INCH-POUND

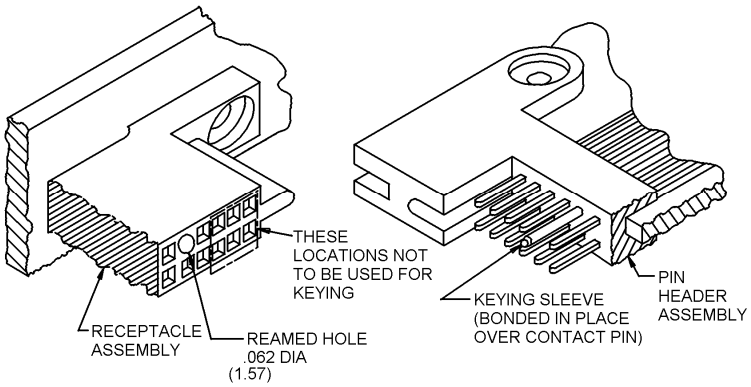
MIL-DTL-55302/31L
20 July 2007
SUPERSEDING
MIL-DTL-55302/31K
9 January 2004

DETAIL SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES: KEYING ACCESSORIES

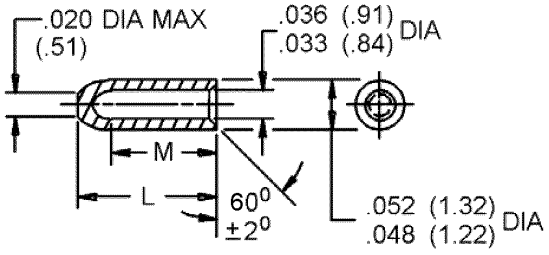
This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-55302.



NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are ±.005 (0.13 mm).
4. Metric equivalents are in parenthesis.

FIGURE 1. Installation of keying sleeve, type I.



Key Part or Identifying Number (PIN)	L	M
M55302/31-01	.305 (7.75)	.240 min (6.10)
M55302/31-02	.250 (6.35)	.225 min (5.72)

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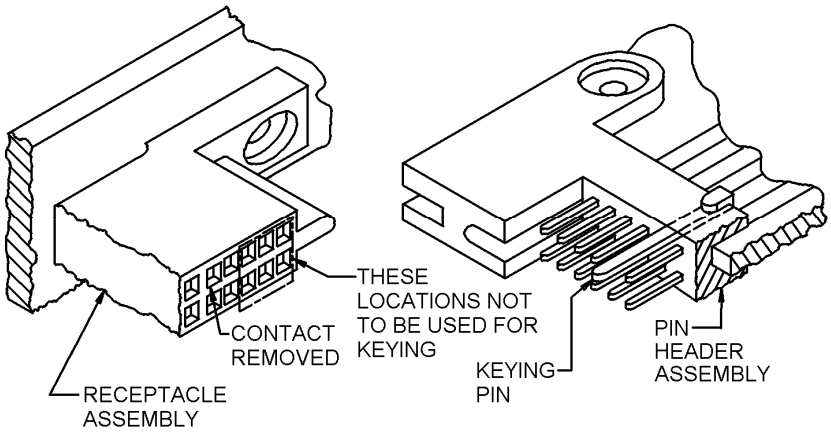
FIGURE 2. Keying sleeve, type I.



NOTES:
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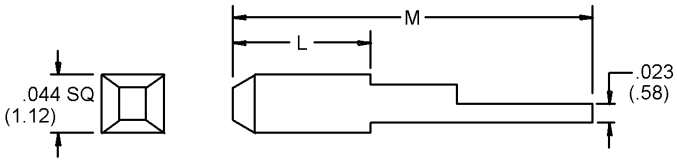
FIGURE 3. Installation of keying pin, type II.



Key PIN	L	M
M55302/31-03	.227 (5.77)	.700 ±.015 (17.78) ±(.38)

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FIGURE 4. Keying pin, type II.

