



DOCUMENT CHANGE REQUEST

| | | | | | |
|------------|-------------|-----------------------|------------|---------------|----------------|
| DCR number | 466 | Changes required for: | N/A | Originator: | Olivier Masson |
| Date: | 2009/01/21 | Date sent: | 2009/01/21 | Organisation: | CNES |
| Status: | IMPLEMENTED | | | | |

Title: Accessories for Rectangular Connectors 3401/001 and 3401/002 and Connector Savers 3401/020

| | | | |
|---------|----------|--------|---|
| Number: | 3401/022 | Issue: | 3 |
|---------|----------|--------|---|

Other documents affected:

Page:

See the details of modifications in red and yellow in the attached document "3401022(draft Issue 4).pdf"

Paragraph:

See the details of modifications in red and yellow in the attached document "3401022(draft Issue 4).pdf"

Original wording:

Proposed wording:

See the details of modifications in red and yellow in the attached document "3401022(draft Issue 4).pdf"

Justification:

Program of re-design of variants 340102217B to 340102243B in progress at C&K.
Reasons for this program are :

- Robustness / quality improvement (monobloc machined backshell)
- delivery lead time improvement (more than 20 weeks currently -> 6 to 8 weeks in the future)
- manufacturing process simplification

Our will is to keep the variants number unchanged :

- to avoid nomenclature changes for our customers
- to make sure that will not receive any more orders for old design

Additional qualification test report will be provided before end of february 2009.

Attachments:

3401022(draft_issue_4).pdf, Data-Sheet_Backshells.pdf, null

Modifications:

Approved wording if different from 'Proposed Wording' above or reason for rejection

The contents of DCR466 are amended to include the following amendments and additions:

1 - The original drawings for the obsolete versions of Variants 17 to 43 are removed and replaced by drawings of the new design as shown in the original attachment to DCR466.

2 – The change description on the DCN page for DCR466 in the up-issued spec 3401/022 shall include the following information note:

.....

Specification updated to incorporate editorial and technical changes per DCR.

Note - Changes include modifications to Variants 17 to 43 with respect to their specified mechanical configuration, dimension limits and/or maximum weight. However these Variants remain form, fit and function interchangeable with the obsolete versions they replace.

.....

3 - The current issue of 3401/022 is issue 3

4 - Table 1(a) should also be amended to include the 3 new Variants as follows:

Variant 81: Potting Shell; Size E; weight N/A

Variant 82: Back-Shell for Strapped Connections; Size E; weight 6.3g

Variant 83: Cable Clamp, Straight; Size E; weight 8.3g

5 - Para 2,

Amend titles of the specs in (a)(b) and (c) to reflect the actual spec titles.

Delete reference to QQ & MIL specs (see comment 6 on Para. 4.4.1 below)

6 - Para 4.4.1. Delete current Para. title & contents to be replaced with the following:

.....

4.4.1 Screw-Lock Assemblies, Potting Shells, Back Shells, Clamps

Screw-lock assemblies (brass), potting shells, back shells and clamps shall be made of brass with gold (0.7um minimum) over copper (1um minimum) plating.

Screw-lock assemblies (stainless steel) shall be made of passivated stainless steel.

.....

7 - Para 4.5.3.1, add Variants 81 to 83 to the list for magnetism level.

Justification for the above amendments are:

1 – Removal of obsolete variants facilitating use of the same variant numbers for the new design accessories which are considered form, fit and function interchangeable with the obsolete versions.

2 – Clarification for users.

3, 4, 5, 7 – Editorial corrections for the purposes of clarity, consistency and completeness.

5, 6 - Definition of the base material and plating is considered sufficient without reference to specific non-ESCC material specifications; It is considered unnecessary to prescribe the actual material specifications to be applied by the Manufacturer (which will be controlled by their PID).

