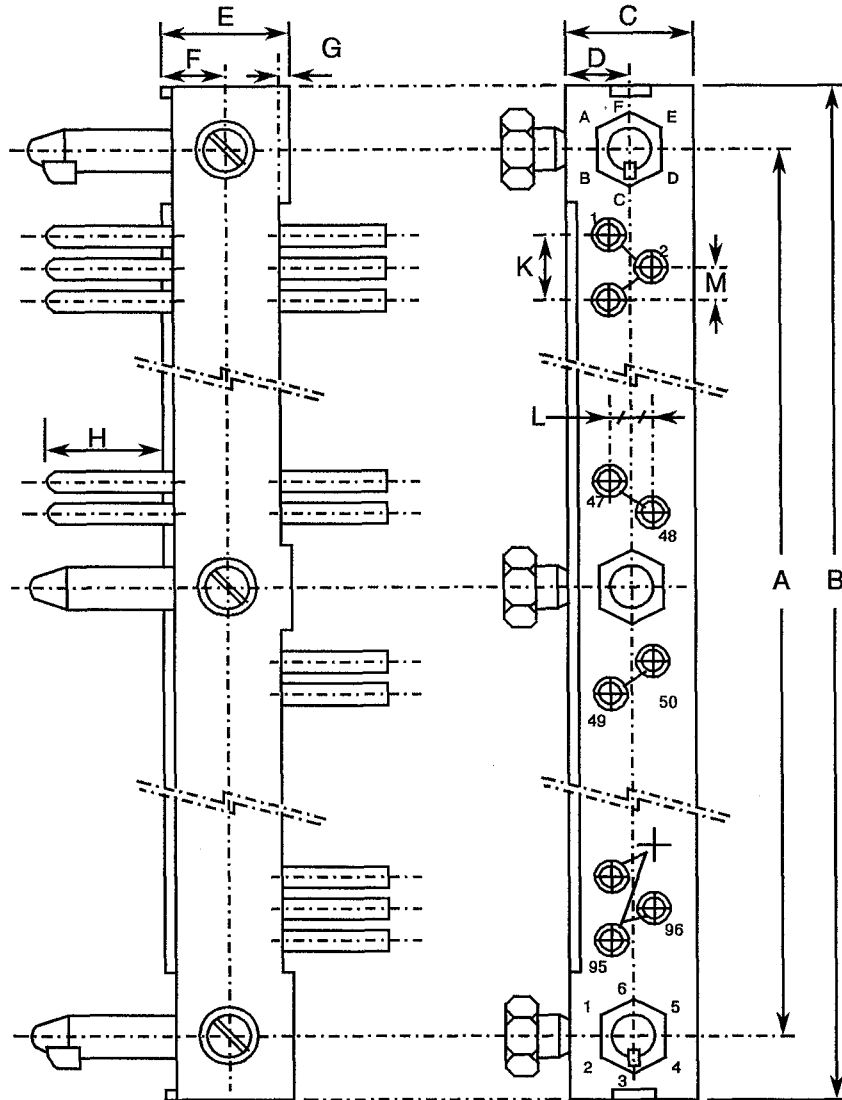
1. Weight: 7.1g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)

FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)

CODE 08 - PLUG, 2 ROWS, 96 CONTACTS



| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 137.01      | 137.31 |
| B      | 144.70      | 145.20 |
| C      | 6.30        | 6.40   |
| D      | 3.10        | 3.30   |
| E      | 7.75        | 8.05   |
| F      | 3.80        | 4.00   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |

**NOTES**

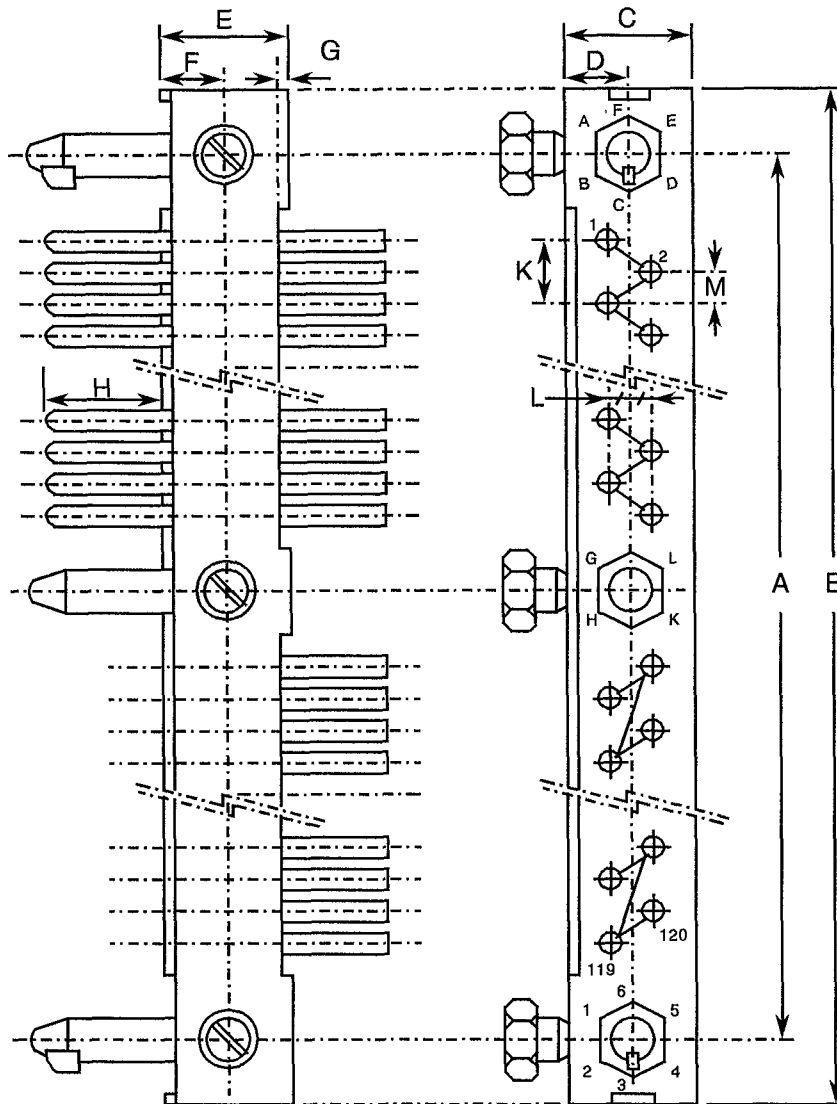
1. Weight: 8.5g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 10 - PLUG, 2 ROWS, 120 CONTACTS**



| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 167.49      | 167.79 |
| B      | 175.10      | 175.60 |
| C      | 6.30        | 6.40   |
| D      | 3.10        | 3.30   |
| E      | 7.75        | 8.05   |
| F      | 3.80        | 4.00   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |

**NOTES**

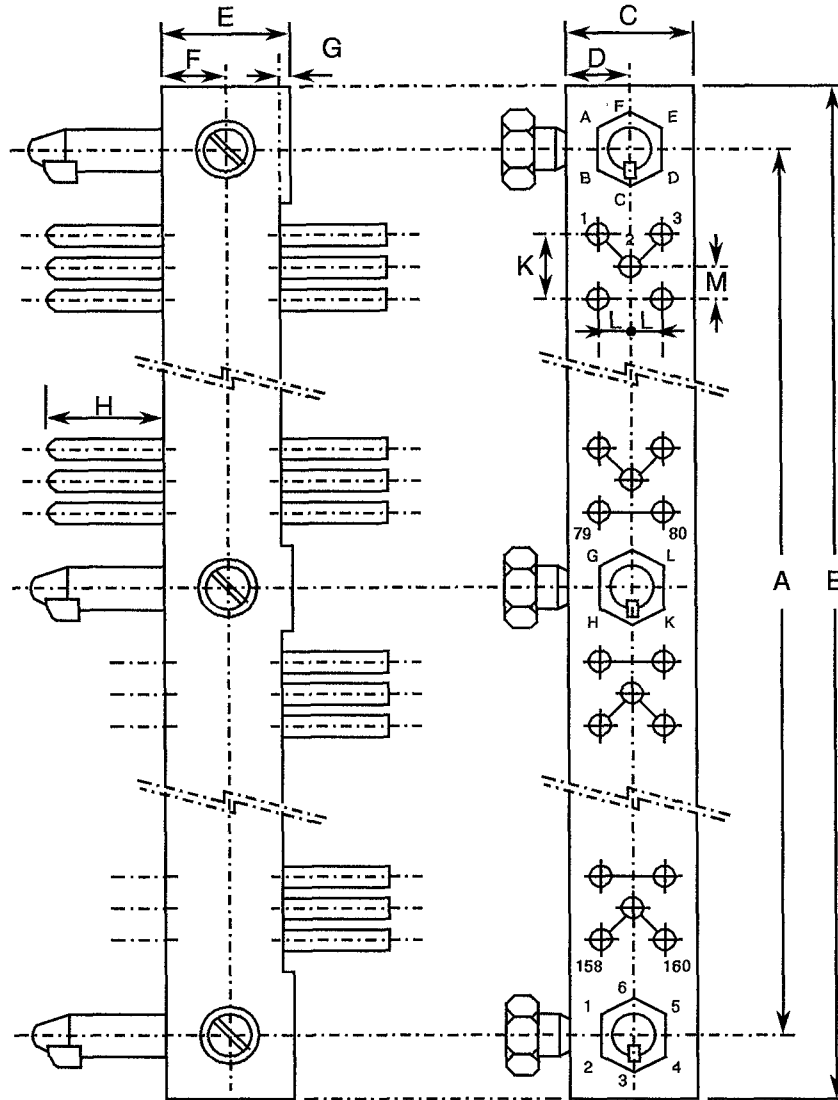
1. Weight: 9.4g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 12 - PLUG, 3 ROWS, 160 CONTACTS**



| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 149.71      | 150.01 |
| B      | 157.50      | 158.00 |
| C      | 9.20        | 9.30   |
| D      | 4.55        | 4.75   |
| E      | 7.75        | 8.05   |
| F      | 3.80        | 4.00   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |

**NOTES**

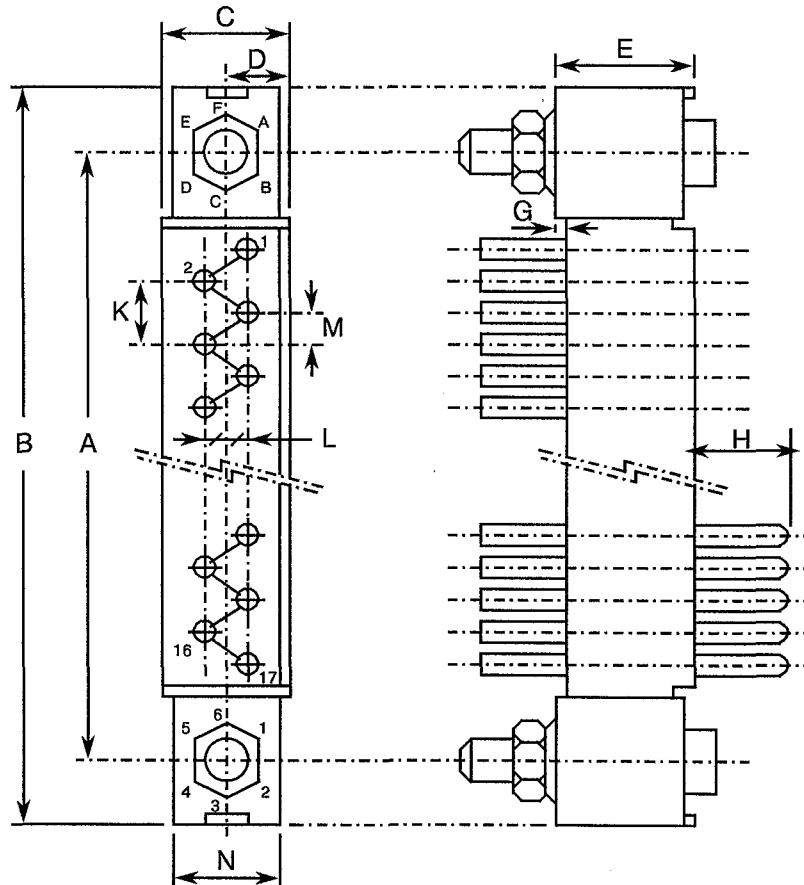
1. Weight: 12.6g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 13 - RECEPTACLE, 2 ROWS, 17 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 30.33       | 30.63 |
| B      | 38.00       | 38.50 |
| C      | 6.30        | 7.00  |
| D      | 2.80        | 3.05  |
| E      | 7.75        | 8.05  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |
| N      | 6.10        | 6.40  |

**NOTES**

1. Weight: 2.5g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

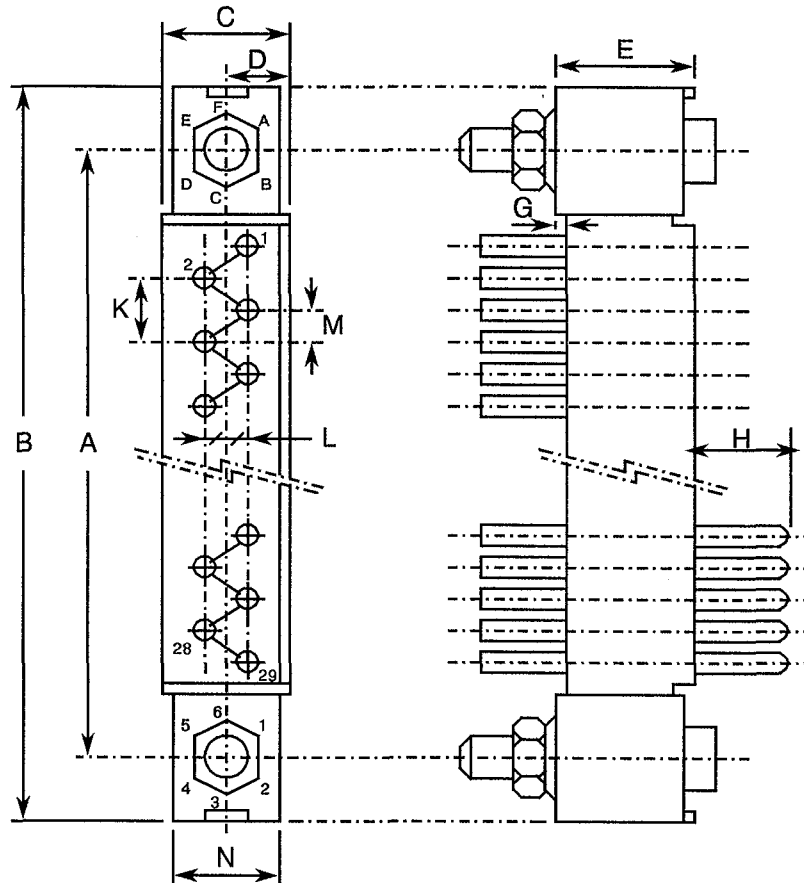




**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 14 - RECEPTACLE, 2 ROWS, 29 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 45.57       | 45.87 |
| B      | 53.20       | 53.70 |
| C      | 6.30        | 7.00  |
| D      | 2.80        | 3.05  |
| E      | 7.75        | 8.05  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |
| N      | 6.10        | 6.40  |

**NOTES**

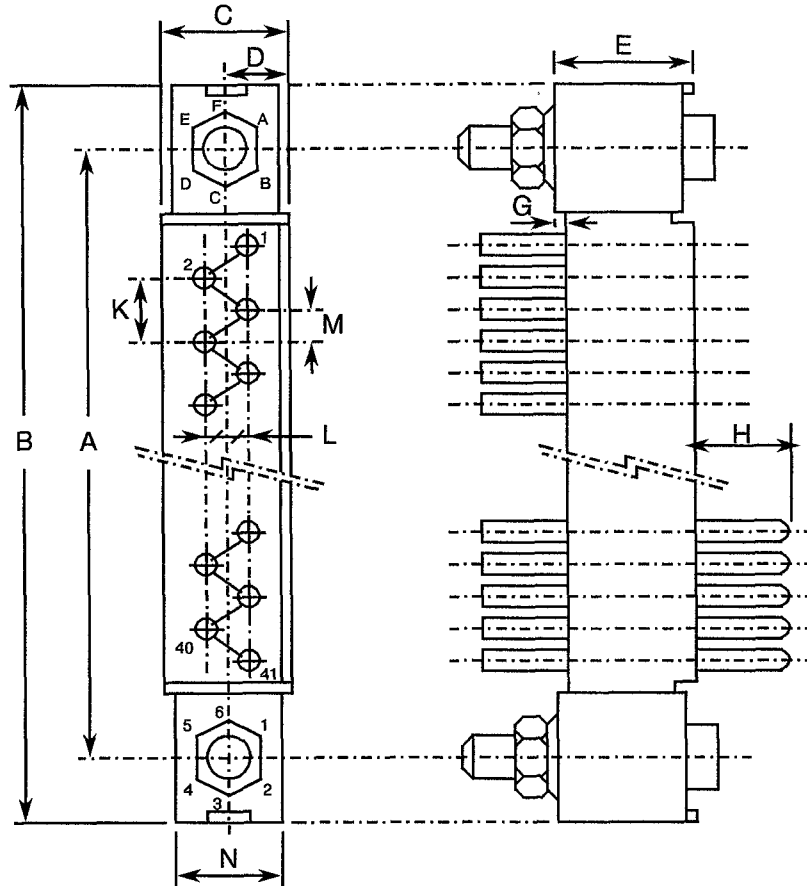
1. Weight: 3.3g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 15 - RECEPTACLE, 2 ROWS, 41 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 60.81       | 61.11 |
| B      | 68.50       | 69.00 |
| C      | 6.30        | 7.00  |
| D      | 2.80        | 3.05  |
| E      | 7.75        | 8.05  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |
| N      | 6.10        | 6.40  |

**NOTES**

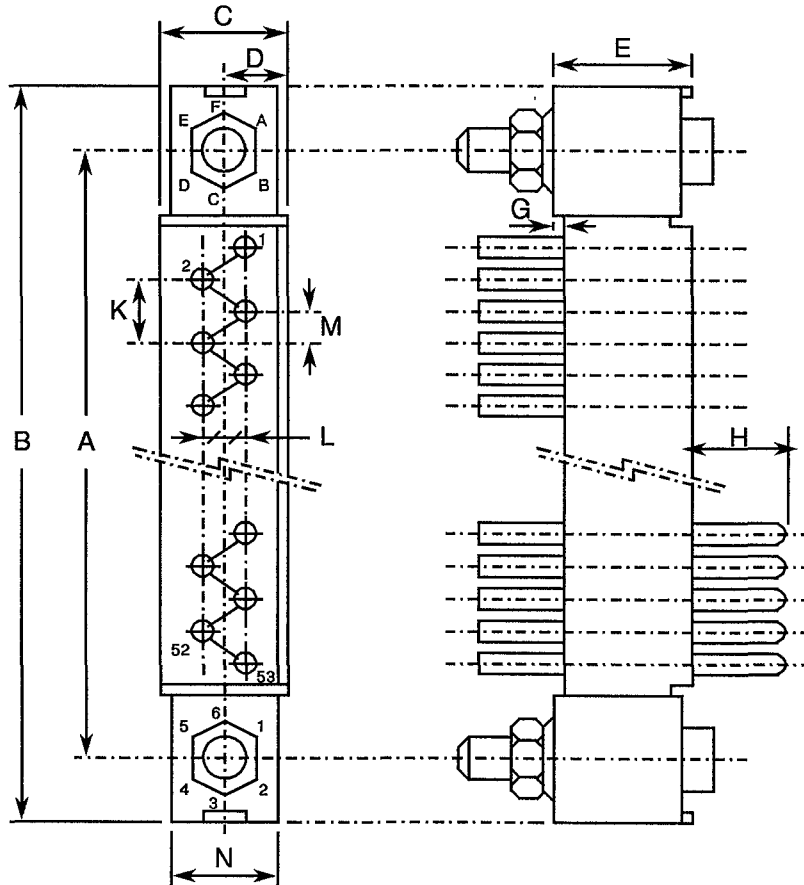
1. Weight: 4.2g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 16 - RECEPTACLE, 2 ROWS, 53 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 76.05       | 76.35 |
| B      | 83.70       | 84.20 |
| C      | 6.30        | 7.00  |
| D      | 2.80        | 3.05  |
| E      | 7.75        | 8.05  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |
| N      | 6.10        | 6.40  |