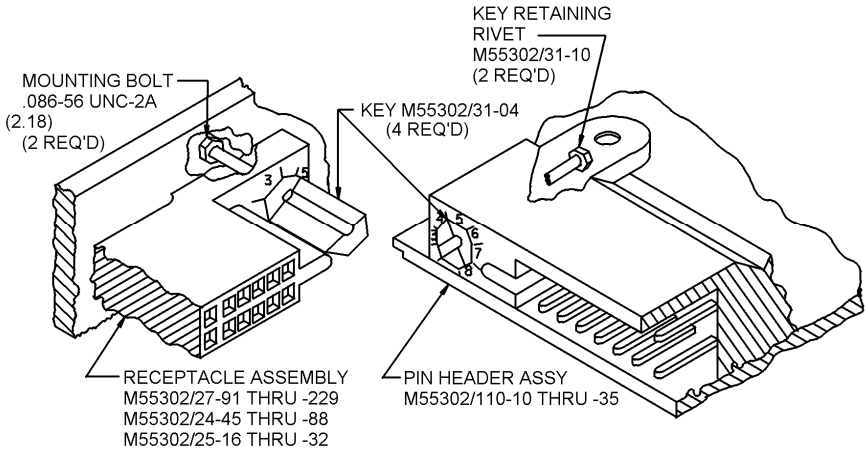

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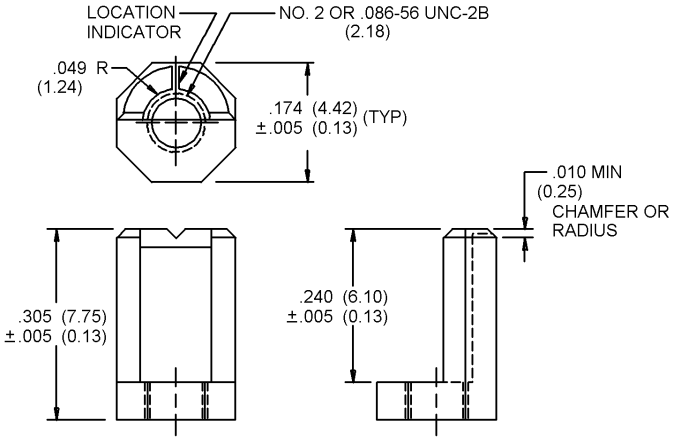
FIGURE 5. Installation of external key (position 6 shown), types II and III.



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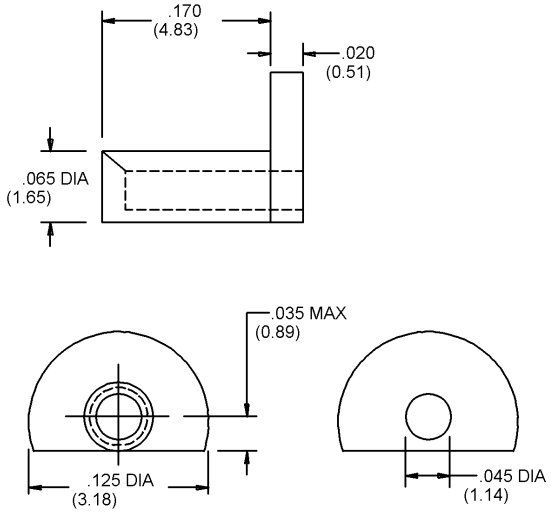
4. Metric equivalents are in parenthesis.

FIGURE 6. External key, M55302/31-04, type III.



NOTES:
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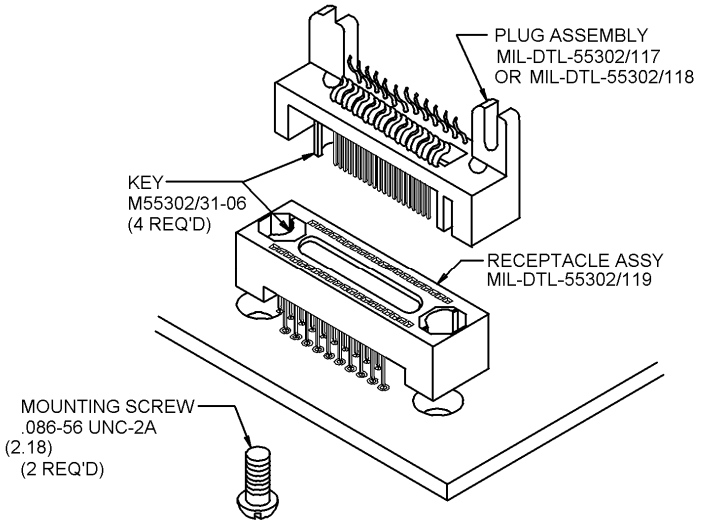
4. Metric equivalents are in parenthesis.

FIGURE 7. Retaining rivet for external key, M55302/31-05, type II.