For modified Variants 39 to 43, Right Angle Clamp, in Figure 2(e), replace the figure with the one attached (including addition of new dimension 'D' and correction of dimension 'G')

Approval signature:

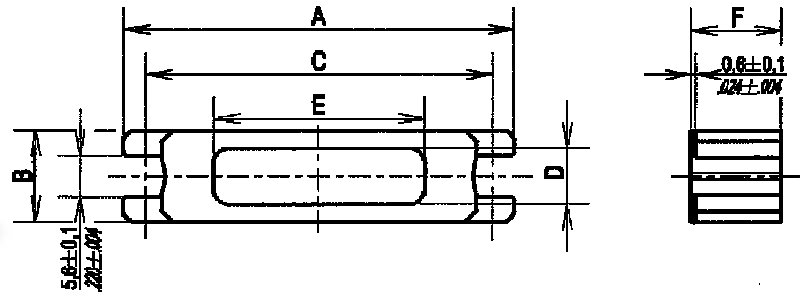
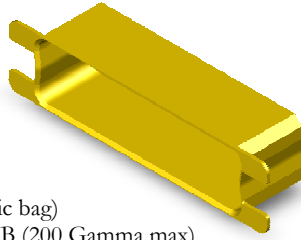
A handwritten signature in black ink, appearing to read "R. C. Clark" followed by a horizontal flourish.

Date signed:

2009-01-21

Potting Shell (rear open)

Max weight (grams) :
N.A. (not on board)

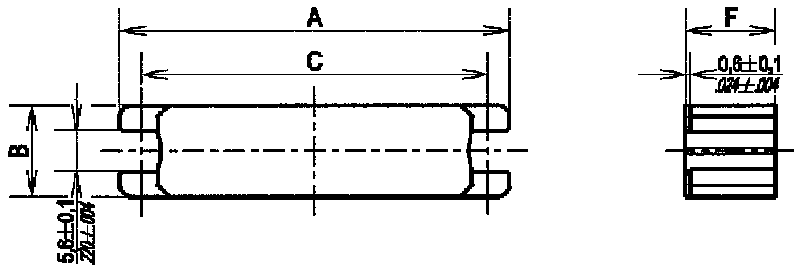
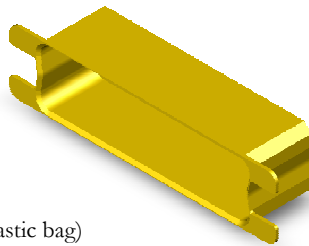


Packaging unit : 1 piece (plastic bag)
Residual magnetism level NMB (200 Gamma max)

| Shell Size | ESA/ESCC Variant | A ± 0,38 (.015) | B ± 0,38 (.015) | C ± 0,13 (.005) | D ± 0,50 (.020) | E ± 0,50 (.020) | F ± 0,38 (.015) |
|------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| E | New | 30,70 (1.208) | 12,70 (.500) | 24,99 (.984) | 7,60 (.300) | 9,00 (.354) | 12,30 (.484) |
| A | 17 | 38,89 (1.531) | 12,70 (.500) | 33,32 (1.312) | 7,60 (.300) | 14,92 (.587) | 12,30 (.484) |
| B | 18 | 52,78 (2.078) | 12,70 (.500) | 47,04 (1.852) | 7,60 (.300) | 28,54 (1.124) | 12,30 (.484) |
| C | 19 | 69,04 (2.718) | 12,70 (.500) | 63,50 (2.500) | 7,60 (.300) | 44,47 (1.751) | 12,30 (.484) |
| D | 20 | 66,67 (2.625) | 15,47 (.609) | 61,12 (2.406) | 9,90 (.390) | 44,47 (1.751) | 12,30 (.484) |

Switching Shell (rear closed)

Max weight (grams)
Size E : 6,3
Size A : 8,4
Size B : 11,6
Size C : 15,5
Size D : 16,6



Packaging unit : 1 piece (plastic bag)
Residual magnetism level NMB (200 Gamma max)

| Shell Size | ESA/ESCC Variant | A ± 0,38 (.015) | B ± 0,38 (.015) | C ± 0,13 (.005) | F ± 0,38 (.015) |
|------------|------------------|--------------------|--------------------|--------------------|--------------------|
| E | New | 30,70 (1.208) | 12,70 (.500) | 24,99 (.984) | 12,30 (.484) |
| A | 21 | 38,89 (1.531) | 12,70 (.500) | 33,32 (1.312) | 12,30 (.484) |
| B | 22 | 52,78 (2.078) | 12,70 (.500) | 47,04 (1.852) | 12,30 (.484) |
| C | 23 | 69,04 (2.718) | 12,70 (.500) | 63,50 (2.500) | 12,30 (.484) |
| D | 24 | 66,67 (2.625) | 15,47 (.609) | 61,12 (2.406) | 12,30 (.484) |