**NOTES**

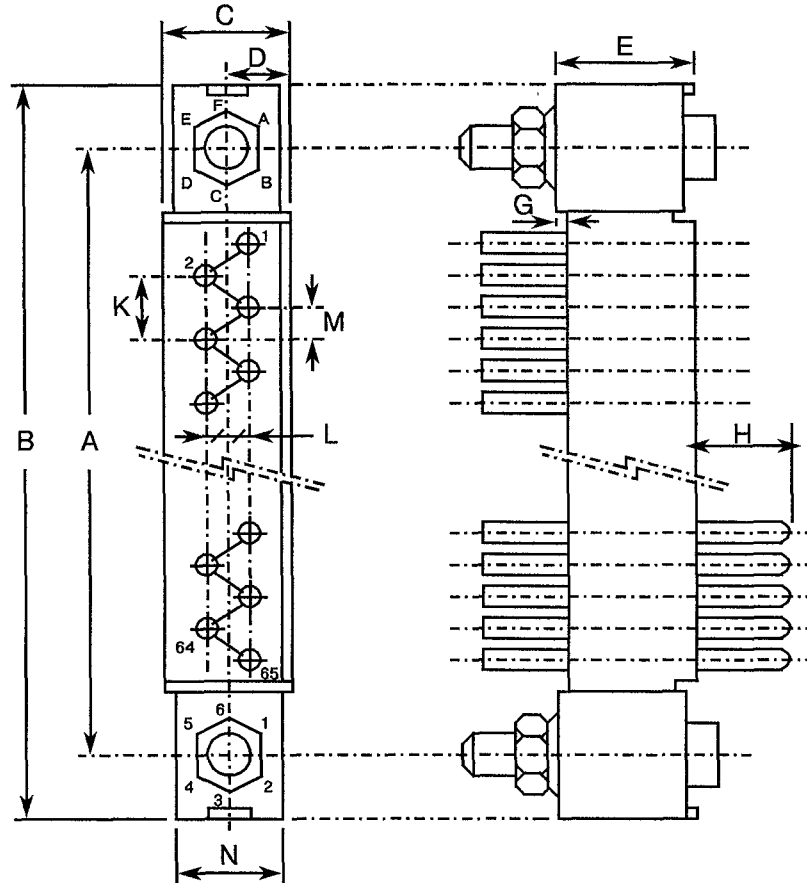
1. Weight: 5.3g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 17 - RECEPTACLE, 2 ROWS, 65 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 91.29       | 91.59 |
| B      | 99.00       | 99.50 |
| C      | 6.30        | 7.00  |
| D      | 2.80        | 3.05  |
| E      | 7.75        | 8.05  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |
| N      | 6.10        | 6.40  |

**NOTES**

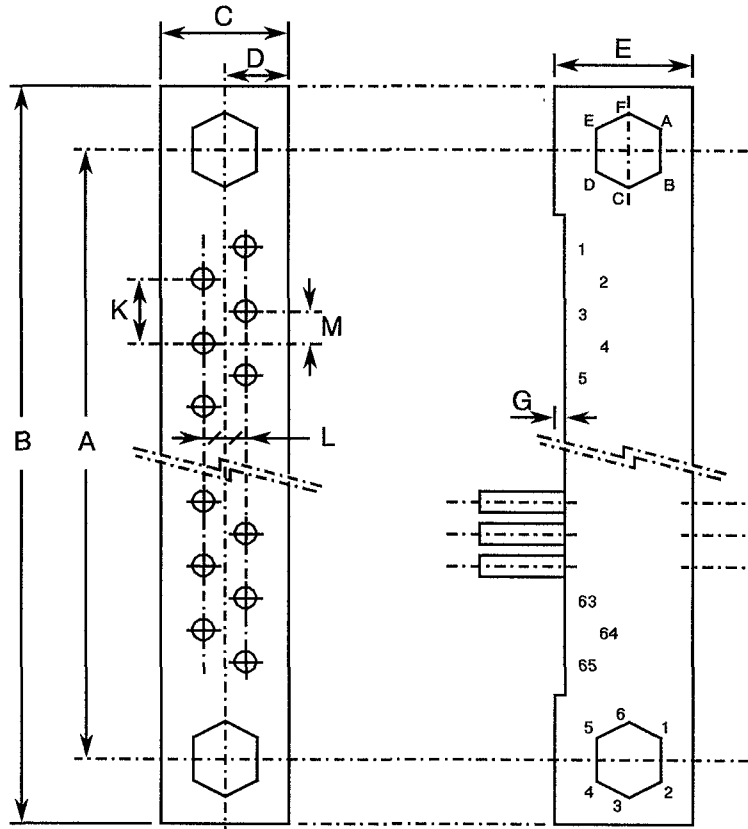
1. Weight: 6.0g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 18 - RECEPTACLE, 2 ROWS, 65 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 91.29       | 91.59 |
| B      | 99.00       | 99.50 |
| C      | 6.30        | 6.40  |
| D      | 3.10        | 3.30  |
| E      | 7.45        | 7.75  |
| G      | 0.25        | 0.60  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |

**NOTES**

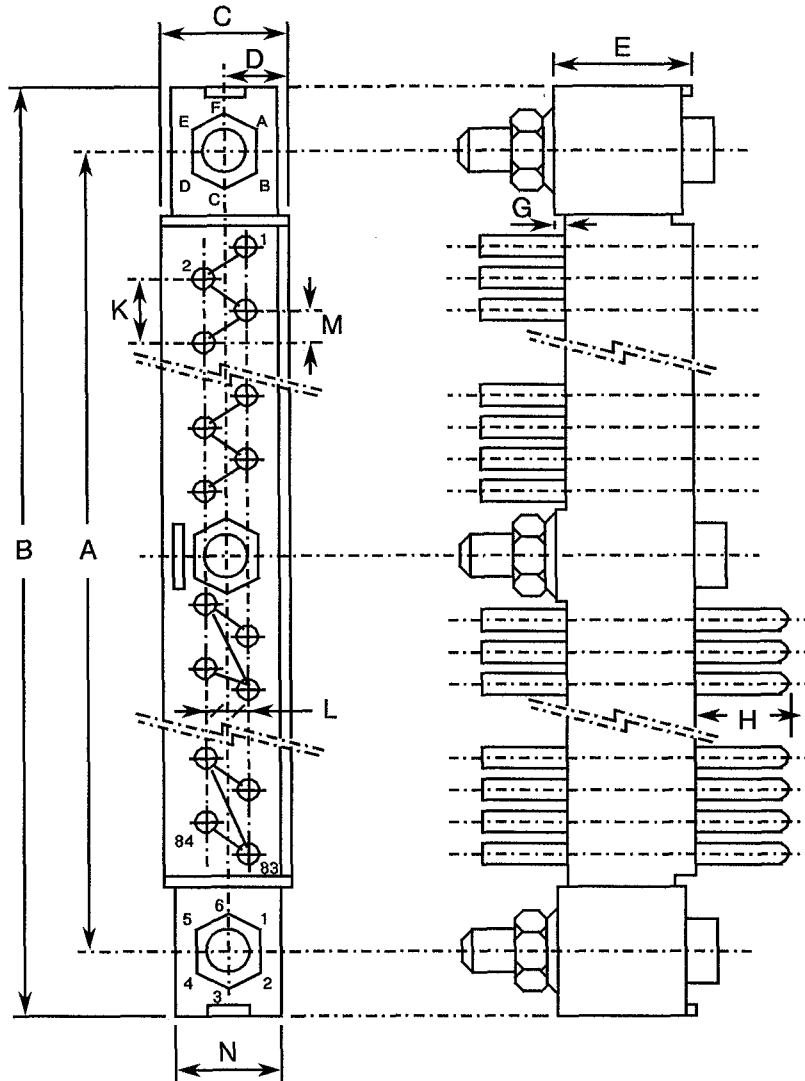
1. Weight: 5.5g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The side of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 19 - RECEPTACLE, 2 ROWS, 84 CONTACTS**



| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 121.77      | 122.07 |
| B      | 129.40      | 129.90 |
| C      | 6.30        | 7.00   |
| D      | 2.80        | 3.05   |
| E      | 7.75        | 8.05   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |
| N      | 6.10        | 6.40   |

**NOTES**

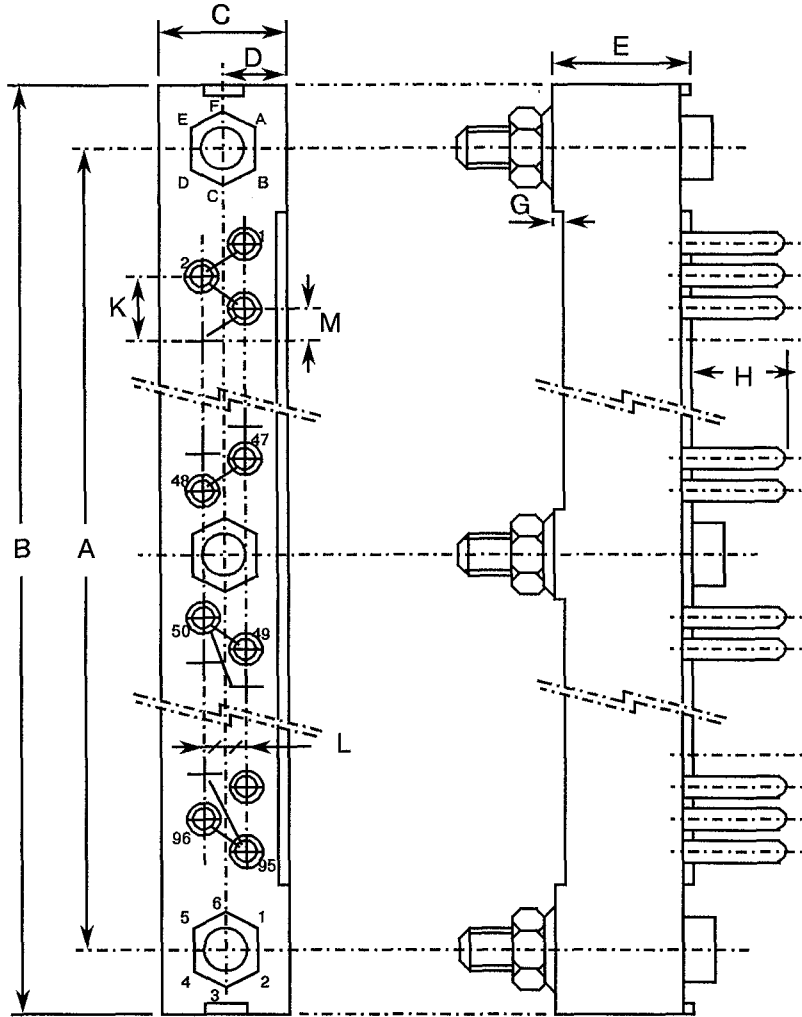
1. Weight: 8.0g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 20 - RECEPTACLE, 2 ROWS, 96 CONTACTS**



**NOTES**

1. Weight: 9.44g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

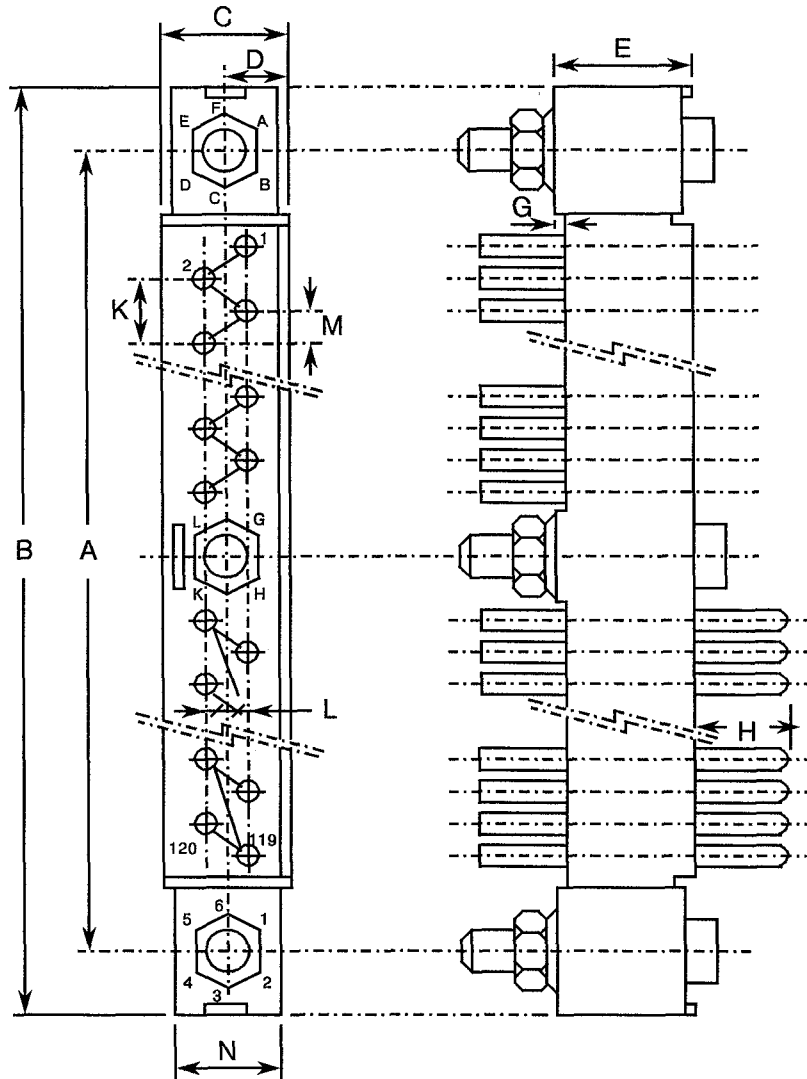
| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 137.01      | 137.31 |
| B      | 144.70      | 145.20 |
| C      | 6.30        | 7.00   |
| D      | 2.80        | 3.05   |
| E      | 7.75        | 8.05   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 22 - RECEPTACLE, 2 ROWS, 120 CONTACTS**



**NOTES**

1. Weight: 10.8g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 167.49      | 167.79 |
| B      | 175.10      | 175.60 |
| C      | 6.30        | 7.00   |
| D      | 2.80        | 3.05   |
| E      | 7.75        | 8.05   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |
| N      | 6.10        | 6.40   |

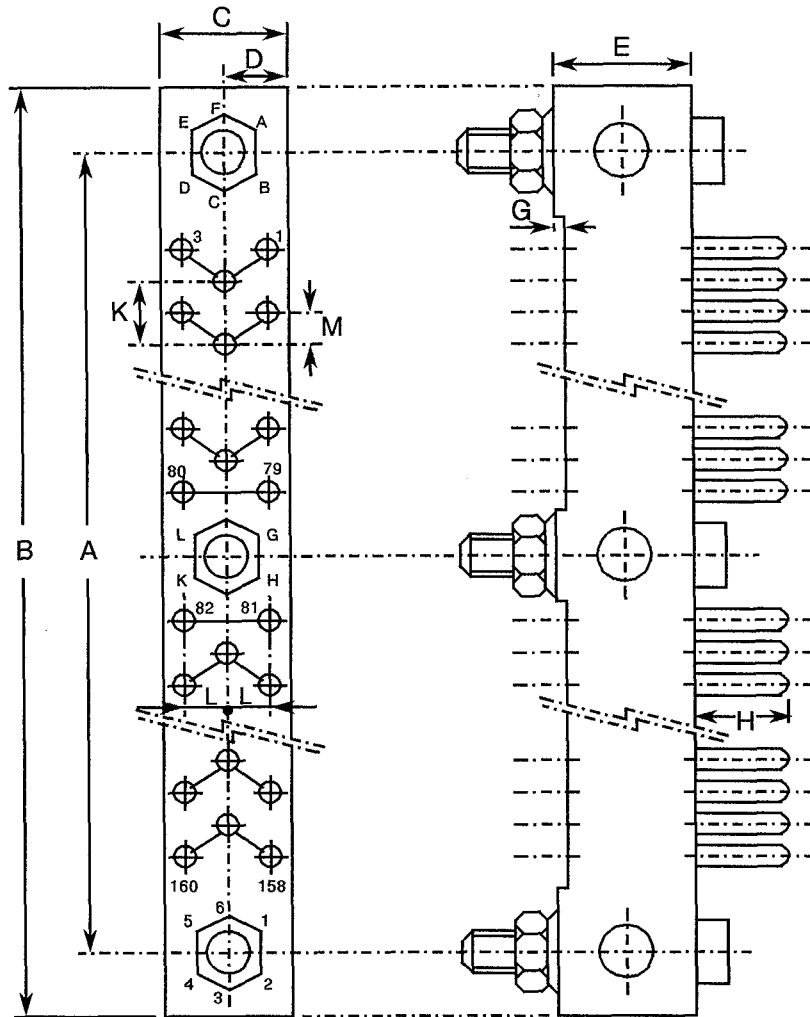




**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 24 - RECEPTACLE, 3 ROWS, 160 CONTACTS**



**NOTES**

1. Weight: 12.6g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

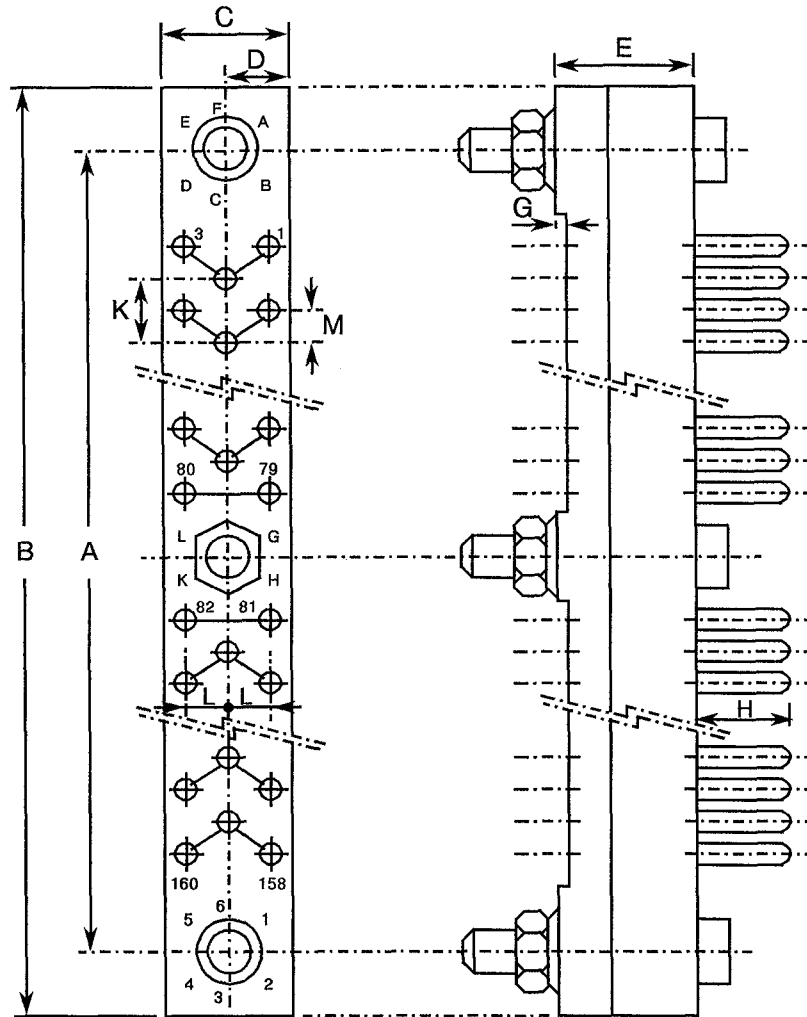
| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 149.71      | 150.01 |
| B      | 157.50      | 158.00 |
| C      | 9.20        | 9.30   |
| D      | 4.55        | 4.75   |
| E      | 7.75        | 8.05   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 25 - RECEPTACLE, 3 ROWS, 160 CONTACTS**