NOTES:
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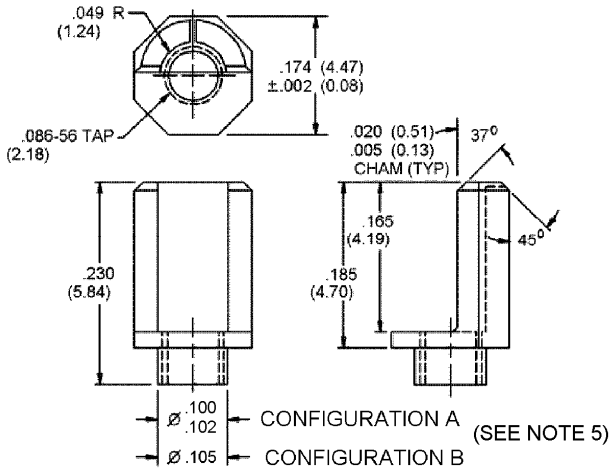
FIGURE 8. Installation of external key, type III.



NOTES:
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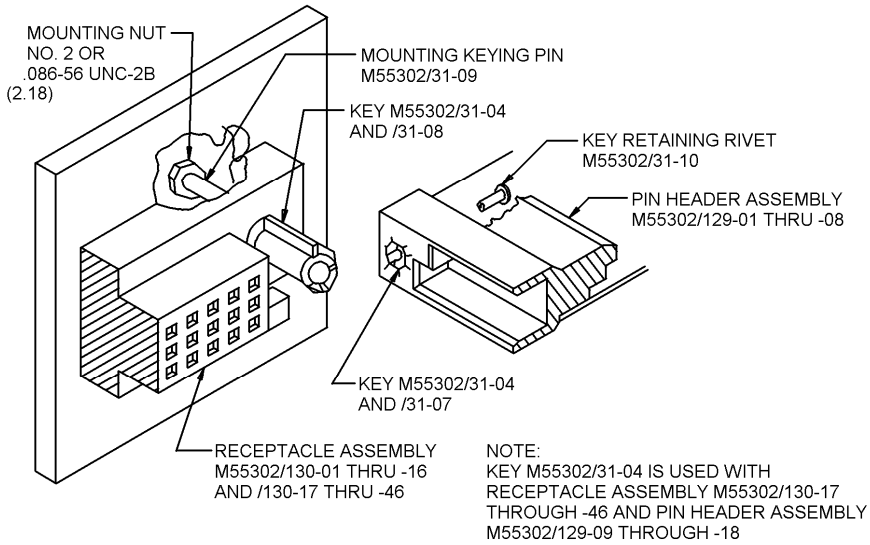
3. Unless otherwise specified, tolerances are ±.005 (0.13 mm).
4. Metric equivalents are in parenthesis.
5. Configurations A and B represent a difference in manufacturers keying hardware design and should be installed in the appropriate connector manufacturer's housing.

FIGURE 9. External key, M55302/31-06, type III.



NOTES:
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3. Unless otherwise specified, tolerances are ±.005 (0.13 mm).

FIGURE 10. Installation of external key, types III and IV.

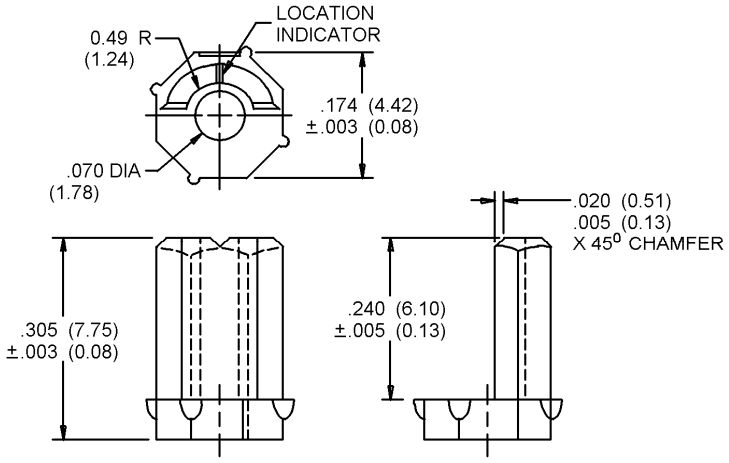

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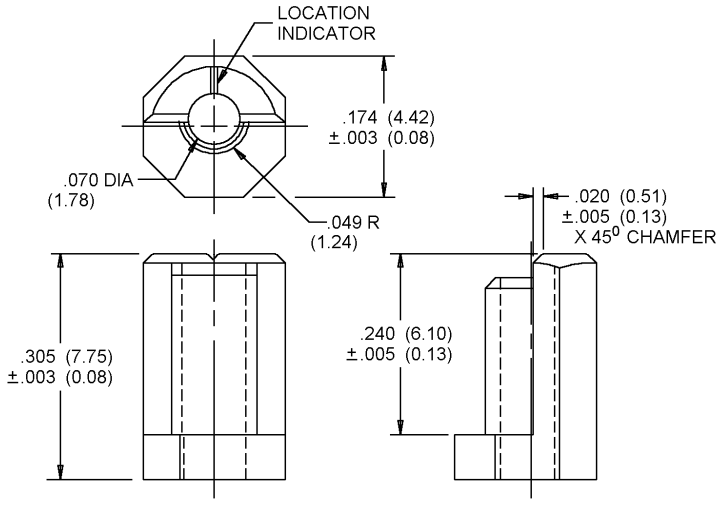
FIGURE 11. External key M55302/31-07, type IV.