Cross References

| Type | Size | ESA/ESCC Quality Level | | FR023 Quality Level | | FR022 Quality Level | |
|-----------------|------|------------------------|-------------|---------------------|-------------|---------------------|-------------|
| | | Description | Part Number | Description | Part Number | Description | Part Number |
| Potting shell | E | 3401022.xx | B NMB | | | | |
| | A | 3401022 | 17B NMB | | | | |
| | B | 3401022 | 18B NMB | | | | |
| | C | 3401022 | 19B NMB | | | | |
| | D | 3401022 | 20B NMB | | | | |
| Switching shell | E | 3401022.xx | B NMB | | | | |
| | A | 3401022 | 21B NMB | | | | |
| | B | 3401022 | 22B NMB | | | | |
| | C | 3401022 | 23B NMB | | | | |
| | D | 3401022 | 24B NMB | | | | |

Straight Clamp

Max weight (grams) :

Size E : 8,5

Size A : 10,6

Size B : 13,7

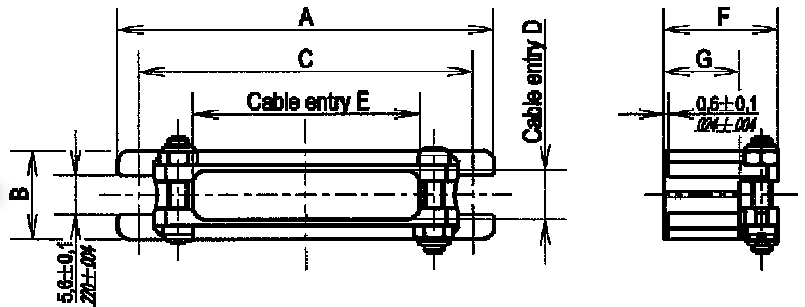
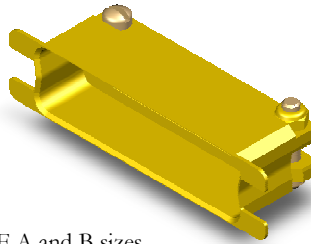
Size C : 18,4

Size D : 19,8

Number of screws : 2 for E,A and B sizes
3 for C and D sizes

Packaging unit : 1 piece (plastic bag)

Residual magnetism level NMB (200 Gamma max)



| Shell Size | ESA/ESCC Variant | A ± 0,38 (.015) | B ± 0,38 (.015) | C ± 0,13 (.005) | D ± 0,38 (.015) | E ± 0,38 (.015) | F ± 0,38 (.015) | G ± 0,38 (.015) |
|------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| E | New | 30,70 (1.208) | 12,70 (.500) | 24,99 (.984) | 7,50 (.295) | 11,00 (.433) | 16,20 (.638) | 10,70 (.421) |
| A | 25 | 38,89 (1.531) | 12,70 (.500) | 33,32 (1.312) | 7,50 (.295) | 19,00 (.748) | 16,20 (.638) | 10,70 (.421) |
| B | 26 | 52,78 (2.078) | 12,70 (.500) | 47,04 (1.852) | 7,50 (.295) | 32,00 (1.260) | 16,20 (.638) | 10,70 (.421) |
| C | 27 | 69,04 (2.718) | 12,70 (.500) | 63,50 (2.500) | 7,50 (.295) | 48,00 (1.890) | 16,20 (.638) | 10,70 (.421) |
| D | 28 | 66,67 (2.625) | 15,47 (.609) | 61,12 (2.406) | 9,88 (.389) | 46,00 (1.811) | 17,80 (.700) | 12,30 (.484) |

Round Clamp

Max weight (grams) :

Size E : 8,9

Size A : 9,5

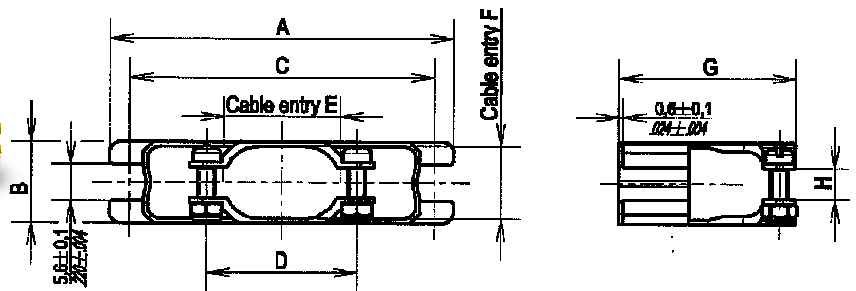
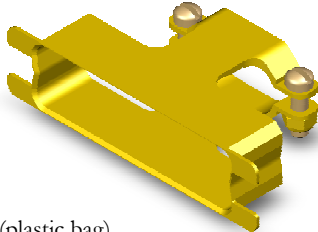
Size B : 12,3