**NOTES**

1. Weight: 14.8g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

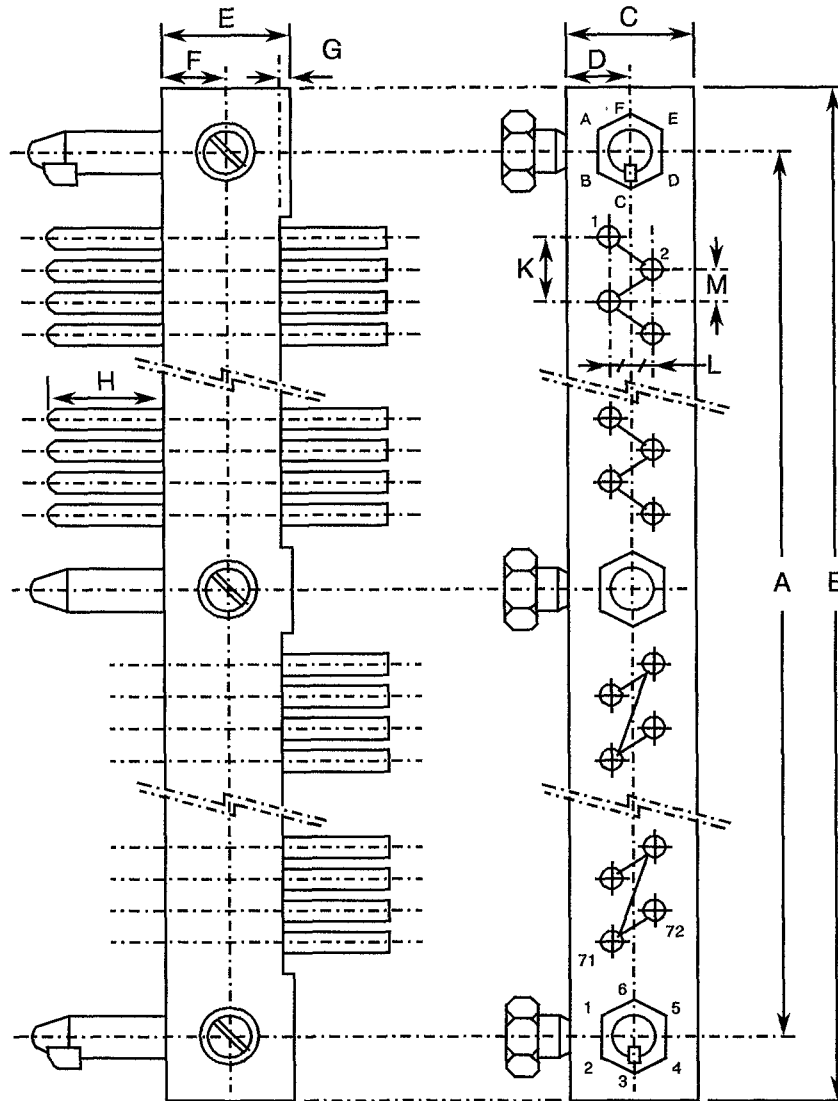
| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 149.71      | 150.01 |
| B      | 157.60      | 158.10 |
| C      | 9.20        | 9.30   |
| D      | 4.55        | 4.75   |
| E      | 8.80        | 9.10   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 56 - PLUG, 2 ROWS, 72 CONTACTS**



**NOTES**

1. Weight: 7.1g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

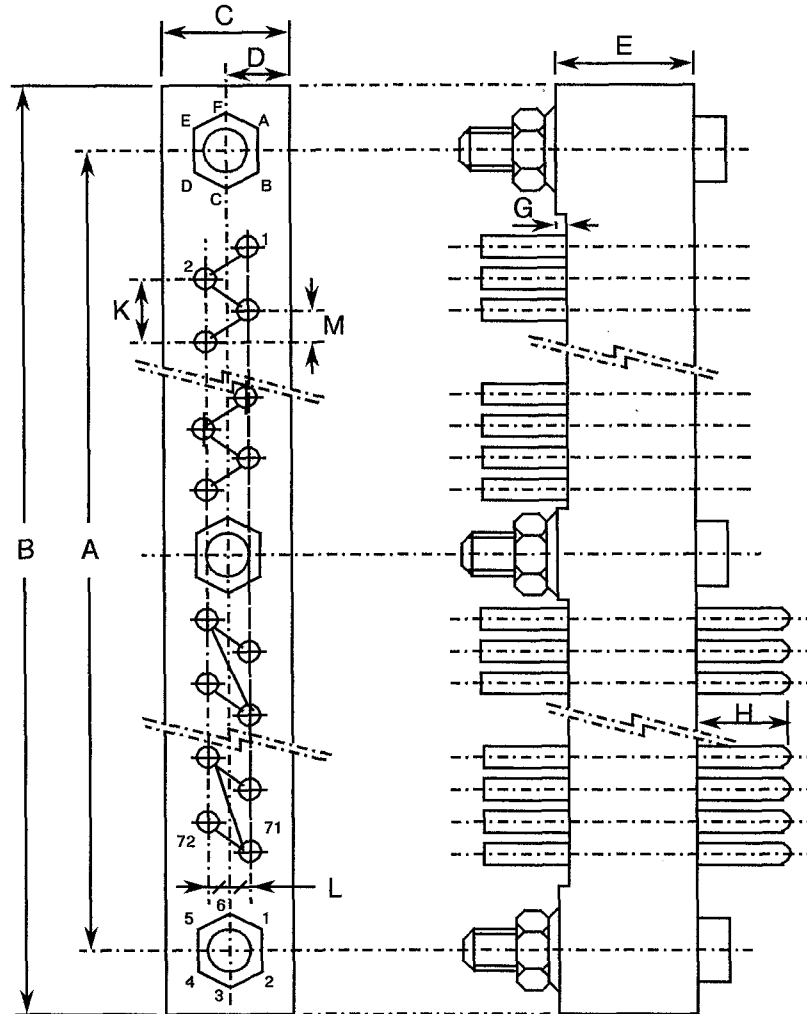
| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 106.53      | 106.83 |
| B      | 114.20      | 114.70 |
| C      | 6.30        | 6.40   |
| D      | 3.10        | 3.30   |
| E      | 7.75        | 8.05   |
| F      | 3.80        | 4.00   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

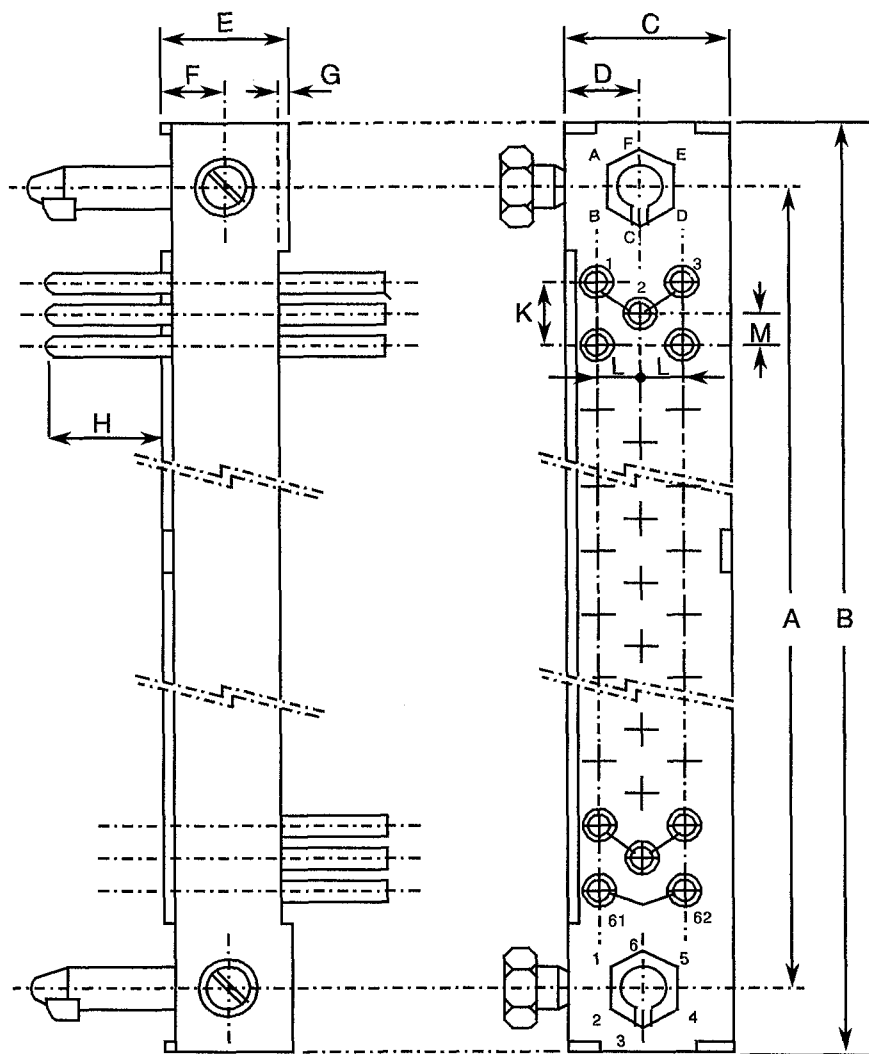
**CODE 57 - RECEPTACLE, 2 ROWS, 72 CONTACTS**



**NOTES**

1. Weight: 8.0g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 106.53      | 106.83 |
| B      | 114.20      | 114.70 |
| C      | 6.30        | 7.00   |
| D      | 2.80        | 3.05   |
| E      | 7.75        | 8.05   |
| G      | 0.25        | 0.60   |
| H      | 3.60        | 4.80   |
| K      | 2.39        | 2.69   |
| L      | 2.39        | 2.69   |
| M      | 1.12        | 1.42   |

**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**
**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**
**CODE 58 - PLUG, 3 ROWS, 62 CONTACTS**


| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 60.81       | 61.11 |
| B      | 68.50       | 69.00 |
| C      | 9.40        | 9.60  |
| D      | 4.35        | 4.55  |
| E      | 7.75        | 8.05  |
| F      | 3.80        | 4.00  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |

**NOTES**

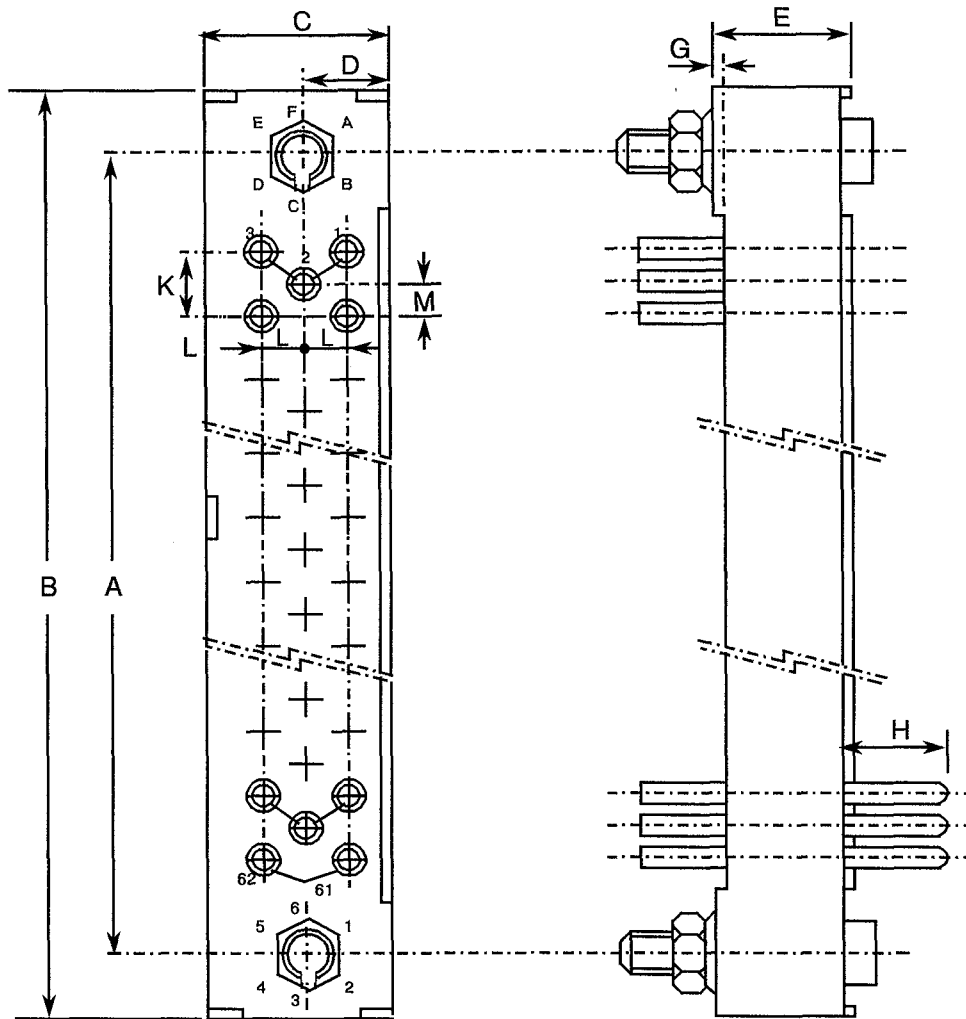
- Weight: 6.3g.
- Orientation of labelling of contacts and guiding devices is not a true representation.
- The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 59 - RECEPTACLE, 3 ROWS, 62 CONTACTS**



**NOTES**

1. Weight: 6.3g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

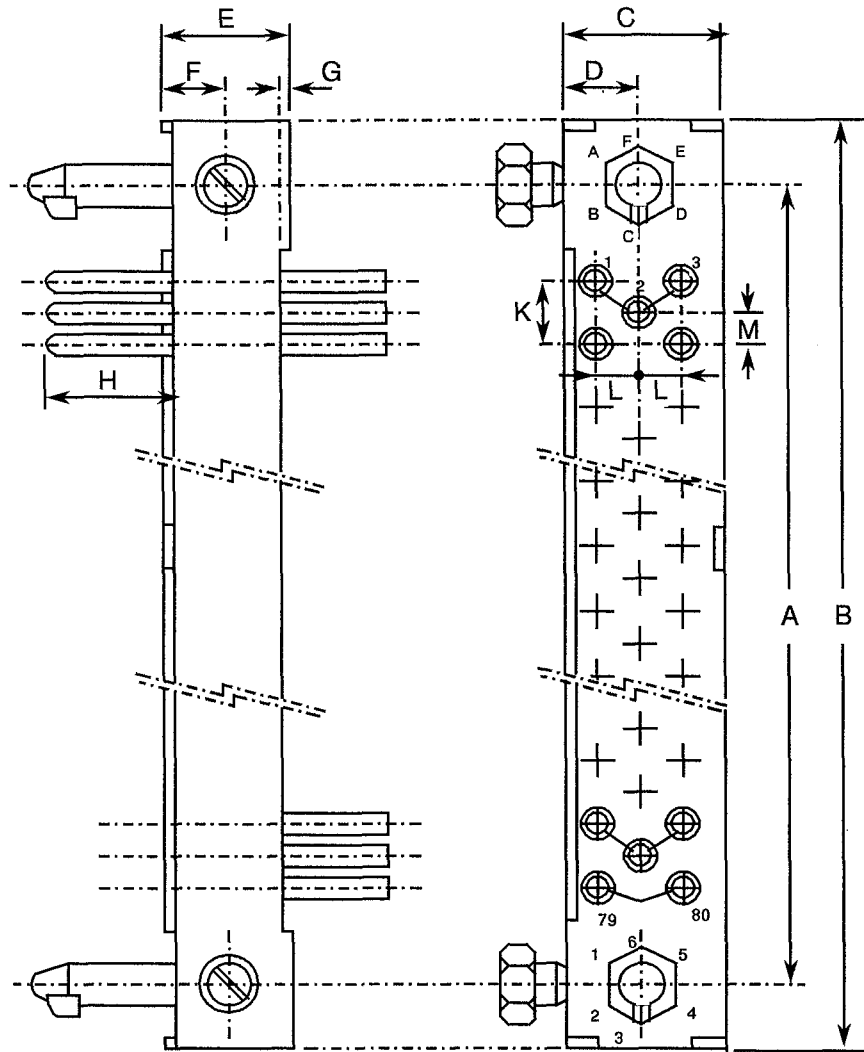
| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 60.81       | 61.11 |
| B      | 68.50       | 69.00 |
| C      | 9.15        | 9.35  |
| D      | 4.05        | 4.25  |
| E      | 7.75        | 8.05  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 60 - PLUG, 3 ROWS, 80 CONTACTS**



| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 76.05       | 76.35 |
| B      | 83.70       | 84.20 |
| C      | 9.40        | 9.60  |
| D      | 4.35        | 4.55  |
| E      | 7.75        | 8.05  |
| F      | 3.80        | 4.00  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |

**NOTES**

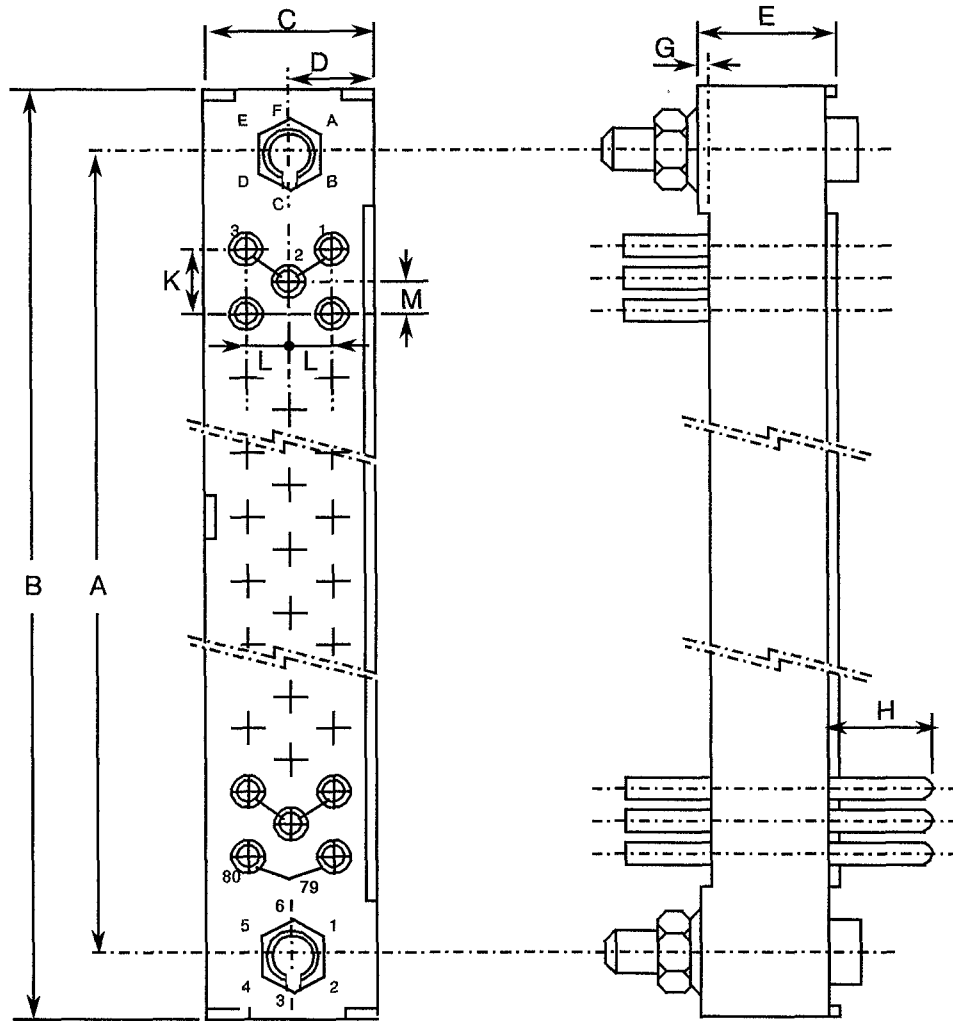
1. Weight: 7.7g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 61 - RECEPTACLE, 3 ROWS, 80 CONTACTS**



**NOTES**

1. Weight: 7.4g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 76.05       | 76.35 |
| B      | 83.70       | 84.20 |
| C      | 9.15        | 9.35  |
| D      | 4.05        | 4.25  |
| E      | 7.75        | 8.05  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |

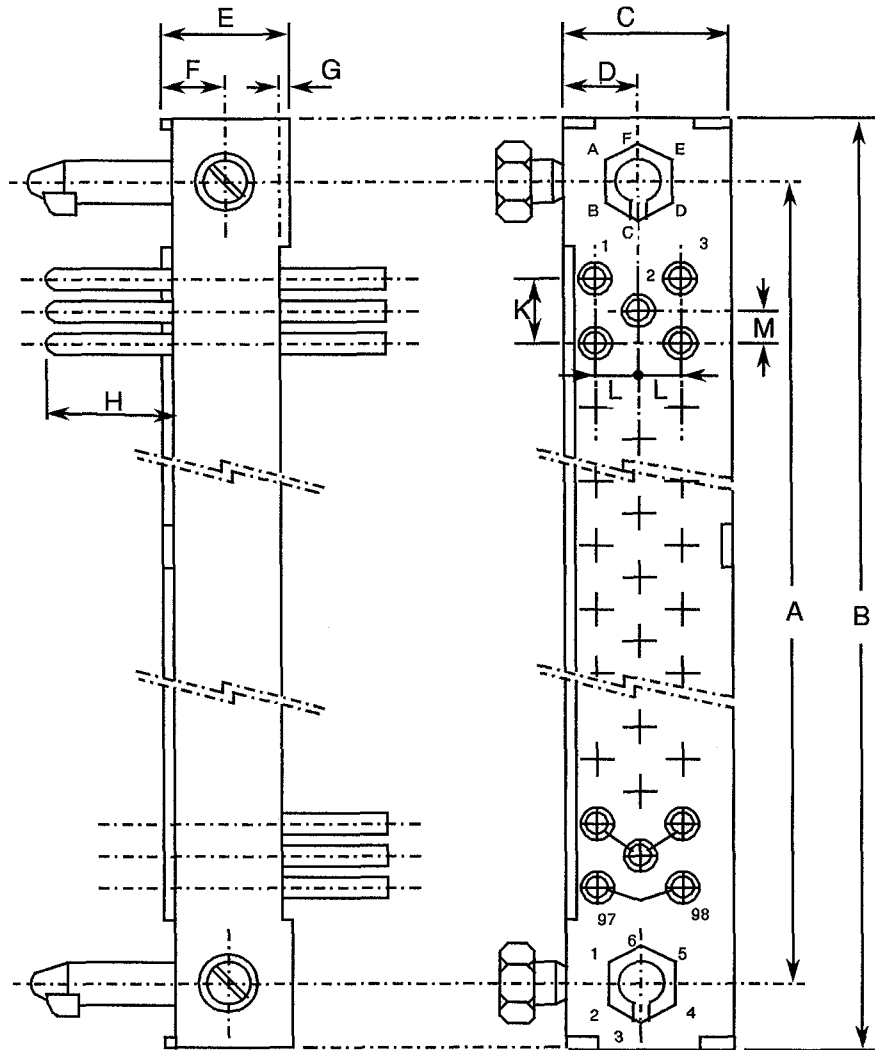




**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 62 - PLUG, 3 ROWS, 98 CONTACTS**



**NOTES**

1. Weight: 8.8g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

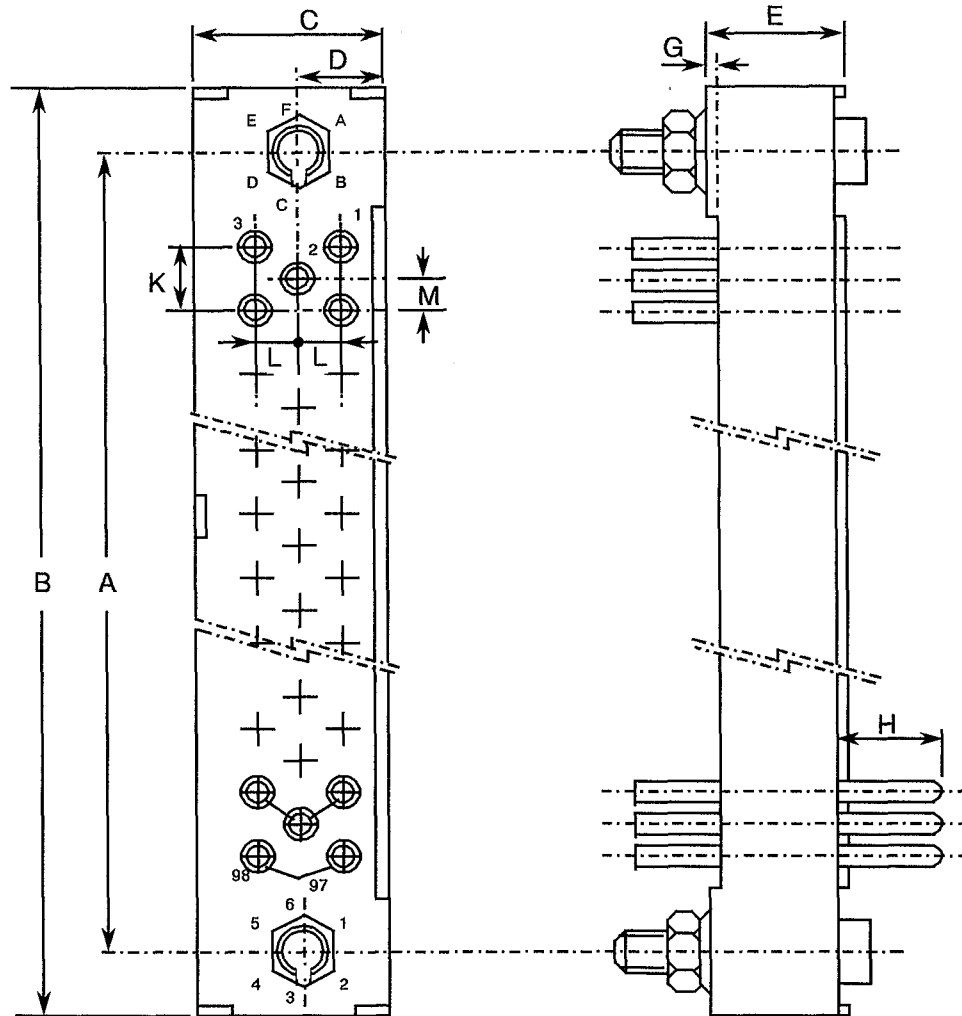
| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 91.29       | 91.59 |
| B      | 99.00       | 99.50 |
| C      | 9.40        | 9.60  |
| D      | 4.35        | 4.55  |
| E      | 7.75        | 8.05  |
| F      | 3.80        | 4.00  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 63 - RECEPTACLE, 3 ROWS, 98 CONTACTS**



**NOTES**

1. Weight: 8.7g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

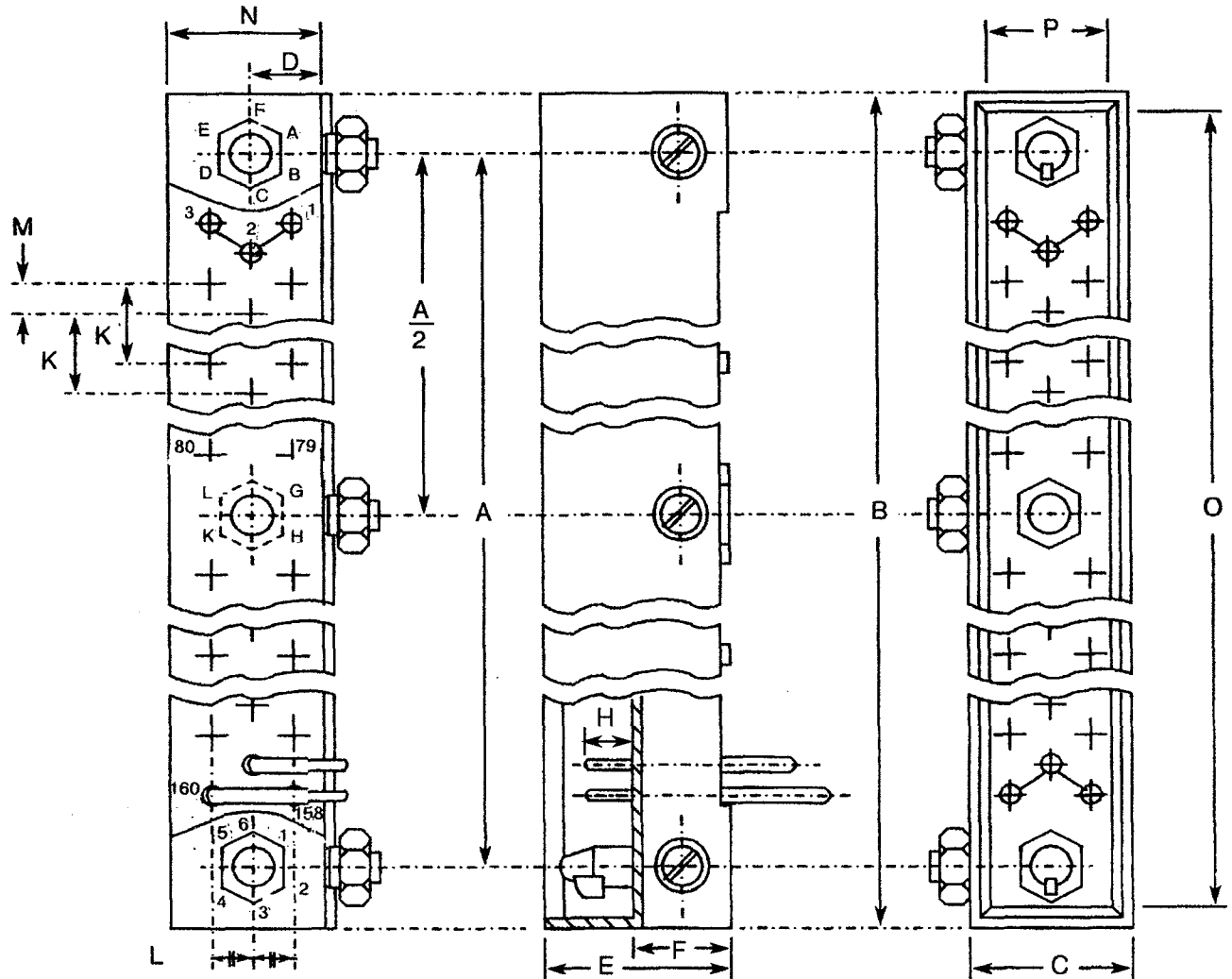
| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 91.29       | 91.59 |
| B      | 99.00       | 99.50 |
| C      | 9.15        | 9.35  |
| D      | 4.05        | 4.25  |
| E      | 7.75        | 8.05  |
| G      | 0.25        | 0.60  |
| H      | 3.60        | 4.80  |
| K      | 2.39        | 2.69  |
| L      | 2.39        | 2.69  |
| M      | 1.12        | 1.42  |



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(a) - INSERTS: PLUGS AND RECEPTACLES (CONTINUED)**

**CODE 64 - PLUG, 3 ROWS, 160 CONTACTS - HPM SHROUDED**



**NOTES**

1. Weight: 23g.
2. Orientation of labelling of contacts and guiding devices is not a true representation.
3. The front of the insert shall be marked with the minimum marking shown.

| SYMBOL | MILLIMETRES |        |
|--------|-------------|--------|
|        | MIN.        | MAX.   |
| A      | 149.71      | 150.01 |
| B      | 160.85      | 161.75 |
| C      | 12.15       | 13.05  |
| D      | 4.70        | 4.75   |
| E      | 15.05       | 15.35  |
| F      | 7.60        | 8.20   |
| H      | 3.60        | -4.80  |
| K      | 2.49        | 2.59   |
| L      | 2.49        | 2.59   |
| M      | 1.22        | 1.32   |
| N      | 10.65       | 11.85  |
| O      | 158.45      | 158.75 |
| P      | 9.75        | 10.05  |

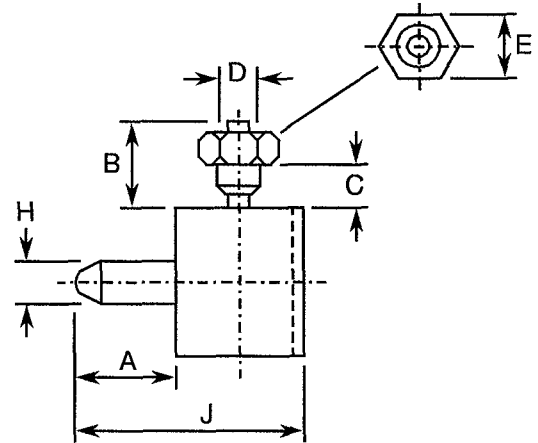


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES**

**CODE 26**

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 2.50        | 3.50  |
| C      | 1.40        | -     |
| D      | 2.45        | 2.55  |
| E      | 3.90        | 4.10  |
| H      | 2.45        | 2.55  |
| J      | 13.35       | 14.15 |

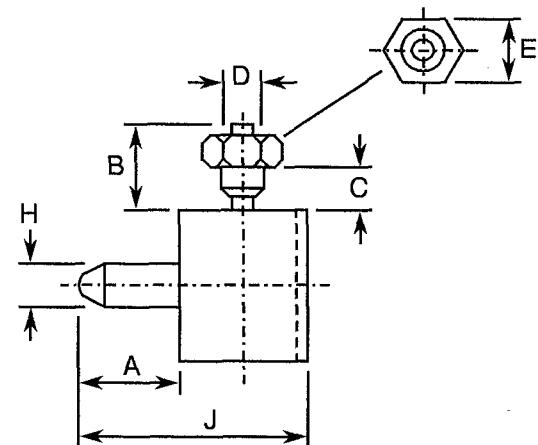


**NOTES**

1. Weight: 1.2g.
2. Torque: 11Ncm.

**CODE 27**

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 2.94        | 4.00  |
| C      | 1.40        | -     |
| D      | 2.45        | 2.55  |
| E      | 3.90        | 4.10  |
| H      | 2.45        | 2.55  |
| J      | 13.35       | 14.15 |



**NOTES**

1. Weight: 1.2g.
2. Torque: 11Ncm.

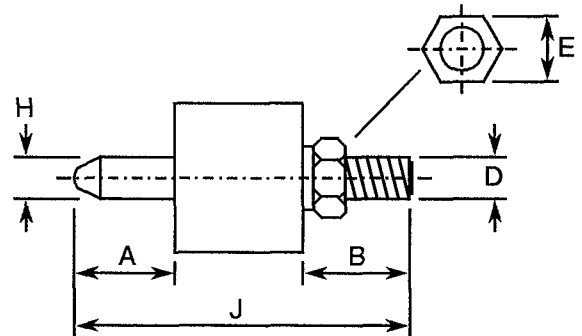


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 28

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 6.50        | 7.50  |
| D      | M 2.50      |       |
| E      | 3.90        | 4.10  |
| H      | 2.45        | 2.55  |
| J      | 20.20       | 21.25 |

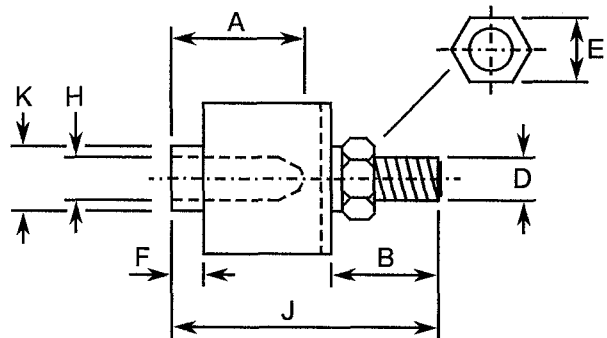


**NOTES**

1. Weight: 1.4g.
2. Torque: 14Ncm.

CODE 29

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.35        | 7.65  |
| B      | 6.50        | 7.50  |
| D      | M 2.50      |       |
| E      | 3.90        | 4.10  |
| F      | 1.80        | 2.20  |
| H      | 2.75        | 2.85  |
| J      | 16.50       | 17.50 |
| K      | 3.55        | 3.90  |



**NOTES**

1. Weight: 1.1g.
2. Torque: 14Ncm.

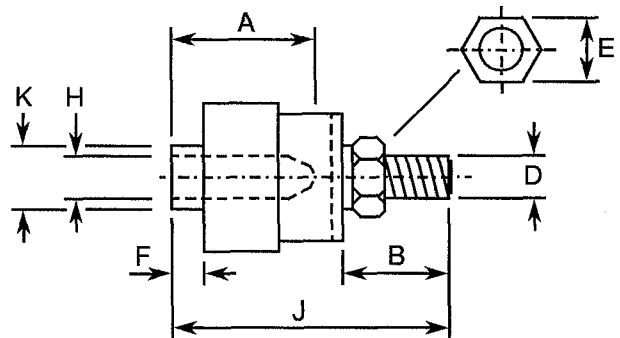


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 30

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.75        | 8.05  |
| B      | 7.00        | 8.20  |
| D      | M 2.50      |       |
| E      | 3.90        | 4.10  |
| F      | 1.80        | 2.20  |
| H      | 2.75        | 2.85  |
| J      | 18.45       | 18.75 |
| K      | 3.75        | 3.90  |

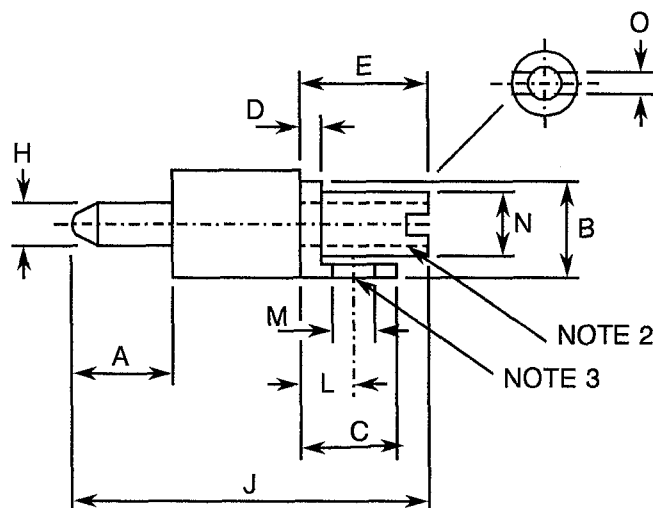


**NOTES**

1. Weight: 1.2g.
2. Torque: 14Ncm.

CODE 31

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 5.80        | 6.20  |
| C      | 5.80        | 6.20  |
| D      | 0.90        | 1.10  |
| E      | 7.80        | 8.20  |
| H      | 2.45        | 2.55  |
| J      | 21.10       | 22.50 |
| L      | 3.00        | 3.30  |
| M      | M 1.60      |       |
| N      | 3.40        | 3.60  |
| O      | 0.80        | 1.15  |



**NOTES**

1. Weight: 1.8g.
2. Torque: 14Ncm.
3. Torque: 11Ncm.

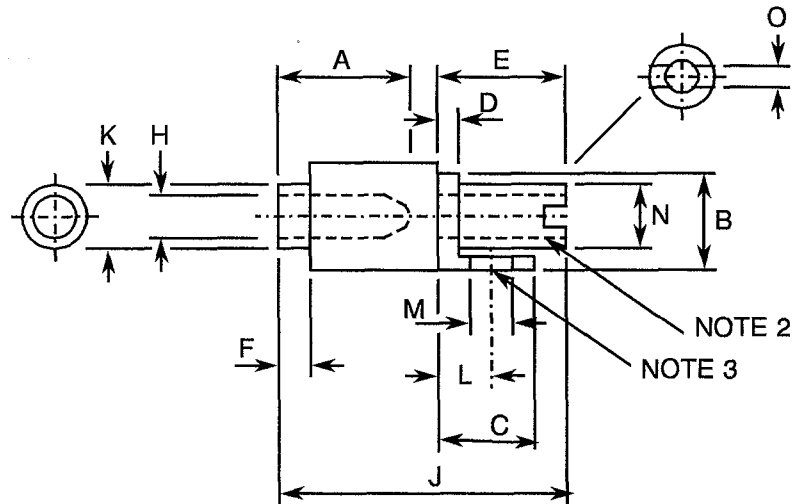


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 32

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.35        | 7.65  |
| B      | 5.80        | 6.20  |
| C      | 5.80        | 6.20  |
| D      | 0.90        | 1.10  |
| E      | 7.80        | 8.20  |
| F      | 1.80        | 2.20  |
| H      | 2.75        | 2.85  |
| J      | 17.50       | 18.50 |
| K      | 3.55        | 3.90  |
| L      | 3.00        | 3.30  |
| M      | M 1.60      |       |
| N      | 3.30        | 3.70  |
| O      | 0.80        | 1.15  |

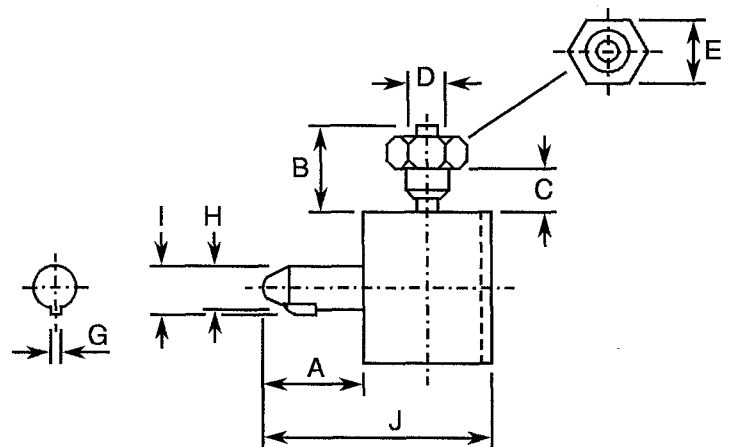


**NOTES**

1. Weight: 1.5g.
2. Torque: 14Ncm.
3. Torque: 11Ncm.

CODE 33

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 2.50        | 3.50  |
| C      | 1.40        | -     |
| D      | 2.45        | 2.55  |
| E      | 3.90        | 4.10  |
| G      | 0.70        | 1.00  |
| H      | 2.45        | 2.50  |
| I      | 3.00        | 3.20  |
| J      | 13.35       | 14.15 |