NOTES:
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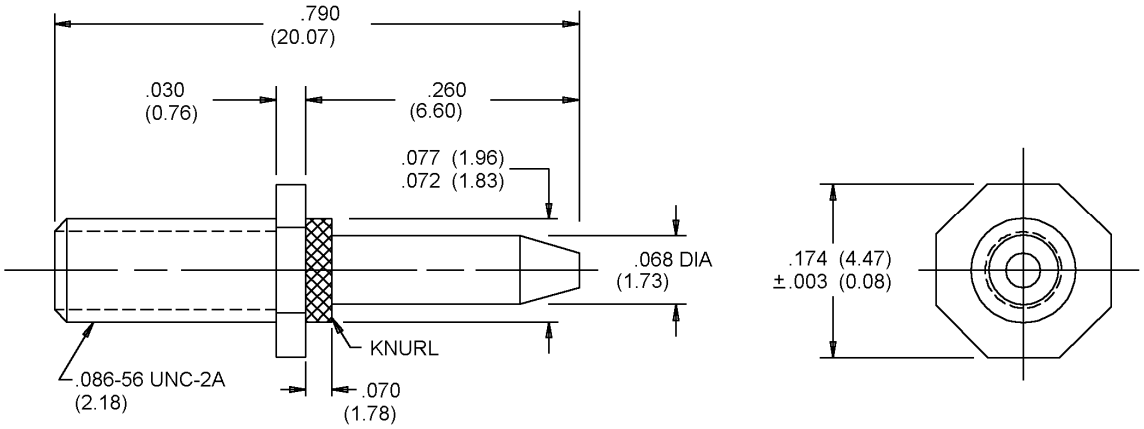
4. Metric equivalents are in parenthesis.

FIGURE 12. External key, M55302/31-08, type IV.



NOTES:
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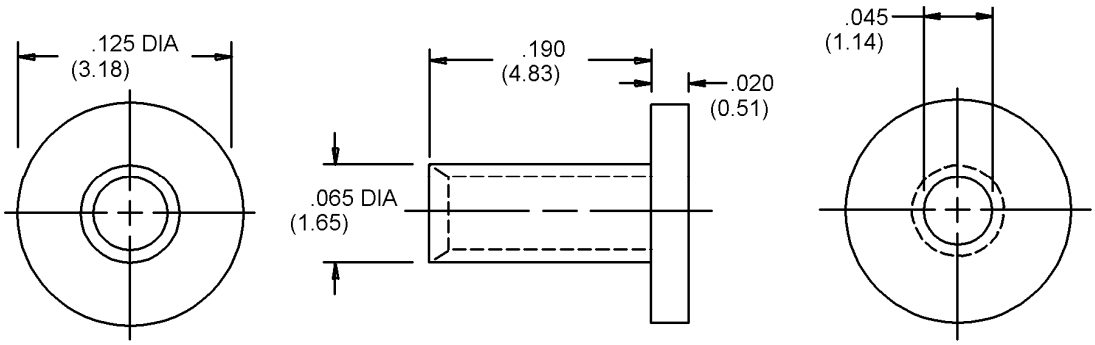
4. Metric equivalents are in parenthesis.

FIGURE 13. Mounting/keying pin, M55302/31-09, type IV.



NOTES:
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FIGURE 14. Retaining rivet for external key, M55302/31-10, type III.

REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figures 1 through 14.

Material:

Types I and II: Brass in accordance with Copper alloy C23000, C24000, C26000 and C26800 of ASTM B36/B36M or C36000 of ASTM B16/B16M or C35300 of ASTM B121/B121M or C37700 of ASTM B124/B124M.

Type III:

Key: Stainless steel in accordance with ASTM A582/A582M.

Rivet: Brass Copper alloy C23000, C24000, C26000 and C26800 of ASTM B36/B36M or C36000 of ASTM B16/B16M or C35300 of ASTM B121/B121M or C37700 of ASTM B124/B124M.

Type IV:

Key: Glass filled polyester in accordance with ASTM D5927 type TPES013G30 or MIL-M-24519 type GPT-30F.

Mounting/keying pin: Stainless steel in accordance with ASTM A582/A582M.