Size C : 14,8

Size D : 15,2

Packaging unit : 1 piece (plastic bag)

Residual magnetism level NMB (200 Gamma max)

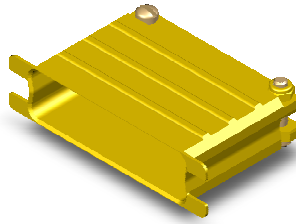


| Shell Size | ESA/ESCC Variant | A ± 0,38 (.015) | B ± 0,38 (.015) | C ± 0,13 (.005) | D ± 0,38 (.015) | E ± 0,38 (.015) | F ± 0,38 (.015) | G ± 0,38 (.015) | H ± 0,13 (.005) |
|------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| E | 29 | 30,70 (1.208) | 12,70 (.500) | 24,99 (.984) | 17,80 (.701) | 10,50 (.413) | 10,50 (.413) | 26,20 (1.031) | 3,20 (.126) |
| A | 30 | 38,89 (1.531) | 12,70 (.500) | 33,32 (1.312) | 17,80 (.701) | 11,10 (.437) | 11,10 (.437) | 26,20 (1.031) | 3,20 (.126) |
| B | 31 | 52,78 (2.078) | 12,70 (.500) | 47,04 (1.852) | 23,30 (.917) | 18,10 (.713) | 11,10 (.437) | 27,00 (1.063) | 4,70 (.185) |
| C | 32 | 69,04 (2.718) | 12,70 (.500) | 63,50 (2.500) | 29,70 (1.169) | 25,10 (.988) | 11,10 (.437) | 27,00 (1.063) | 6,30 (.248) |
| D | 33 | 66,67 (2.625) | 15,47 (.609) | 61,12 (2.406) | 30,90 (1.217) | 26,90 (1.059) | 13,90 (.547) | 27,00 (1.063) | 7,90 (.311) |

Cross References

| Type | Size | ESA/ESCC Quality Level | | FR023 Quality Level | | FR022 Quality Level | |
|----------------|------|------------------------|-------------|---------------------|-------------|---------------------|-------------|
| | | Description | Part Number | Description | Part Number | Description | Part Number |
| Straight clamp | E | 3401022.xx | NMB | | | | |
| | A | 340102225B | NMB | | | | |
| | B | 340102226B | NMB | | | | |
| | C | 340102227B | NMB | | | | |
| | D | 340102228B | NMB | | | | |
| Round clamp | E | 340102229B | NMB | | | | |
| | A | 340102230B | NMB | | | | |
| | B | 340102231B | NMB | | | | |
| | C | 340102232B | NMB | | | | |
| | D | 340102233B | NMB | | | | |

Deep Straight Clamp



Max weight (grams) :

Size E : 13

Size A : 16,3

Size B : 26,5

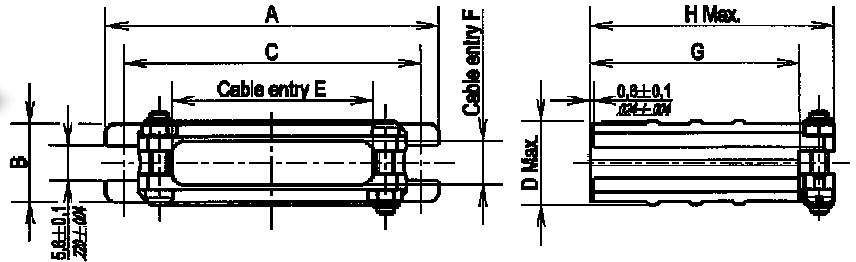
Size C : 35

Size D : 38,5

Number of screws : 2 for E,A and B sizes
3 for C and D sizes

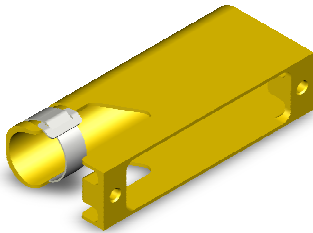
Packaging unit : 1 piece (plastic bag)