**NOTES**

1. Weight: 1.1g.
2. Torque: 11Ncm.

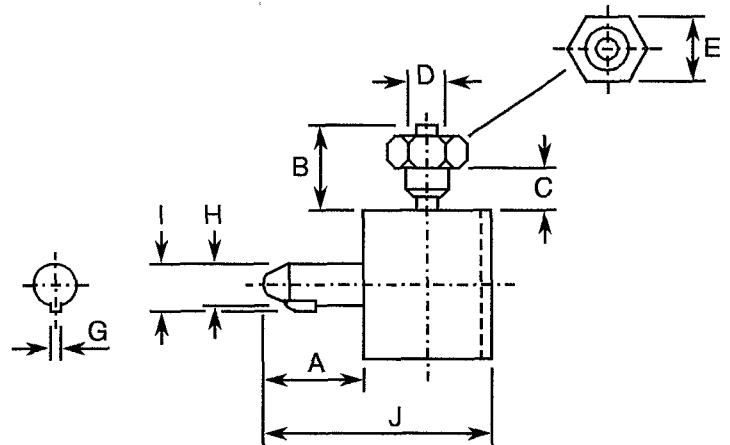


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 34

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 2.94        | 4.00  |
| C      | 1.40        | -     |
| D      | 2.45        | 2.55  |
| E      | 3.90        | 4.10  |
| G      | 0.70        | 1.00  |
| H      | 2.45        | 2.50  |
| I      | 3.00        | 3.20  |
| J      | 13.35       | 14.15 |

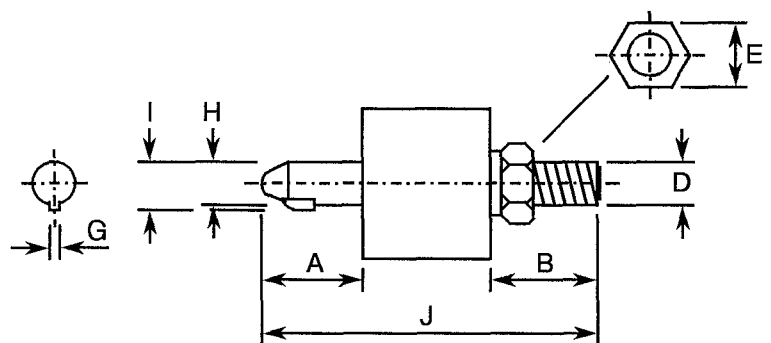


**NOTES**

1. Weight: 1.1g.
2. Torque: 11Ncm.

CODE 35

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 6.50        | 7.50  |
| D      | M 2.50      |       |
| E      | 3.90        | 4.10  |
| G      | 0.70        | 1.00  |
| H      | 2.45        | 2.50  |
| I      | 3.00        | 3.20  |
| J      | 20.20       | 21.20 |



**NOTES**

1. Weight: 1.5g.
2. Torque: 14Ncm.



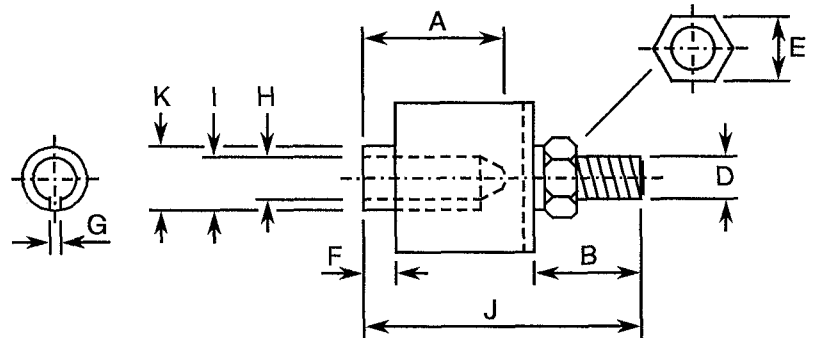


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 36

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.35        | 7.65  |
| B      | 6.50        | 7.50  |
| D      | M 2.50      |       |
| E      | 3.90        | 4.10  |
| F      | 1.80        | 2.20  |
| G      | 1.10        | 1.30  |
| H      | 2.75        | 2.85  |
| I      | 3.05        | 3.35  |
| J      | 16.50       | 17.50 |
| K      | 3.55        | 3.90  |

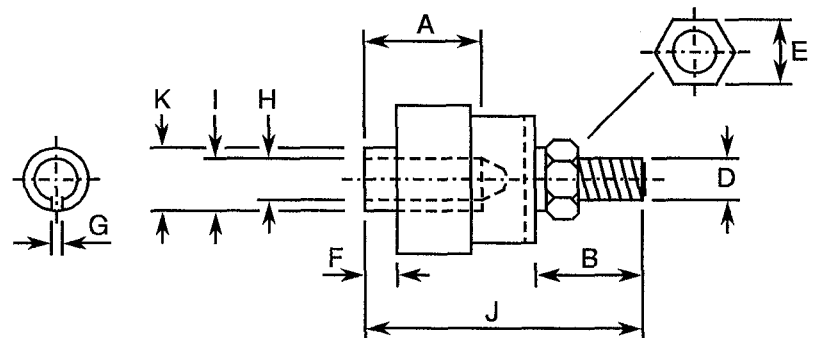


**NOTES**

1. Weight: 1.0g.
2. Torque: 14Ncm.

CODE 37

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.75        | 8.05  |
| B      | 7.00        | 8.20  |
| D      | M 2.50      |       |
| E      | 3.90        | 4.10  |
| F      | 1.50        | 2.10  |
| G      | 1.10        | 1.30  |
| H      | 2.75        | 2.85  |
| I      | 3.20        | 3.45  |
| J      | 18.45       | 18.75 |
| K      | 3.75        | 3.90  |



**NOTES**

1. Weight: 1.9g.
2. Torque: 14Ncm.

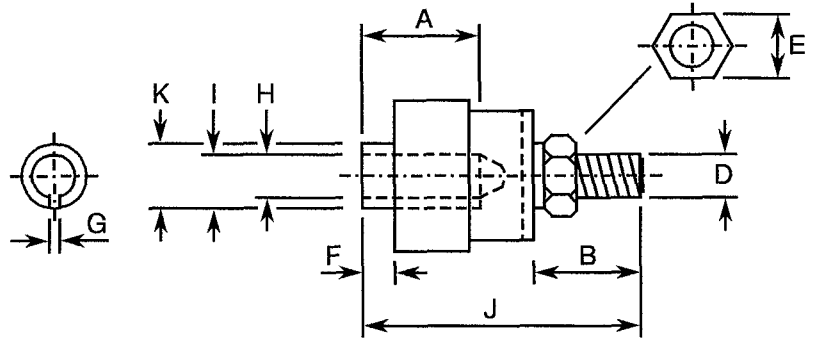


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

**CODE 38**

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.75        | 8.05  |
| B      | 7.00        | 8.20  |
| D      | M 2.50      |       |
| E      | 3.90        | 4.10  |
| F      | 1.50        | 2.10  |
| G      | 1.10        | 1.30  |
| H      | 2.75        | 2.85  |
| I      | 3.20        | 3.45  |
| J      | 18.45       | 18.75 |
| K      | 3.75        | 3.90  |

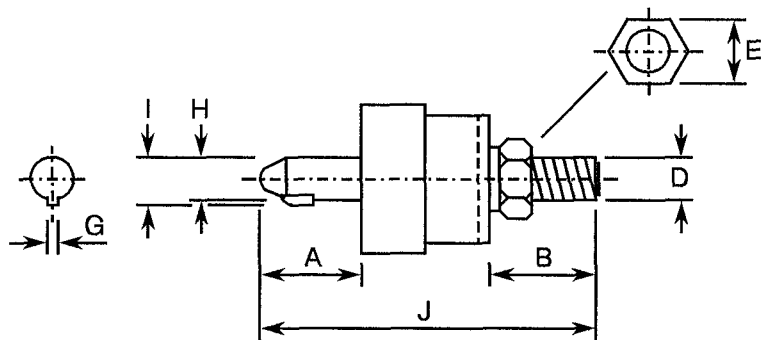


**NOTES**

1. Weight: 1.1g.
2. Torque: 14Ncm.

**CODE 39**

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.30        | 6.10  |
| B      | 7.00        | 8.20  |
| D      | M 2.50      |       |
| E      | 3.90        | 4.10  |
| G      | 0.70        | 1.00  |
| H      | 2.45        | 2.50  |
| I      | 3.00        | 3.20  |
| J      | 22.05       | 22.35 |



**NOTES**

1. Weight: 2.3g.
2. Torque: 14Ncm.

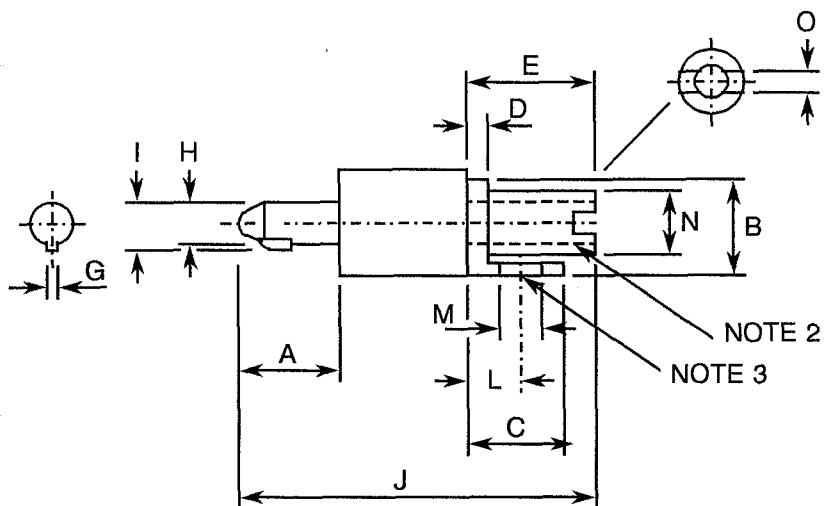


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 40

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 5.80        | 6.20  |
| C      | 5.80        | 6.20  |
| D      | 0.90        | 1.10  |
| E      | 6.90        | 8.20  |
| G      | 0.70        | 1.00  |
| H      | 2.45        | 2.50  |
| I      | 3.00        | 3.20  |
| J      | 20.55       | 22.50 |
| L      | 3.00        | 3.30  |
| M      | M 1.60      |       |
| N      | 3.40        | 3.60  |
| O      | 0.80        | 1.15  |

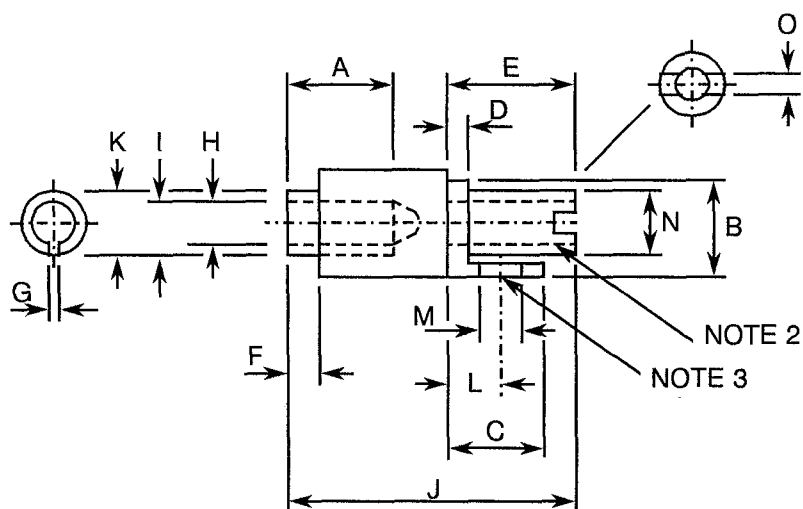


**NOTES**

1. Weight: 1.9g.
2. Torque: 14Ncm.
3. Torque: 11Ncm.

CODE 41

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.35        | 7.65  |
| B      | 5.80        | 6.20  |
| C      | 5.80        | 6.20  |
| D      | 0.90        | 1.10  |
| E      | 7.80        | 8.20  |
| F      | 1.80        | 2.20  |
| G      | 1.10        | 1.30  |
| H      | 2.75        | 2.85  |
| I      | 3.05        | 3.35  |
| J      | 16.55       | 18.50 |
| K      | 3.55        | 3.90  |
| L      | 3.00        | 3.30  |
| M      | M 1.60      |       |
| N      | 3.30        | 3.70  |
| O      | 0.80        | 1.15  |



**NOTES**

1. Weight: 1.5g.
2. Torque: 14Ncm.
3. Torque: 11Ncm.

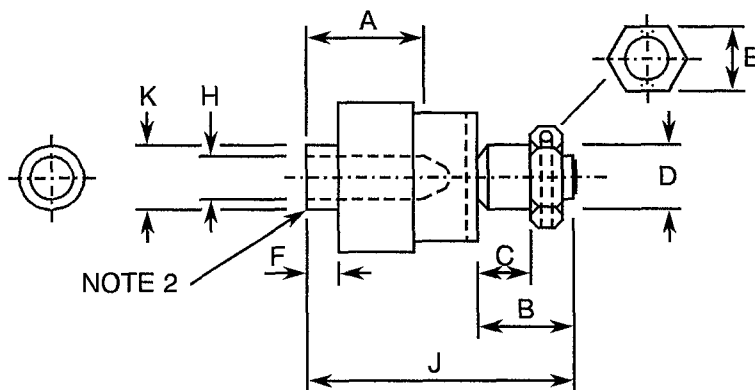


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 42

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 6.50        | 7.50  |
| B      | 6.00        | 7.00  |
| C      | 3.50        | -     |
| D      | 3.80        | 4.00  |
| E      | 5.40        | 5.60  |
| F      | 1.60        | 2.90  |
| H      | M 2.50      |       |
| J      | 17.45       | 17.75 |
| K      | 3.75        | 3.90  |

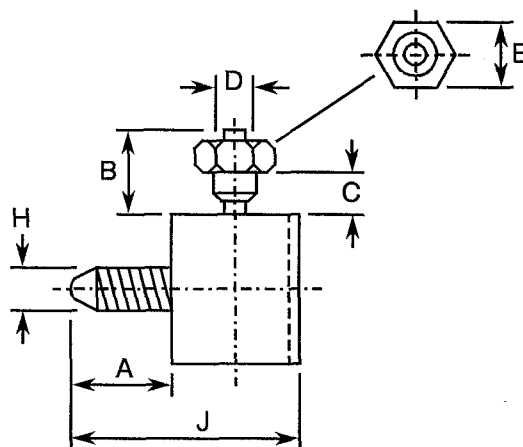


**NOTES**

1. Weight: 1.7g.
2. Torque: 14Ncm.

CODE 43

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.00        | 5.65  |
| B      | 2.94        | 4.00  |
| C      | 1.40        | -     |
| D      | 2.45        | 2.55  |
| E      | 3.90        | 4.10  |
| H      | M 2.50      |       |
| J      | 12.75       | 13.65 |



**NOTES**

1. Weight: 1.1g.
2. Torque: 11Ncm.

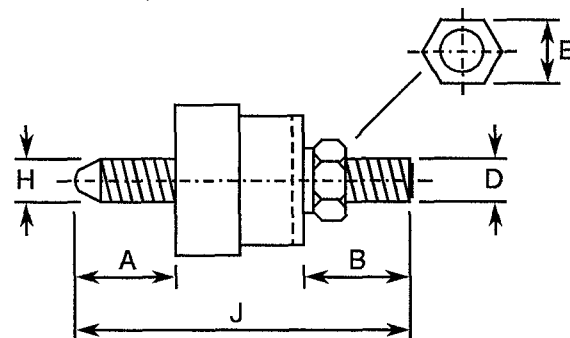


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 44

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 4.70        | 5.50  |
| B      | 7.00        | 8.20  |
| D      | M 2.50      |       |
| E      | 3.90        | 4.10  |
| H      | M 2.50      |       |
| J      | 21.20       | 22.20 |

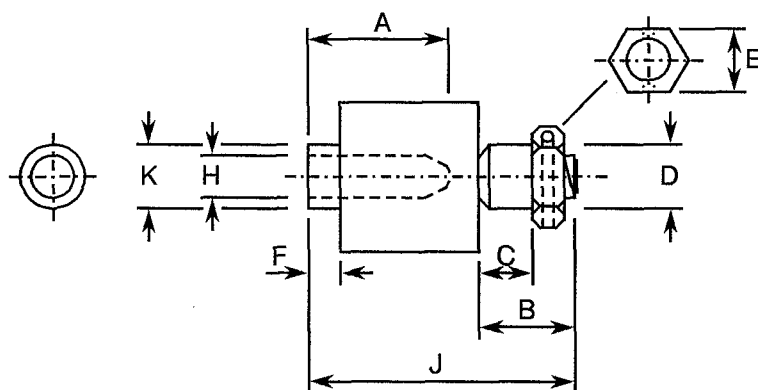


**NOTES**

1. Weight: 2.2g.
2. Torque: 14Ncm.

CODE 45

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 6.50        | 7.50  |
| B      | 6.40        | 7.00  |
| C      | 3.50        | -     |
| D      | 3.80        | 4.00  |
| E      | 5.40        | 5.60  |
| F      | 1.90        | 2.90  |
| H      | M 2.50      |       |
| J      | 16.35       | 16.65 |
| K      | 3.75        | 3.90  |



**NOTES**

1. Weight: 1.7g.
2. Torque: 14Ncm.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

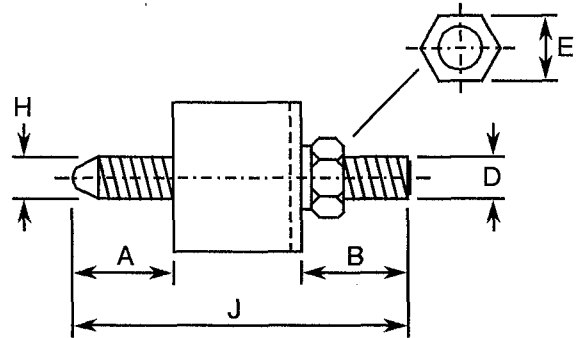
**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 46

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.00        | 5.65  |
| B      | 6.75        | 9.00  |
| D      | M 2.50      |       |
| E      | 3.90        | 4.10  |
| H      | M 2.50      |       |
| J      | 19.95       | 21.85 |

**NOTES**

1. Weight: 1.3g.
2. Torque: 14Ncm.

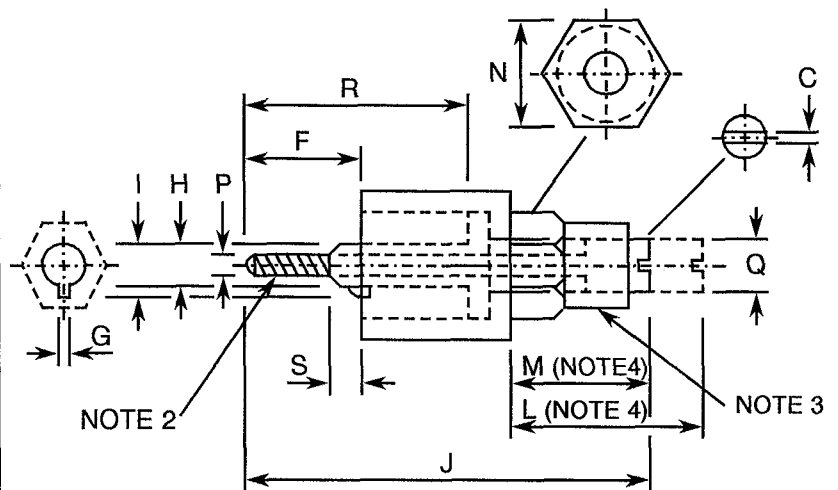


CODE 47

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| F      | 5.70        | 6.50  |
| G      | 0.70        | 1.00  |
| H      | 2.45        | 2.50  |
| I      | 3.00        | 3.20  |
| J      | 22.20       | 22.50 |
| L      | -           | 13.00 |
| M      | 8.00        | 9.00  |
| N      | 5.40        | 5.60  |
| O      | 0.40        | 0.60  |
| P      | M 1.60      |       |
| Q      | 2.90        | 3.10  |
| R      | 11.40       | 12.00 |
| S      | 1.25        | 1.85  |