Finish:

Types I and II: Nickel in accordance with SAE-AMS2403.

Type III:

Key: Passivate in accordance SAE-AMS2700

Rivet: Nickel in accordance with SAE-AMS2403.

Type IV:

Mounting/keying pin: Passivate in accordance with SAE-AMS2700

Application:

Types I and II: This keying shall be used with connectors, as specified in MIL-DTL-55302/23, MIL-DTL-55302/24, MIL-DTL-55302/25, MIL-DTL-55302/26 and MIL-DTL-55302/27.

Type III: This keying shall be used with connectors, M55302/27-91 through M55302/27-229; M55302/110-10 through M55302/110-35, M55302/117-01 through M55302/117-11; M55302/118-01 through M55302/118-11; and M55302/119-01 through M55302/119-11, M55302/129-09 through M55302/129-18 and M55302/130-17 through M55302/130-46.

Type IV: This keying shall be used with M55302/129-01 through M55302/129-08 and M55302/130-01 through M55302/130-16.

Installation:

Type I: For receptacle assemblies MIL-DTL-55302/24, MIL-DTL-55302/25 and MIL-DTL-55302/27, remove contact and ream cavity to .062 inch diameter hole. For plug assemblies MIL-DTL-55302/23 or MIL-DTL-55302/26, bond keying sleeve with 3M adhesive (EC-2216 or equivalent) in place over contact (see figure 1).

Type II: For receptacle assemblies MIL-DTL-55302/24, MIL-DTL-55302/25 and MIL-DTL-55302/27, remove contact. For plug assemblies MIL-DTL-55302/23 or MIL-DTL-55302/26, remove contact and ream cavity to .062 inch (1.57 mm) diameter hole. Secure in place by bending tail over outside edge of housing. Trim excess material (see figure 3).

Recommended keying:

Types I and II: (-01, -02 and -03): See figures 2 and 4. Two keys of same type located on opposite ends of connector excluding first six contacts on each end.

Types III and IV: (-04, -05 and -10): See figures 5 and 10.

Receptacle assembly: For PIN M55302/27-91 through M55302/27-229, M55302/24-45 through M55302/24-88, M55302/25-16 through M55302/25-32 and M55302/130-17 through M55302/130-46, place key (-04) in numbered position as indicated by location slot (position 6 shown) and secure in place with .086-56 screw inserted through printed circuit board.

Plug assembly: For PINs M55302/129-09 through M55302/129-18, M55302/110-10 through M55302/110-35, M55302/23-16 through M55302/23-30 and M55302/26-10 through M55302/26-22, place key (-04) in the identically numbered position as indicated by location slot (position 6 shown) and secure in place with rivet M55302/31-05 or M55302/31-10, using AMP tool PIN 91117-1, 91117-3 or equivalent.

Type III (-06): See figure 8.

Receptacle assembly: For PINs M55302/119-01 through M55302/119-11, place key (-06) in one of the eight possible locations and press fit into mounting hole; then secure in place with .086-56 screw inserted through printed circuit board.

Plug assembly: For PINs M55302/117-01 through M55302/117-11, or M55302/118-01 through M55302/118-11, place key (-06) in the identical position as the receptacle (M55302/119-01 through M55302/119-08) and press fit into mounting hole.

Type IV (-07, -08, and -09): See figure 10.

Receptacle assembly: For PINs M55302/130-01 through M55302/130-16, mount connector to printed circuit board with mounting/key pin (-09) and secure with mounting nut. Place key (-08) over pin and press fit in to one of the eight possible locations.

Plug assembly: For PINs M55302/129-01 through M55302/129-08, place key (-07) in the identical position as the receptacle (M55302/130-01 through M55302/130-16) and secure in place with rivet M55302/31-10 using AMP tool PIN 91117-3 or equivalent.

PIN: M55302/31- (and dash number from table I).

Visual and mechanical inspections, required in accordance with MIL-DTL-55302.

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Referenced documents. In addition to MIL-DTL-55302, this document references the following:

MIL-DTL-55302/23	ASTM A582/A582M
MIL-DTL-55302/24	ASTM B16/B16M
MIL-DTL-55302/25	ASTM B36/B36M
MIL-DTL-55302/26	ASTM B121/B121M
MIL-DTL-55302/27	ASTM B124/B124M
MIL-DTL-55302/117	ASTM D5927
MIL-DTL-55302/118	SAE-AMS2403
MIL-DTL-55302/119	SAE-AMS2700
MIL-M-24519	

CONCLUDING MATERIAL

Custodians:
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-2006-034)

Review activities:
Air Force - 19, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at http://assist.daps.dla.mil