Residual magnetism level NMB (200 Gamma max)



| Shell Size | ESA/ESC C Variant | A ± 0,38 (.015) | B ± 0,38 (.015) | C ± 0,13 (.005) | D Max. | E ± 0,38 (.015) | F ± 0,38 (.015) | G ± 0,38 (.015) | H Max. |
|------------|-------------------|--------------------|--------------------|--------------------|--------------|--------------------|--------------------|--------------------|---------------|
| E | 34 | 30,70 (1.208) | 12,70 (.500) | 24,99 (.984) | 14,70 (.579) | 11,00 (.433) | 7,50 (.295) | 19 (.748) | 31,70 (1.248) |
| A | 35 | 38,89 (1.531) | 12,70 (.500) | 33,32 (1.312) | 14,70 (.579) | 19,00 (.748) | 7,50 (.295) | 19 (.748) | 31,70 (1.248) |
| B | 36 | 52,78 (2.078) | 12,70 (.500) | 47,04 (1.852) | 14,70 (.579) | 32,00 (1.260) | 7,50 (.295) | 25,40 (1.000) | 39,70 (1.563) |
| C | 37 | 69,04 (2.718) | 12,70 (.500) | 63,50 (2.500) | 14,70 (.579) | 48,00 (1.890) | 7,50 (.295) | 25,40 (1.000) | 39,70 (1.563) |
| D | 38 | 66,67 (2.625) | 15,47 (.609) | 61,12 (2.406) | 17,40 (.685) | 46,00 (1.811) | 9,88 (.389) | 28,60 (1.126) | 42,90 (1.689) |

90° Entry



Max weight (grams) :

Size E : 14,6

Size A : 17,2

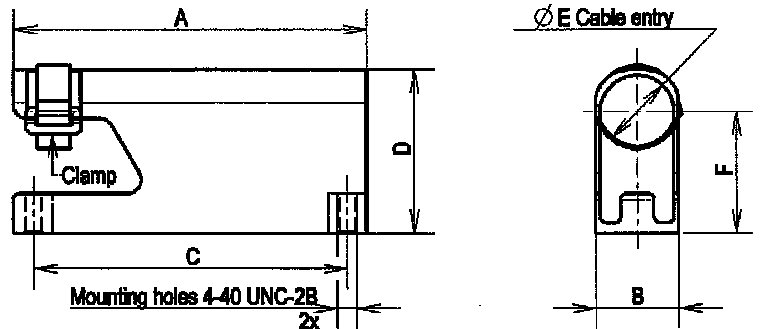
Size B : 21,4

Size C : 33,3

Size D : 38,7

Packaging unit : 1 piece with 1 clamp (plastic bag)

Residual magnetism level NMB (200 Gamma max)



| Shell Size | ESA/ESC C Variant | A ± 0,38 (.015) | B ± 0,38 (.015) | C ± 0,13 (.005) | D ± 0,25 (.010) | E ± 0,38 (.015) | F ± 0,38 (.015) |
|------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| E | 39 | 30,70 (1.208) | 12,70 (.500) | 24,99 (.984) | 18,20 (.716) | 11,10 (.437) | 11,85 (.466) |
| A | 40 | 38,89 (1.531) | 12,70 (.500) | 33,32 (1.312) | 18,20 (.716) | 11,10 (.437) | 11,85 (.466) |
| B | 41 | 52,78 (2.078) | 12,70 (.500) | 47,04 (1.852) | 24,60 (.968) | 11,10 (.437) | 18,25 (.718) |
| C | 42 | 69,04 (2.718) | 12,70 (.500) | 63,50 (2.500) | 30,20 (1.189) | 11,10 (.437) | 23,85 (.939) |
| D | 43 | 66,67 (2.625) | 15,47 (.609) | 61,12 (2.406) | 31,70 (1.248) | 13,90 (.547) | 23,95 (.943) |

Cross References

| Type | Size | ESA/ESCC Quality Level | | FR023 Quality Level | | FR022 Quality Level | |
|----------------------|------|------------------------|-------------|---------------------|-------------|---------------------|-------------|
| | | Description | Part Number | Description | Part Number | Description | Part Number |
| Deep, straight clamp | E | 340102234B | NMB | | | | |
| | A | 340102235B | NMB | | | | |
| | B | 340102236B | NMB | | | | |
| | C | 340102237B | NMB | | | | |
| | D | 340102238B | NMB | | | | |
| 90° entry | E | 340102239B | NMB | | | | |
| | A | 340102240B | NMB | | | | |
| | B | 340102241B | NMB | | | | |
| | C | 340102242B | NMB | | | | |
| | D | 340102243B | NMB | | | | |