**NOTES**

1. Weight: 2.0g.
2. Torque: 4.6Ncm.
3. Torque: 14Ncm.
4. M = Locked, L = Unlocked.



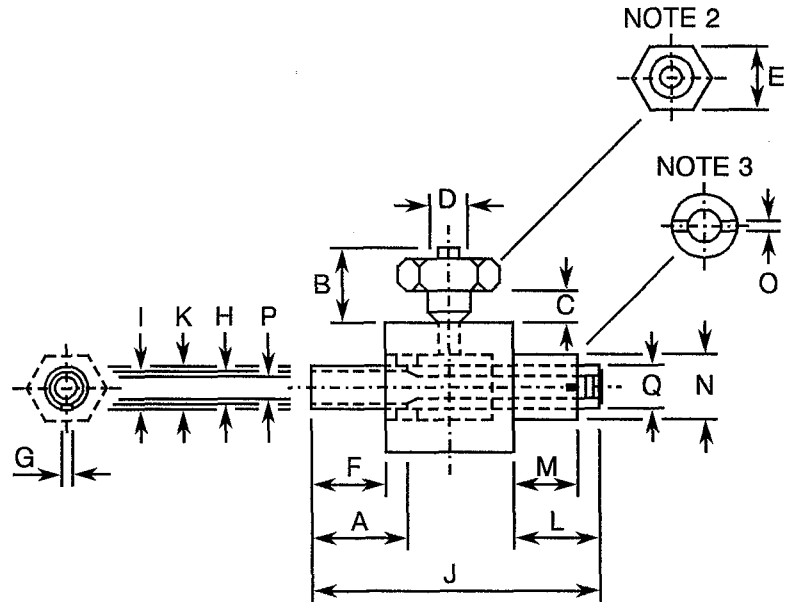


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

**CODE 48**

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 6.80        | 7.20  |
| B      | 3.10        | 3.70  |
| C      | 1.40        | -     |
| D      | 2.42        | 2.58  |
| E      | 3.90        | 4.10  |
| F      | 4.80        | 5.40  |
| G      | 1.10        | 1.30  |
| H      | 2.77        | 2.85  |
| I      | 3.05        | 3.30  |
| J      | 16.55       | 16.85 |
| K      | 3.50        | 3.90  |
| L      | 3.20        | 4.00  |
| M      | 2.90        | 3.10  |
| N      | 4.85        | 5.15  |
| O      | 0.85        | 1.20  |
| P      | M 1.60      |       |
| Q      | M 3.0       |       |

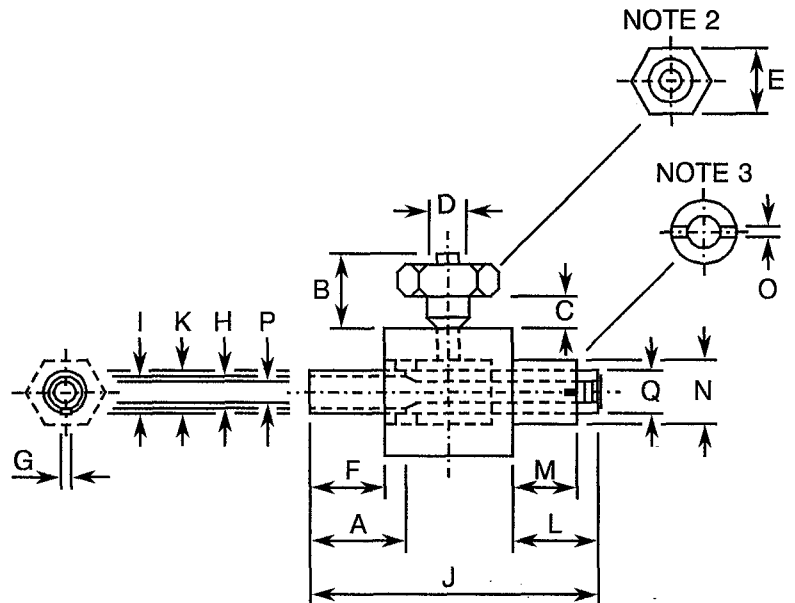


**NOTES**

1. Weight: 1.4g.
2. Torque: 8.0Ncm.
3. Torque: 14Ncm.

**CODE 49**

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 6.80        | 7.20  |
| B      | 3.10        | 3.70  |
| C      | 1.40        | -     |
| D      | 2.42        | 2.58  |
| E      | 3.90        | 4.10  |
| F      | 4.80        | 5.40  |
| G      | 1.10        | 1.30  |
| H      | 2.77        | 2.85  |
| I      | 3.05        | 3.30  |
| J      | 16.55       | 16.85 |
| K      | 3.50        | 3.90  |
| L      | 3.20        | 4.00  |
| M      | 2.90        | 3.10  |
| N      | 4.85        | 5.15  |
| O      | 0.85        | 1.20  |
| P      | M 1.60      |       |
| Q      | M 3.0       |       |



**NOTES**

1. Weight: 1.5g.
2. Torque: 8.0Ncm.
3. Torque: 14Ncm.

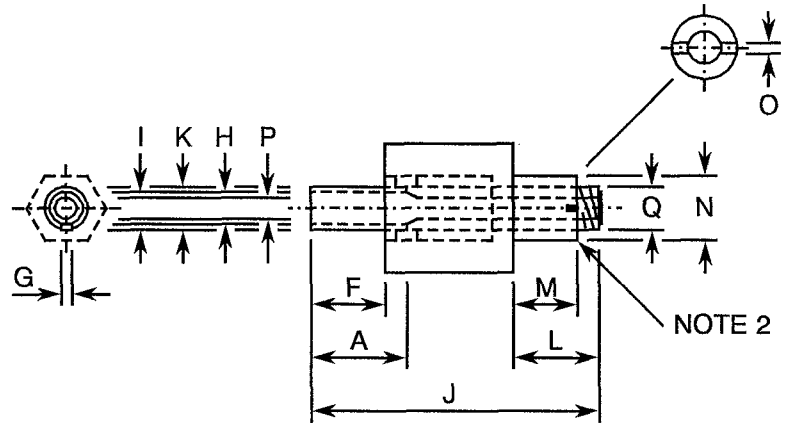


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 50

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 6.80        | 7.20  |
| F      | 4.80        | 5.40  |
| G      | 1.10        | 1.30  |
| H      | 2.77        | 2.85  |
| I      | 3.05        | 3.30  |
| J      | 16.55       | 16.85 |
| K      | 3.50        | 3.90  |
| L      | 3.20        | 4.00  |
| M      | 2.90        | 3.10  |
| N      | 4.85        | 5.15  |
| O      | 0.85        | 1.20  |
| P      | M 1.60      |       |
| Q      | M 3.0       |       |

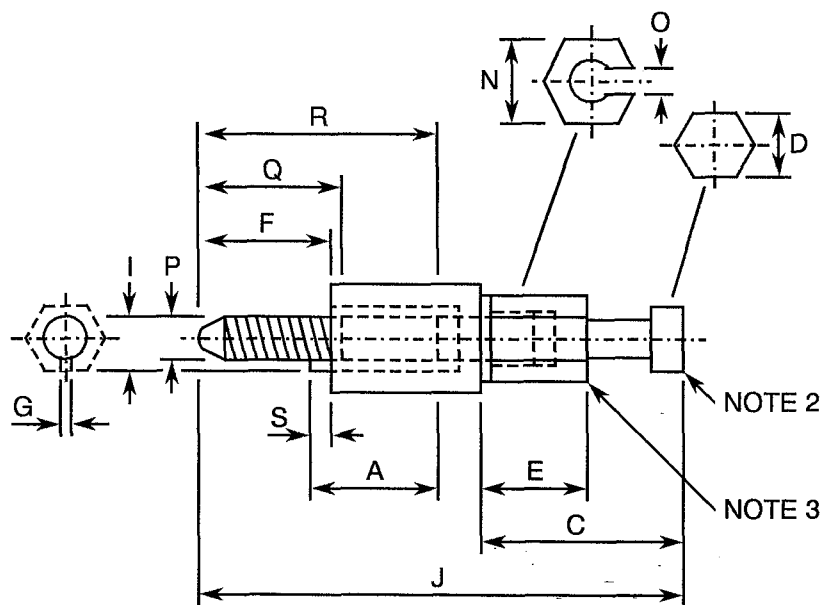


**NOTES**

1. Weight: 1.2g.
2. Torque: 14Ncm.

CODE 51

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 6.30        | 6.70  |
| C      | 11.00       | 12.80 |
| D      | 3.90        | 4.10  |
| E      | 6.00        | 6.30  |
| F      | 3.80        | 6.20  |
| G      | 1.15        | 1.25  |
| I      | 3.10        | 3.25  |
| J      | 25.20       | 25.80 |
| N      | 4.90        | 5.10  |
| O      | 2.07        | 2.15  |
| P      | M 2.50      |       |
| Q      | 7.00        | 8.00  |
| R      | 9.50        | 11.50 |
| S      | 0.80        | 1.40  |



**NOTES**

1. Weight: 2.0g.
2. Torque: 11Ncm.
3. Torque: 15.5Ncm.



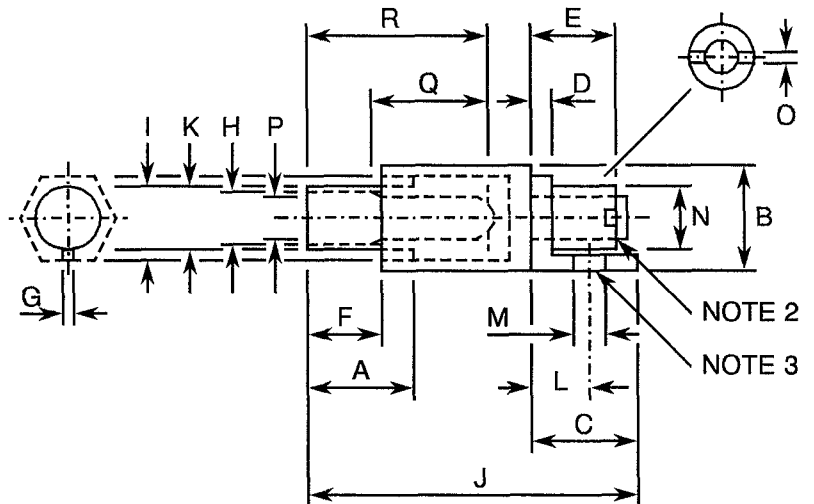


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 52

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.30        | 7.70  |
| B      | 5.80        | 6.20  |
| C      | 5.80        | 6.20  |
| D      | 0.90        | 1.10  |
| E      | 3.50        | 4.50  |
| F      | 4.50        | 5.00  |
| G      | 1.30        | 1.50  |
| H      | 2.70        | 2.80  |
| I      | 3.15        | 3.30  |
| J      | 18.05       | 19.35 |
| K      | 3.75        | 3.85  |
| L      | 3.00        | 3.30  |
| M      | M 1.60      |       |
| N      | 3.50        | 3.75  |
| O      | 0.55        | 0.95  |
| P      | M 2.50      |       |
| Q      | 6.00        | 6.50  |

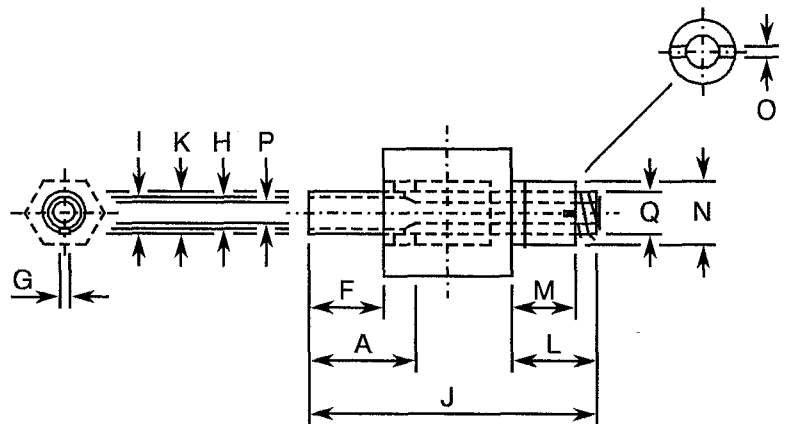


**NOTES**

1. Weight: 1.4g.
2. Torque: 14Ncm.
3. Torque: 11Ncm.

CODE 53

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 6.80        | 7.20  |
| F      | 4.80        | 5.40  |
| G      | 1.10        | 1.30  |
| H      | 2.77        | 2.85  |
| I      | 3.05        | 3.30  |
| J      | 19.55       | 19.85 |
| K      | 3.50        | 3.70  |
| L      | 6.20        | 7.00  |
| M      | 3.35        | 3.70  |
| N      | 4.85        | 5.15  |
| O      | 0.80        | 1.15  |
| P      | M 1.60      |       |
| Q      | M 3.0       |       |



**NOTES**

1. Weight: 1.2g.
2. Torque: 14Ncm.

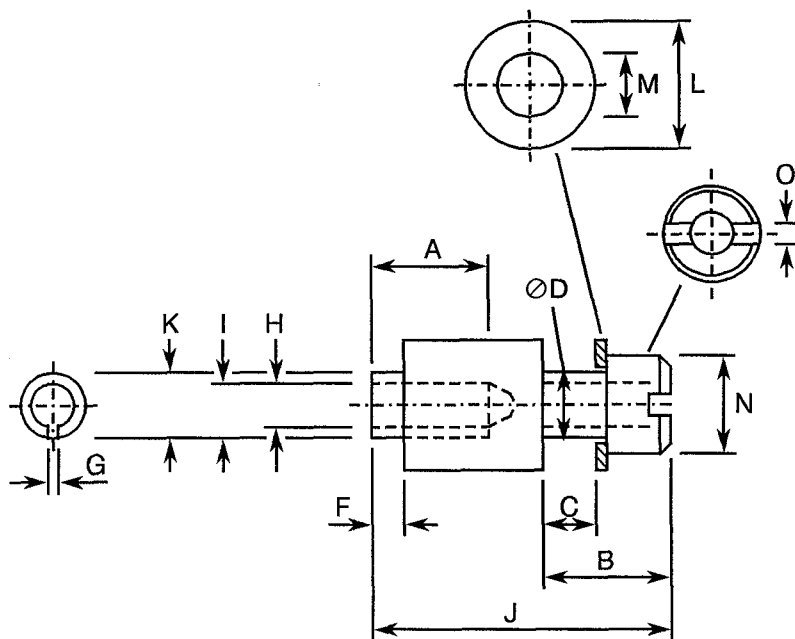


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 54

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.35        | 7.65  |
| B      | 6.50        | 7.50  |
| C      | 2.10        | 2.50  |
| D      | 3.90        | 4.10  |
| F      | 1.80        | 2.20  |
| G      | 1.10        | 1.30  |
| H      | 2.75        | 2.85  |
| I      | 3.05        | 3.35  |
| J      | 16.50       | 17.50 |
| K      | 3.55        | 3.90  |
| L      | 7.30        | 7.70  |
| M      | 4.05        | 4.15  |
| N      | 5.80        | 6.35  |
| O      | 0.90        | 1.10  |

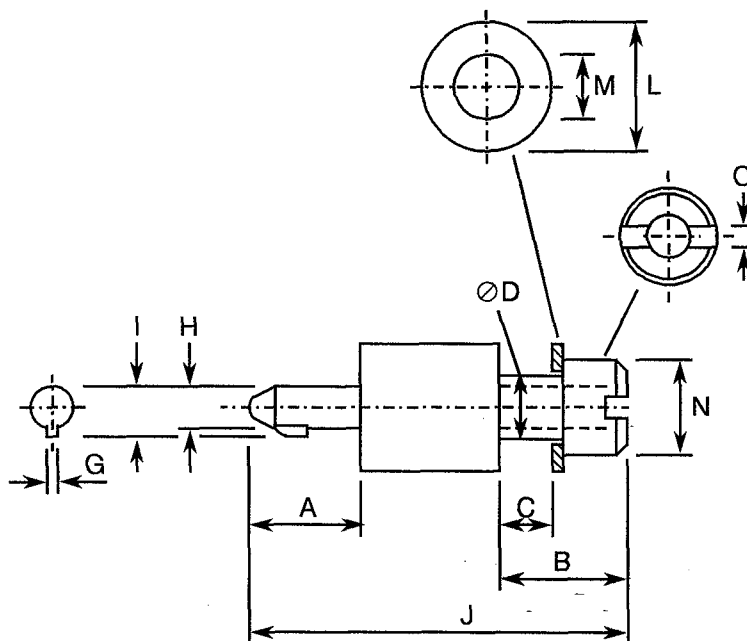


**NOTES**

1. Weight: 1.8g.
2. Torque: 14Ncm.

CODE 55

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 6.50        | 7.50  |
| C      | 2.10        | 2.50  |
| D      | 3.90        | 4.10  |
| G      | 0.70        | 1.00  |
| H      | 2.45        | 2.50  |
| I      | 3.00        | 3.20  |
| J      | 20.20       | 21.25 |
| L      | 7.30        | 7.70  |
| M      | 4.05        | 4.15  |
| N      | 5.80        | 6.35  |
| O      | 0.90        | 1.10  |



**NOTES**

1. Weight: 2.2g.
2. Torque: 14Ncm.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

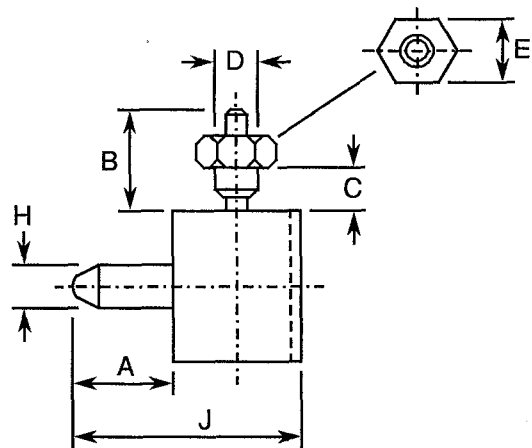
**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 71

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 4.20        | 5.30  |
| C      | 1.40        | -     |
| D      | 2.45        | 2.55  |
| E      | 3.90        | 4.10  |
| H      | 2.45        | 2.55  |
| J      | 13.35       | 14.15 |

**NOTES**

1. Weight: 1.2g.
2. Torque: 11Ncm.

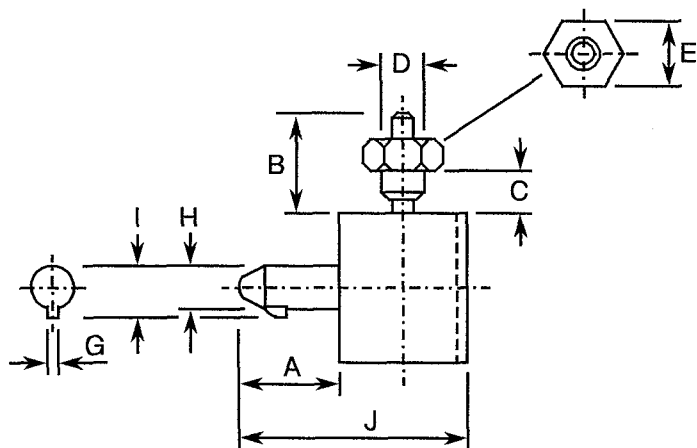


CODE 72

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 4.20        | 5.30  |
| C      | 1.40        | -     |
| D      | 2.45        | 2.55  |
| E      | 3.90        | 4.10  |
| G      | 0.70        | 1.00  |
| H      | 2.45        | 2.50  |
| I      | 3.00        | 3.20  |
| J      | 13.35       | 14.15 |

**NOTES**

1. Weight: 1.2g.
2. Torque: 11Ncm.



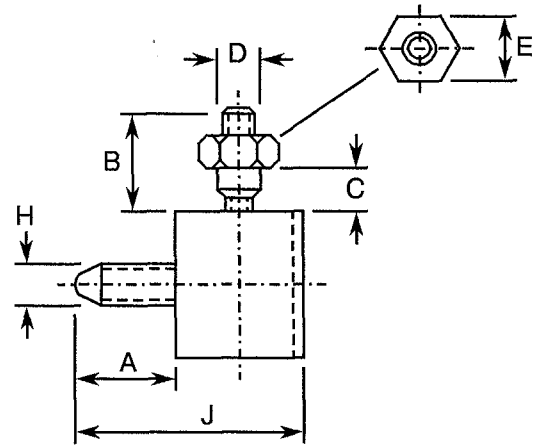


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 73

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.00        | 5.65  |
| B      | 4.20        | 5.30  |
| C      | 1.40        | -     |
| D      | 2.45        | 2.55  |
| E      | 3.90        | 4.10  |
| H      | M 2.50      |       |
| I      | -           | -     |
| J      | 12.75       | 13.65 |