Pages 1 to 17

**ACCESSORIES FOR RECTANGULAR CONNECTORS,
3401/001, 3401/002 AND CONNECTOR SAVERS 3401/020**

ESCC Detail Specification No. 3401/022

Issue 4

January 2009



Document Custodian: European Space Agency - see <https://escies.org>

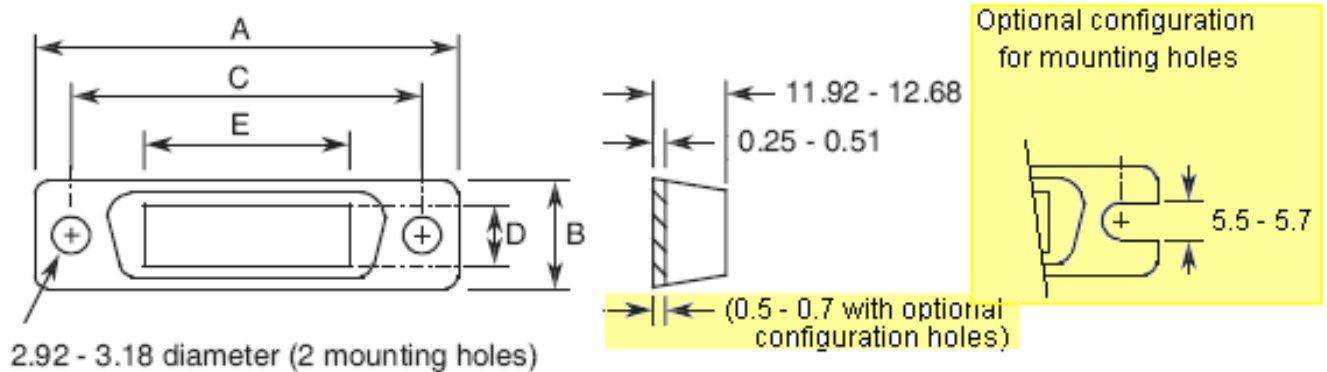
TABLE 1(a) - TYPE VARIANTS

| VARIANT | DESCRIPTION | | WEIGHT (g) |
|---------|---|--------------------|------------|
| 01 | Screw Lock Assembly Brass (Female) | | 1.9 |
| 02 | Screw Lock Assembly Brass (Male/slotted head screw) | Without Back Shell | 0.85 |
| 03 | Screw Lock Assembly Brass (Male/slotted head screw) | Without Back Shell | 0.85 |
| 04 | Screw Lock Assembly Brass (Male/slotted head screw) | Without Back Shell | 1.0 |
| 05 | Screw Lock Assembly Brass (Male/slotted head screw) | Without Back Shell | 1.0 |
| 06 | Screw Lock Assembly Brass (Female) for Savers | | 2.0 |
| 07 | Dust Cap (Female) | Size E | N/A |
| 08 | Dust Cap (Male) | Size E | N/A |
| 09 | Dust Cap (Female) | Size A | N/A |
| 10 | Dust Cap (Male) | Size A | N/A |
| 11 | Dust Cap (Female) | Size B | N/A |
| 12 | Dust Cap (Male) | Size B | N/A |
| 13 | Dust Cap (Female) | Size C | N/A |
| 14 | Dust Cap (Male) | Size C | N/A |
| 15 | Dust Cap (Female) | Size D | N/A |
| 16 | Dust Cap (Male) | Size D | N/A |
| 17 | Potting Shell | Size A | N/A |
| 18 | Potting Shell | Size B | N/A |
| 19 | Potting Shell | Size C | N/A |
| 20 | Potting Shell | Size D | N/A |
| 21 | Back-Shell for Strapped Connections | Size A | 8.4 |
| 22 | Back-Shell for Strapped Connections | Size B | 11.6 |
| 23 | Back-Shell for Strapped Connections | Size C | 15.5 |
| 24 | Back-Shell for Strapped Connections | Size D | 16.6 |
| 25 | Cable Clamp, Straight | Size A | 10.6 |
| 26 | Cable Clamp, Straight | Size B | 13.7 |
| 27 | Cable Clamp, Straight | Size C | 18.4 |
| 28 | Cable Clamp, Straight | Size D | 19.8 |
| 29 | Cable Clamp, Round | Size E | 9.0 |
| 30 | Cable Clamp, Round | Size A | 11 |
| 31 | Cable Clamp, Round | Size B | 13 |
| 32 | Cable Clamp, Round | Size C | 15 |
| 33 | Cable Clamp, Round | Size D | 16 |
| 34 | Deep Straight Clamp | Size E | 13 |
| 35 | Deep Straight Clamp | Size A | 16.3 |
| 36 | Deep Straight Clamp | Size B | 26.5 |