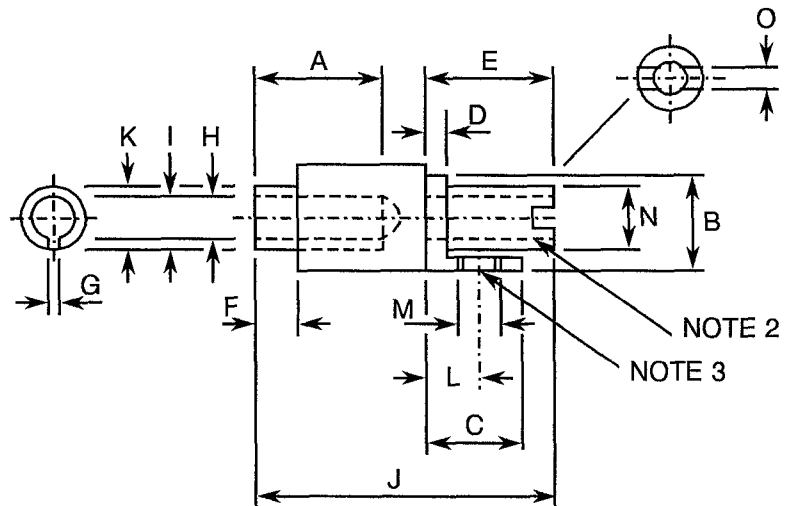


**NOTES**

1. Weight: 1.1g.
2. Torque: 11Ncm.

CODE 74

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.35        | 7.65  |
| B      | 7.80        | 8.20  |
| C      | 7.80        | 8.20  |
| D      | 1.40        | 1.60  |
| E      | 8.30        | 8.70  |
| F      | 1.80        | 2.20  |
| G      | 1.10        | 1.30  |
| H      | 2.75        | 2.85  |
| I      | 3.05        | 3.35  |
| J      | 18.00       | 19.00 |
| K      | 3.55        | 3.90  |
| L      | 4.75        | 5.05  |
| M      | M 1.60      |       |
| N      | 3.30        | 3.70  |
| O      | 0.80        | 1.15  |



**NOTES**

1. Weight: 1.5g.
2. Torque: 14Ncm.
3. Torque: 11Ncm.

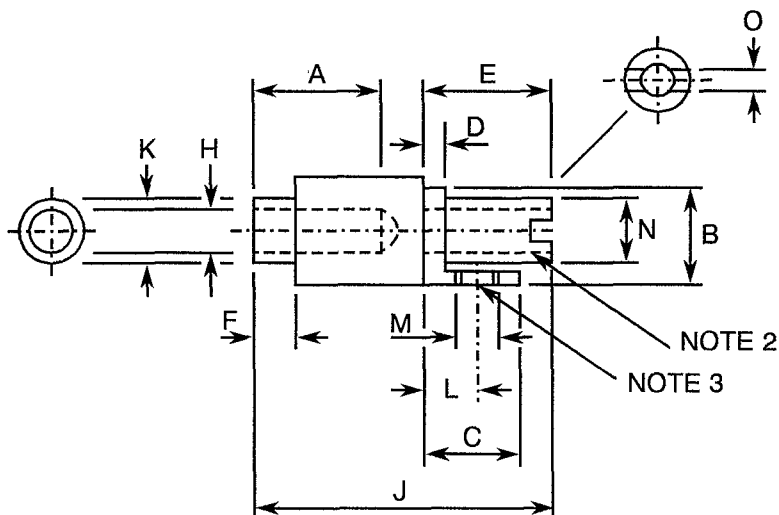


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 75

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.35        | 7.65  |
| B      | 7.80        | 8.20  |
| C      | 7.80        | 8.20  |
| D      | 1.40        | 1.60  |
| E      | 8.30        | 8.70  |
| F      | 1.80        | 2.20  |
| H      | 2.75        | 2.85  |
| J      | 18.00       | 19.00 |
| K      | 3.55        | 3.90  |
| L      | 4.75        | 5.05  |
| M      | M 1.60      |       |
| N      | 3.30        | 3.70  |
| O      | 0.80        | 1.15  |

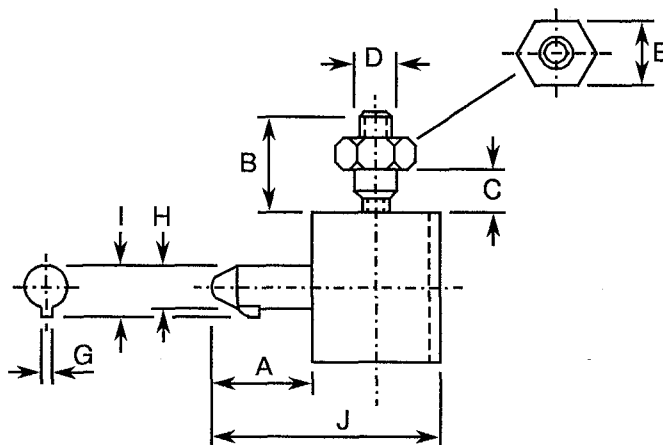


**NOTES**

1. Weight: 1.5g.
2. Torque: 14Ncm.
3. Torque: 11Ncm.

CODE 76

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 4.88        | 6.00  |
| C      | 1.40        | -     |
| D      | 2.45        | 2.55  |
| E      | 3.90        | 4.10  |
| G      | 0.70        | 1.00  |
| H      | 2.45        | 2.50  |
| I      | 3.00        | 3.20  |
| J      | 13.35       | 14.15 |



**NOTES**

1. Weight: 1.1g.
2. Torque: 11Ncm.



**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

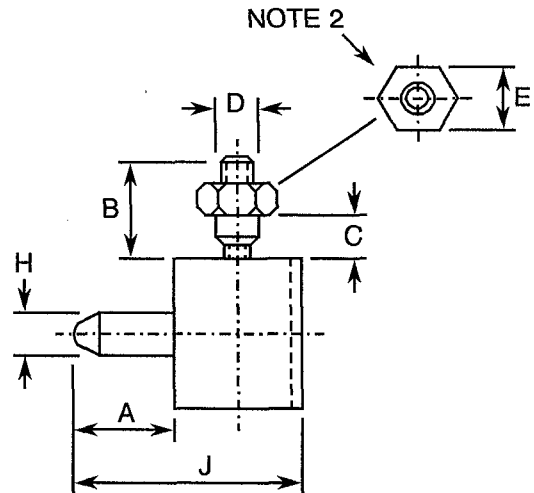
**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 77

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 5.60        | 6.10  |
| B      | 4.88        | 6.00  |
| C      | 1.40        | -     |
| D      | 2.45        | 2.55  |
| E      | 3.90        | 4.10  |
| H      | 2.45        | 2.55  |
| J      | 13.35       | 14.15 |

**NOTES**

1. Weight: 1.2g.
2. Torque: 11Ncm.

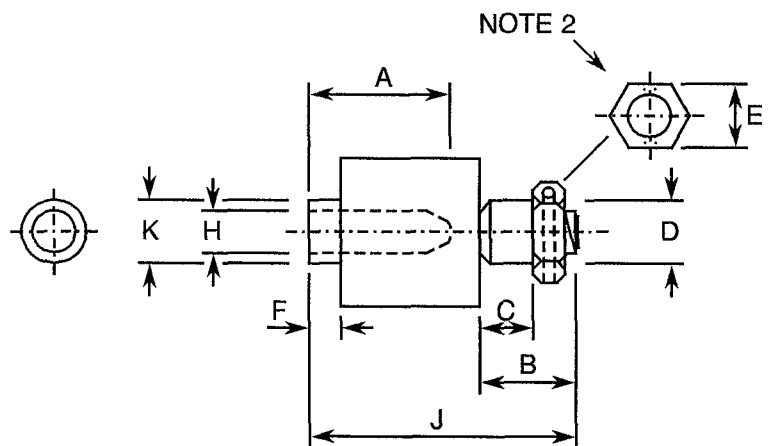


CODE 78

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 6.50        | 7.50  |
| B      | 4.50        | 7.00  |
| C      | 3.50        | -     |
| D      | 3.80        | 4.00  |
| E      | 5.40        | 5.60  |
| F      | 1.15        | 2.90  |
| H      | M 2.50      |       |
| J      | 13.45       | 16.65 |
| K      | 3.75        | 3.90  |

**NOTES**

1. Weight: 1.7g.
2. Torque: 14Ncm.



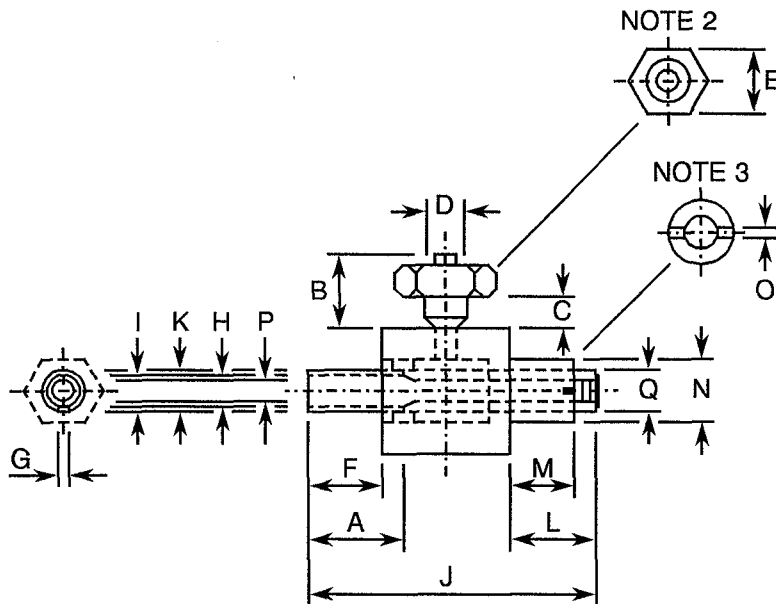


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 79

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 6.80        | 7.20  |
| B      | 4.80        | 5.40  |
| C      | 1.40        | -     |
| D      | 2.42        | 2.58  |
| E      | 3.90        | 4.10  |
| F      | 4.80        | 5.40  |
| G      | 1.10        | 1.30  |
| H      | 2.77        | 2.85  |
| I      | 3.05        | 3.30  |
| J      | 16.55       | 16.85 |
| K      | 3.50        | 3.90  |
| L      | 3.20        | 4.00  |
| M      | 2.90        | 3.10  |
| N      | 4.85        | 5.15  |
| O      | 0.85        | 1.20  |
| P      | M 1.60      |       |
| Q      | M 3.0       |       |

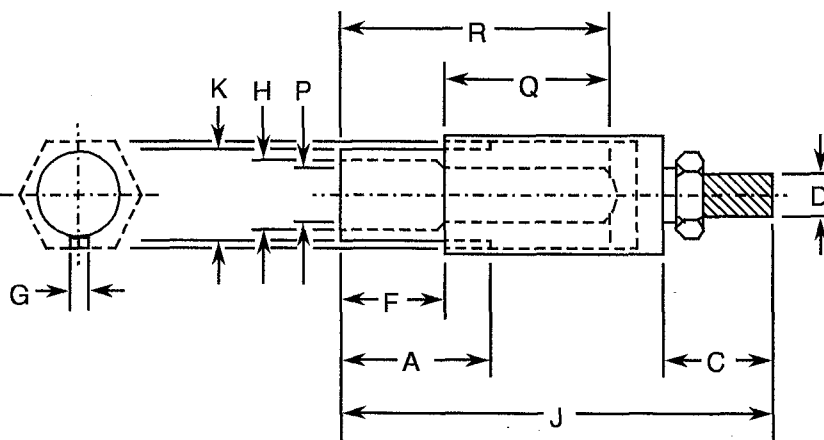


**NOTES**

1. Weight: 1.4g.
2. Torque: 8.0Ncm.
3. Torque: 14Ncm.

CODE 80

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 7.30        | 7.70  |
| C      | 3.50        | 4.50  |
| D      | M 2.50      |       |
| F      | 4.50        | 5.00  |
| G      | 1.30        | 1.50  |
| H      | 2.70        | 2.80  |
| J      | 16.30       | 17.10 |
| K      | 3.75        | 3.85  |
| P      | M 2.50      |       |



**NOTES**

1. Weight: 2g.
2. Torque: 14Ncm.

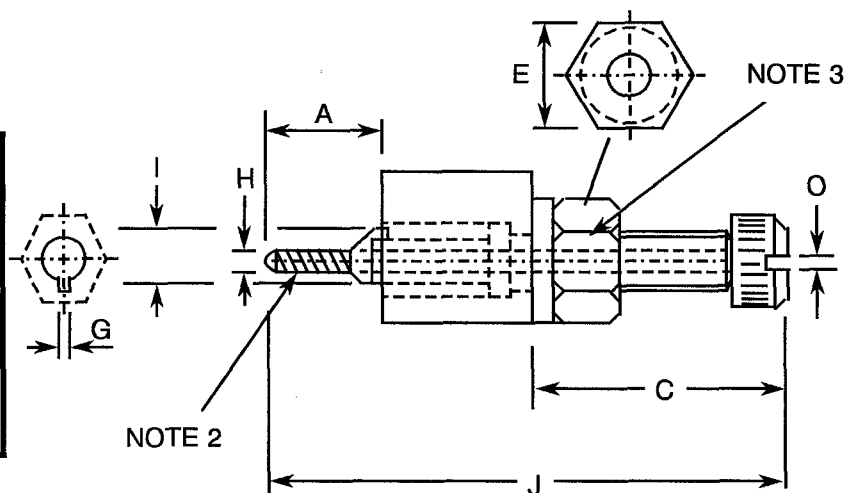


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(b) - GUIDING AND LOCKING DEVICES (CONTINUED)**

CODE 81

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 6.20        | 7.00  |
| C      | 9.20        | 10    |
| E      | 5.40        | 5.60  |
| G      | 0.70        | 1.00  |
| H      | M 1.60      |       |
| I      | 3.00        | 3.20  |
| J      | 24          | 24.50 |
| O      | 0.30        | 0.60  |



**NOTES**

1. Weight: 1.70g.
2. Torque: 4.6N.cm.
3. Torque: 14N.cm.



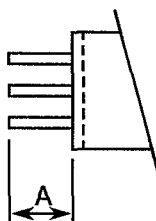


**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(c) - CONTACT MOUNTING CONFIGURATIONS**

**VIEW OF REAR PART OF CONNECTOR**

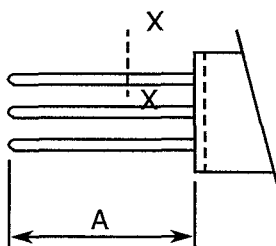
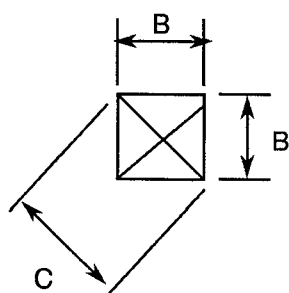
**CRIMP CONTACTS - CODE NUMBERS 04 AND 15 (2 OR 3 ROWS)**



| SYMBOL | MILLIMETRES |      |
|--------|-------------|------|
|        | MIN.        | MAX. |
| A      | 4.15        | 4.90 |

**WIRE-WRAP CONTACTS (2 OR 3 ROWS)**

**CROSS SECTION XX**



| SYMBOL | MILLIMETRES  |       |
|--------|--------------|-------|
|        | MIN.         | MAX.  |
| A      | 13.50        | 15.00 |
| B      | 0.60 nominal |       |
| C      | 0.76         | 0.864 |



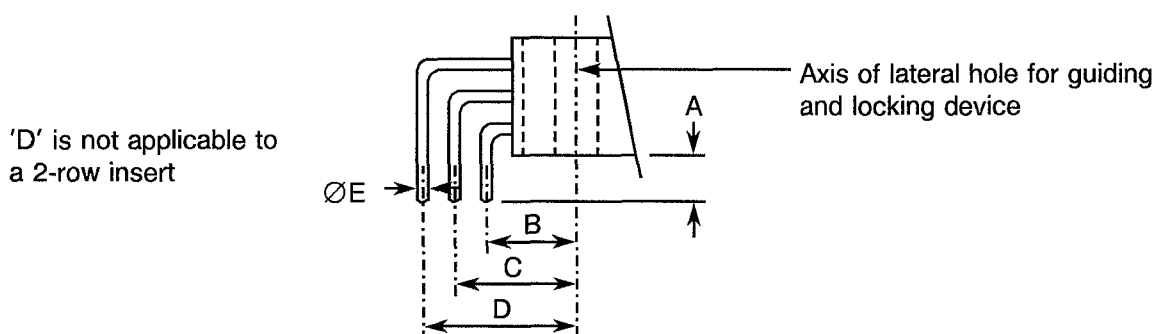
**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(c) - CONTACT MOUNTING CONFIGURATIONS**

**VIEW OF REAR PART OF CONNECTOR**

**SOLDER CONTACTS**

1. Insert with lateral hole for guiding and locking devices with solder right-angle contacts.

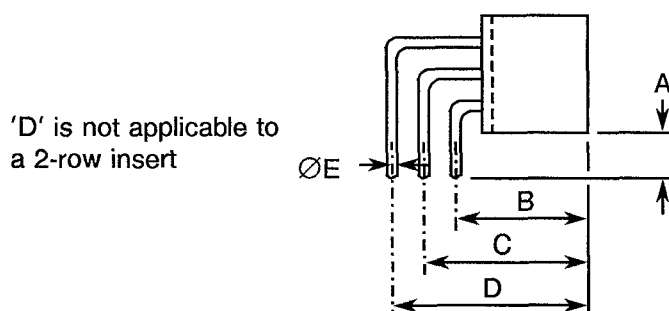


Inserts with contact code numbers 01, 02, 03, 12, 13 and 14:

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 2.50        | 3.50  |
| B      | 4.88        | 5.28  |
| C      | 7.32        | 7.92  |
| D      | 9.76        | 10.56 |
| ØE     | 0.56        | 0.64  |

For inserts with contact code numbers 64, 65, 66, 68, 69 and 70, dimension 'A' shall be: 3.50 to 4.50 mm.

2. Insert without lateral hole for guiding and locking devices with solder right-angle contacts.



Inserts with contact code numbers 01, 02, 03, 12, 13 and 14:

| SYMBOL | MILLIMETRES |       |
|--------|-------------|-------|
|        | MIN.        | MAX.  |
| A      | 2.50        | 3.70  |
| B      | 8.78        | 9.18  |
| C      | 11.22       | 11.82 |
| D      | 13.66       | 14.46 |
| ØE     | 0.56        | 0.64  |

For inserts with contact code numbers 64, 65, 66, 68, 69 and 70, dimension 'A' shall be: 3.50 to 4.70 mm.



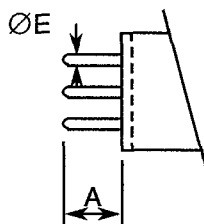
**FIGURE 2 - PHYSICAL DIMENSIONS(CONTINUED)**

**FIGURE 2(c) - CONTACT MOUNTING CONFIGURATIONS**

**VIEW OF REAR PART OF CONNECTOR**

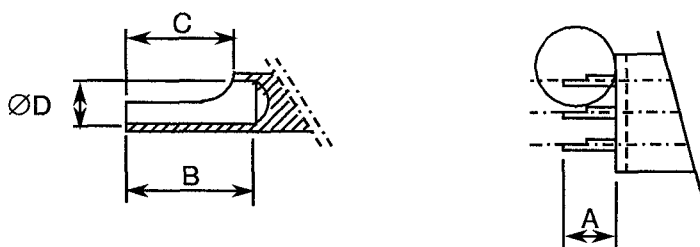
**SOLDER AND SAVER CONTACTS**

3. Inserts with solder straight-through contacts ( 2 or 3 rows).



| CONTACT CODE Nos. | SYMBOL | MILLIMETRES |      |
|-------------------|--------|-------------|------|
|                   |        | MIN.        | MAX. |
| 07                | A      | 5.30        | 6.15 |
| 06 and 17         | A      | 4.50        | 5.35 |
| 18                | A      | 4.25        | 5.10 |
| 67                | A      | 4.15        | 5.00 |
| 06, 07, 17, 18    | ØE     | 0.56        | 0.64 |
| 67                | ØE     | 0.58        | 0.62 |

4. Inserts with bucket contacts (2 or 3 rows).



| CONTACT CODE Nos. | SYMBOL | MILLIMETRES |      |
|-------------------|--------|-------------|------|
|                   |        | MIN.        | MAX. |
| 08 and 19         | A      | 4.75        | 5.65 |
| 08 and 19         | B      | 2.80        | -    |
| 08 and 19         | C      | 2.30        | 2.70 |
| 08 and 19         | ØD     | 0.98        | 1.04 |



#### 4. REQUIREMENTS

##### 4.1 GENERAL

The complete requirements for procurement of the connectors specified herein are stated in this specification and ESA/SCC 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 ESA/SCC requirements and do not affect the components' reliability, are listed in the appendices attached to this specification.

##### 4.2 DEVIATIONS FROM GENERIC SPECIFICATION

###### 4.2.1 Deviations from Special In-process Controls

None.

###### 4.2.2 Deviations from Final Production Tests (Chart II)

- (a) Para. 9.1.1.4, Mated Shell Conductivity: Not applicable.
- (b) Para. 9.4, Contact Capability: Sampling in accordance with Para. 9.6 of ESA/SCC No. 3401.
- (c) Para. 9.5, Magnetism Level: Not applicable.
- (d) Para. 9.9, Seal Test: Not applicable.
- (e) Para. 9.3, Contact Retainer Test: Not applicable.

Instead, the compression (25N) test of the Contact Retention (In Insert) as specified in Para. 4.3.4 of this specification shall be performed on a sample of contacts in accordance with Para. 9.6 of ESA/SCC 3401.

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

Not applicable.

###### 4.2.4 Deviations from Qualification Tests (Chart IV)

- (a) Para. 9.1.1.4, Mated Shell Conductivity: Not applicable.
- (b) Para. 9.9, Seal Test: Not applicable.
- (c) Para. 9.22, Corrosion: Not applicable.
- (d) Para. 9.23, Insert Retention (in shell): Not applicable.
- (e) Para. 9.24, Jackscrew Retention: Not applicable.

###### 4.2.5 Deviations from Lot Acceptance Tests (Chart V)

- (a) Para. 9.1.1.4, Mated Shell Conductivity: Not applicable.
- (b) Para. 9.9, Seal Test: Not applicable.
- (c) Para. 9.22, Corrosion: Not applicable.

##### 4.3 MECHANICAL REQUIREMENTS

###### 4.3.1 Dimension Check

The dimensions of the connectors specified herein shall be verified in accordance with requirements set out in Para. 9.6 of ESA/SCC Generic Specification No. 3401 and shall conform to those shown in Figure 2 of this specification. For procurement, dimensions to be checked are limited to:-



Figure 2(a) - Between centres of guiding or locking device. (Dimension A).

- Dimension D (where applicable).

Figure 2(b) - Protrusion of locking/guiding devices.

- Overall dimensions of locking/guiding devices.

Figure 2(c) - All dimensions.

#### 4.3.2 Weight

The maximum weight of the connectors, without contacts, and of the accessories specified herein shall be as specified in Figure 2.

#### 4.3.3 Contact Capability

See ESA/SCC Detail Specification No. 3401/017.

#### 4.3.4 Contact Retention (In Insert)

See ESA/SCC Detail Specification No. 3401/017.

#### 4.3.5 Mating and Unmating Forces

The forces applied for mating and unmating of the connectors shall not be more than 0.7N per contact.

#### 4.3.6 Insert Retention (In Shell)

Not applicable.

#### 4.3.7 Jackscrew Retention

Not applicable.

#### 4.3.8 Contact Insertion and Withdrawal Forces

See ESA/SCC Detail Specification No. 3401/017.

#### 4.3.9 Engagement and Separation Forces

See ESA/SCC Detail Specification No. 3401/017.

#### 4.3.10 Oversize Pin Exclusion

See ESA/SCC Detail Specification No. 3401/017.

#### 4.3.11 Probe Damage

See ESA/SCC Detail Specification No. 3401/017.

#### 4.3.12 Solderability

Size B soldering iron shall be used. See also ESA/SCC Detail Specification No. 3401/017.

#### 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 connectors 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

Not applicable.

4.4.2 Inserts

The inserts shall be made of glass fibre-filled diallylphthalate resin.

4.4.3 Contacts

As specified in ESA/SCC Detail Specification No. 3401/017.

4.4.4 Contact Retaining Clip

See ESA/SCC Detail Specification No. 3401/017.

4.4.5 Guiding and Locking Devices

Guiding and locking devices shall be made of brass (nickel-plated), stainless steel or arcap alloy.

4.4.6 Magnetism Level

Not applicable.

4.5 MARKING

4.5.1 General

The marking of all components delivered to this specification shall be in accordance with the requirements of ESA/SCC 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:-

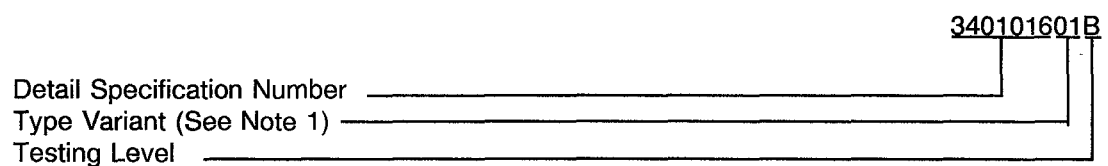
- (a) Contact Identification.
- (b) The SCC Component Number.
- (c) Characteristics
- (d) Traceability Information.

4.5.2 Contact Position

Contact position shall be marked on the inserts in accordance with Figure 2(a).

4.5.3 The SCC Component Number

The SCC Component Number shall be constituted and marked as follows:



**NOTES**

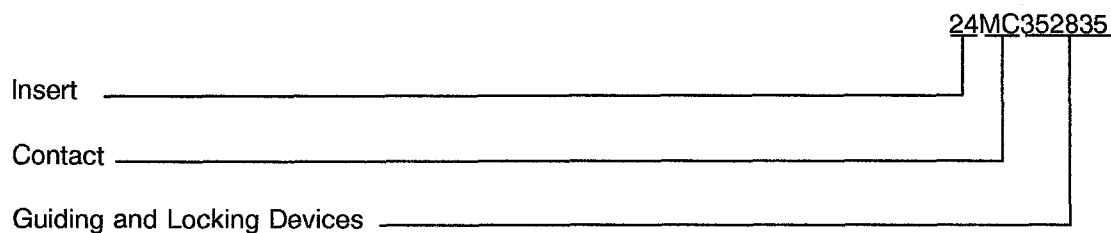
1. Marking of the Type Variant is mandatory. No further reference to type variants is made in this specification.

4.5.4 Characteristics

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

- (a) Insert.
- (b) Contact.
- (c) Guiding and Locking Devices.

The information shall be constituted and marked as follows:-



4.5.4.1 Insert

Code numbers are specified in Figure 2(a) of this specification.

4.5.4.2 Contacts

Codes are specified in ESA/SCC Detail Specification No. 3401/017.

4.5.4.3 Guiding and Locking Devices

Code numbers are specified in Figure 2(b) of this specification.

|  |  |   |
|--|--|---|
| <u>35</u>  | <u>28</u>  | <u>35</u>   |
| Guide or locking device to be placed on left side of insert (as seen from mating side) | Guide or locking device to be placed in centre of insert (if not applicable, use 00) | Guide or locking device to be placed on right side of insert (as seen from mating side) |

If the Purchase Order does not specify any guiding or locking devices, the following shall be delivered:

- 2 row plugs : 332633 or 330033
- 3 row plugs : 342734 or 340034
- Receptacle : 362936 or 360036.

Connector savers shall be designated by the contact code FM and codes 000000 when delivered without guiding and locking devices. Codes 000000 are only applicable to savers.

4.5.5 Traceability Information

Traceability information shall be marked in accordance with the requirements of ESA/SCC 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.

##### 4.6.2 Electrical Measurements at High and Low Temperatures (Table 3)

Not applicable.

##### 4.6.3 Circuits for Electrical Measurements (Figure 4)

Not applicable.

#### 4.7 BURN-IN AND ELECTRICAL MEASUREMENTS (TABLES 4 AND 5)

Not applicable.

#### 4.8 ENVIRONMENTAL AND ENDURANCE TESTS (CHARTS IV AND V OF ESA/SCC GENERIC SPECIFICATION No. 3401)

##### 4.8.1 Measurements and Inspections on Completion of Environmental Tests

The parameters to be measured and inspections to be performed on completion of environmental testing are scheduled in Table 6. Unless otherwise specified, the measurements shall be performed at  $T_{amb} = +22 \pm 3$  °C.

##### 4.8.2 Measurements and Inspections at Intermediate Points during Endurance Tests

Not applicable.

##### 4.8.3 Measurements and Inspections on Completion of Endurance Tests

The parameters to be measured and inspections to be performed on completion of endurance testing are scheduled in Table 6. Unless otherwise specified, the measurements shall be performed at  $T_{amb} = +22 \pm 3$  °C.

##### 4.8.4 Conditions for Operating Life Tests (Part of Endurance Testing)

Not applicable.

##### 4.8.5 Electrical Circuit for Operating Life Tests

Not applicable.

##### 4.8.6 Conditions for High Temperature Storage Test (Part of Endurance Testing)

The requirements for the high temperature storage test are specified in Section 9 of ESA/SCC Generic Specification No. 3401. The conditions for high temperature storage testing shall be the maximum storage temperature specified in Table 1(b) of this specification.



**TABLE 2 - ELECTRICAL MEASUREMENTS AT ROOM TEMPERATURE**

| No. | CHARACTERISTIC                                  | SYMBOL         | ESA/SCC 3401<br>TEST METHOD | TEST<br>CONDITION | LIMITS         |      | UNIT |
|-----|---|----------------|-----------------------------|-------------------|----------------|------|------|
|     |   |                |                             |                   | MIN.           | MAX. |      |
| 1   | Insulation<br>Resistance                        | R <sub>i</sub> | Para. 9.1.1.1               | Para. 9.1.1.1     | 10 000         | -    | MΩ   |
| 2   | Voltage Proof<br>Leakage Current<br>(Sea Level) | I <sub>L</sub> | Para. 9.1.1.2               | 1200Vrms          | -              | 1.0  | mA   |
| 3   | Mated Shell<br>Conductivity<br>(Voltage Drop)   | V <sub>d</sub> | Para. 9.1.1.4               | Para. 9.1.1.4     | Not applicable |      | mV   |

**TABLES 3, 4 AND 5**

Not applicable.



**TABLE 6 - MEASUREMENTS AND INSPECTIONS ON COMPLETION OF ENVIRONMENTAL AND ENDURANCE TESTING**

| NO.                         | ESA/SCC GENERIC NO. 3401              |  | MEASUREMENTS AND INSPECTIONS       |                        | SYMBOL         | LIMITS                    |     | UNIT |
|-----------------------------|---------------------------------------|--|------------------------------------|------------------------|----------------|---------------------------|-----|------|
|                             | ENVIRONMENTAL AND ENDURANCE TESTS (1) | TEST METHOD AND CONDITIONS             | IDENTIFICATION                     | CONDITIONS             |                | MIN                       | MAX |      |
| 01                          | Seal Test                             | Para. 9.9                              | ESA/SCC 3401 Para. 9.9             |                        |                | Not applicable            |     |      |
| 02                          | Wiring                                | Para. 9.10                             | ESA/SCC 3401/017                   |                        |                | -                         | -   |      |
| 03                          | Vibration                             | Para. 9.11                             | <b>Initial Measurements</b>        |                        |                | Record Values             |     |      |
|                             |                                       |  | Coupling Screw(s)                  |                        |                |                           |     |      |
|                             |                                       |  | Unlocking Torque                   | -                      | -              |                           |     |      |
|                             |                                       |  | <b>Final Measurements</b>          |                        |                |                           |     |      |
|                             |                                       |  | Full Engagement                    | -                      | -              |                           |     |      |
| Coupling Screw(s)           |                                       |  |                                    |                        |                |                           |     |      |
| Unlocking Torque Drift      | -                                     | Δ                                      | -25                                | +25                    | %              |                           |     |      |
| Visual Examination          | -                                     | -                                      |                                    |                        |                |                           |     |      |
| 04                          | Shock or Bump                         | Para. 9.12                             | Full Engagement                    | -                      | -              | -                         | -   |      |
|                             |                                       |  | Visual Examination                 | -                      | -              | -                         | -   |      |
| 05                          | Climatic Sequence                     | Para. 9.13                             | <b>Dry Heat</b>                    |                        |                |                           |     |      |
|                             |                                       |  | Insulation Resistance              | Table 2 Item 1         | Ri             | 1 000                     | -   | MΩ   |
|                             |                                       |  | <b>Low Air Pressure</b>            |                        |                |                           |     |      |
|                             |                                       |  | Voltage Proof Leakage Curr.        | Figure 1               | I <sub>L</sub> | ESA/SCC 3401 Para. 9.13.5 |     |      |
|                             |                                       |  | <b>Damp Heat</b>                   | Immediately after test |                |                           |     |      |
|                             |                                       |  | Insulation Resistance              | Table 2 Item 1         | Ri             | 100                       | -   | MΩ   |
| <b>Final Measurements</b>   | After 1-24 hrs Recovery               |  |                                    |                        |                |                           |     |      |
| External Visual Inspection  | ESA/SCC 3401 Para. 9.7                | -                                      | ESA/SCC 3401 Para. 9.7             |                        |                |                           |     |      |
| Insulation Resistance       | Table 2 Item 1                        | Ri                                     | Table 2 Item 1                     |                        |                |                           |     |      |
| Voltage Proof Leakage Curr. | Table 2 Item 2                        | I <sub>L</sub>                         | Table 2 Item 2                     |                        |                |                           |     |      |
| 06                          | Plating Thickness                     | Para. 9.14                             | Thickness                          | -                      | -              | ESA/SCC 3401/017          |     |      |
| 07                          | Joint Strength                        | Para. 9.15                             | ESA/SCC 3401 Para. 9.15            | -                      | -              | ESA/SCC 3401 Para. 9.15   |     |      |
| 08                          | Rapid Change of Temperature           | Para. 9.16                             | <b>Final Measurements</b>          |                        |                |                           |     |      |
|                             |                                       |  | Visual Examination                 |                        |                |                           |     |      |
|                             |                                       |  | Insulation Resistance              | Table 2 Item 1         | Ri             | Table 2 Item 1            |     |      |
| Voltage Proof Leakage Curr. | Table 2 Item 2                        | I <sub>L</sub>                         | Table 2 Item 2                     |                        |                |                           |     |      |
| 09                          | Contact Retention (In Insert)         | Para. 9.17 & Para. 4.3.4 of this spec. | Contact Displacement               | -                      | -              | ESA/SCC 3401 Para. 9.17   |     |      |
| 10                          | Endurance                             | Para. 9.18                             | <b>Initial Measurements</b>        |                        |                |                           |     |      |
|                             |                                       |  | Mating/Unmating Forces             | -                      | F              | Para. 4.3.5 of this spec. |     |      |
|                             |                                       |  | Low Level Contact Resist           | ESA/SCC 3401/017       | Rcl            | Record Values             |     |      |
|                             |                                       |  | Mated Shell Conductivity           | Table 2 Item 3         | Vd             | Not applicable            |     |      |
|                             |                                       |  | <b>Final Measurements</b>          |                        |                |                           |     |      |
|                             |                                       |  | Visual Examination                 |                        |                |                           |     |      |
|                             |                                       |  | Mating/Unmating Forces             | -                      | F              | Para. 4.3.5 of this spec. |     |      |
|                             |                                       |  | Low Level Contact Resistance Drift | ESA/SCC 3401/017       | ΔRcl           | ESA/SCC 3401/017          |     |      |
| Mated Shell Conductivity    | Table 2 Item 3                        | Vd                                     | Not applicable                     |                        |                |                           |     |      |
| Insulation Resistance       | Table 2 Item 1                        | Ri                                     | Table 2 Item 1                     |                        |                |                           |     |      |
| Voltage Proof Leakage Curr. | Table 2 Item 2                        | I <sub>L</sub>                         | Table 2 Item 2                     |                        |                |                           |     |      |

**NOTES** 1. The tests in this table refer to either Chart IV or V and shall be used as applicable.



**TABLE 6 - MEASUREMENTS AND INSPECTIONS ON COMPLETION OF ENVIRONMENTAL AND ENDURANCE TESTING (CONT'D)**

| NO. | ESA/SCC GENERIC NO. 3401              |  | MEASUREMENTS AND INSPECTIONS  |   | SYMBOL  | LIMITS   |      | UNIT   |
|-----|---------------------------------------|--|---|---|---|--|------|--|
|     | ENVIRONMENTAL AND ENDURANCE TESTS (1) | TEST METHOD AND CONDITIONS             | IDENTIFICATION  | CONDITIONS  |   | MIN  | MAX  |  |
| 11  | Permanence of Marking                 | Para. 9.19                             | As applicable   | -   | -   | -  | -    |  |
| 12  | Mating/Unmating Forces                | Para. 9.20                             | Force   | -   | F   | Para. 4.3.5 of this spec.  |      |  |
| 13  | High Temperature Storage              | Para. 9.21                             | <b>Initial Measurements</b><br>Low Level Contact Resis.<br>Mated Shell Conductivity<br><b>Final Measurements</b><br>Visual Examination<br>Mating/Unmating Forces<br><br>Low Level Contact Resistance Drift<br>Rated Current Contact Resis.<br>Mated Shell Conductivity<br>Insulation Resistance<br>Voltage Proof Leakage Curr.<br>Contact Retention (In Insert) | ESA/SCC 3401/017<br>Table 2 Item 3<br><br>-<br>-<br><br>ESA/SCC 3401/017<br><br>ESA/SCC 3401/017<br>Table 2 Item 3<br>Table 2 Item 1<br>Table 2 Item 2<br>Para. 4.3.4 of this spec. | Rcl<br>Vd<br><br>-<br>F<br><br>ΔRcl<br><br>Rcr<br>Vd<br>Ri<br>I <sub>L</sub><br>- | Record Values<br>Not applicable<br><br>-<br>-<br>Para. 4.3.5 of this spec.<br>ESA/SCC 3401/017<br><br>ESA/SCC 3401/017<br>Not applicable<br>Table 2 Item 1<br>Table 2 Item 2<br>ESA/SCC 3401<br>Para. 9.17 |      |  |
| 14  | Corrosion                             | Para. 9.22                             | Visual Examination  | -   | -   | Not applicable   |      |  |
| 15  | Insert Retention (in shell)           | Para. 9.23 & Para. 4.3.6 of this spec. | Visual Examination  | -   | -   | Not applicable   |      |  |
| 16  | Jackscrew Retention                   | Para. 9.24 & Para. 4.3.7 of this spec. | Visual Examination  | -   | -   | Not applicable   |      |  |
| 17  | High Temperature Measurements         | Para. 9.25                             | Insulation Resistance   | Table 2 Item 1  | Ri  | 500  | -    | MΩ   |
| 18  | Overload Test                         | Para. 9.26                             | Internal Temperature<br>Rated Current Contact Resis.<br>Mated Shell Conductivity<br>Insulation Resistance<br>Voltage Proof Leakage Curr.  | ESA/SCC 3401/017<br>Table 2 Item 3<br>Table 2 Item 1<br>Table 2 Item 2  | T<br>Rcr<br>Vd<br>Ri<br>I <sub>L</sub>  | -  | +100 | °C   |
| 19  | Maintenance Aging                     | Para. 9.27                             | Visual Examination<br>Contact Retention<br><br>Contact Insertion & Withdrawal Forces  | -<br>Para. 4.3.4 of this spec<br>Para. 4.3.8 of this spec   | -   | -  | -    | -<br>ESA/SCC 3401<br>Para. 9.17<br>Para. 4.3.8 |

**NOTES**

1. The tests in this table refer to either Chart IV or V and shall be used as applicable.

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**TABLE 6 - MEASUREMENTS AND INSPECTIONS ON COMPLETION OF ENVIRONMENTAL AND ENDURANCE TESTING (CONT'D)**

| NO. | ESA/SCC GENERIC NO. 3401              |   | MEASUREMENTS AND INSPECTIONS |                           | SYMBOL | LIMITS                     |     | UNIT |
|-----|---------------------------------------|---|------------------------------|---------------------------|--------|----------------------------|-----|------|
|     | ENVIRONMENTAL AND ENDURANCE TESTS (1) | TEST METHOD AND CONDITIONS              | IDENTIFICATION               | CONDITIONS                |        | MIN                        | MAX |      |
| 20  | Engage/Separation Forces              | Para. 9.28 & Para. 4.3.9 of this spec.  | Force                        | -                         | -      | Para. 4.3.9                |     |      |
| 21  | Oversize Pin Exclusion                | Para. 9.29 & Para. 4.3.10 of this spec. | -                            | -                         | -      | ESA/SCC 3401<br>Para. 9.29 |     |      |
| 22  | Probe Damage                          | Para. 9.30 & Para. 4.3.11 of this spec. | Contact Separation Force     | Para. 4.3.9 of this spec. | -      | Para. 4.3.9                |     |      |
| 23  | Solderability                         | Para. 9.31 & Para. 4.3.12 of this spec. | -                            | -                         | -      | ESA/SCC 3401<br>Para. 9.31 |     |      |

**NOTES**

1. The tests in this table refer to either Chart IV or V and shall be used as applicable.