| VARIANT | DESCRIPTION | | WEIGHT (g) |
|---------|---|--------------------|------------|
| 37 | Deep Straight Clamp | Size C | 35 |
| 38 | Deep Straight Clamp | Size D | 38.5 |
| 39 | Right Angle Clamp | Size E | 14.6 |
| 40 | Right Angle Clamp | Size A | 17.2 |
| 41 | Right Angle Clamp | Size B | 21.4 |
| 42 | Right Angle Clamp | Size C | 33.3 |
| 43 | Right Angle Clamp | Size D | 38.7 |
| 44 | Screw Lock Assembly Brass (Male/slotted head screw) | With Back Shell | 0.85 |
| 45 | Screw Lock Assembly Brass (Male/slotted head screw) | With Back Shell | 0.85 |
| 46 | Screw Lock Assembly Brass (Male/slotted head screw) | With Back Shell | 1.0 |
| 47 | Screw Lock Assembly Brass (Male/slotted head screw) | With Back Shell | 1.0 |
| 48 | Screw Lock Assembly Stainless Steel (Female) | | 1.80 |
| 49 | Screw Lock Assembly Stainless Steel (Male/slotted head screw) | Without Back Shell | 0.8 |
| 50 | Screw Lock Assembly Stainless Steel (Male/slotted head screw) | Without Back Shell | 0.8 |
| 51 | Screw Lock Assembly Stainless Steel (Male/slotted head screw) | Without Back Shell | 1.0 |
| 52 | Screw Lock Assembly Stainless Steel (Male/slotted head screw) | Without Back Shell | 1.0 |
| 53 | Screw Lock Assembly Stainless Steel (Female) for Savers | | 1.9 |
| 54 | Screw Lock Assembly Stainless Steel (Male/slotted head screw) | With Back Shell | 0.8 |
| 55 | Screw Lock Assembly Stainless Steel (Male/slotted head screw) | With Back Shell | 0.8 |
| 56 | Screw Lock Assembly Stainless Steel (Male/slotted head screw) | With Back Shell | 1.0 |
| 57 | Screw Lock Assembly Stainless Steel (Male/slotted head screw) | With Back Shell | 1.0 |
| 58 | Screw Lock Assembly Brass (Female) for Feedthrough | | 2.0 |
| 59 | Screw Lock Assembly Stainless Steel (Female) for Feedthrough | | 1.86 |
| 60 | 60° Angled Clamp | Size E | 9.0 |
| 61 | 60° Angled Clamp | Size A | 11 |
| 62 | 60° Angled Clamp | Size B | 12 |
| 63 | 60° Angled Clamp | Size C | 15 |
| 64 | 60° Angled Clamp | Size D | 16 |
| 65 | Screw Lock Assembly Brass (male/hex. hole head screw) | Without Back Shell | 0.85 |
| 66 | Screw Lock Assembly Brass (male/hex. hole head screw) | Without Back Shell | 0.85 |
| 67 | Screw Lock Assembly Brass (male/hex. hole head screw) | Without Back Shell | 1.0 |
| 68 | Screw Lock Assembly Brass (male/hex. hole head screw) | Without Back Shell | 1.0 |

| VARIANT | A | | B | | C | | D | |
|---------|------|------|------|------|------|------|------|------|
| | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. |
| 10 | 27.1 | 27.7 | 25.4 | 26.0 | 10.2 | 10.8 | 8.5 | 9.1 |
| 11 | 39.4 | 40.0 | 37.7 | 38.3 | 8.9 | 9.5 | 7.2 | 7.8 |
| 12 | 41.2 | 41.8 | 39.5 | 40.1 | 10.2 | 10.8 | 8.9 | 9.6 |
| 13 | 55.8 | 56.4 | 54.1 | 54.7 | 8.9 | 9.5 | 7.2 | 7.8 |
| 14 | 57.6 | 58.2 | 56.0 | 56.0 | 10.2 | 10.8 | 8.9 | 9.6 |
| 15 | 53.4 | 54.0 | 51.7 | 52.3 | 11.7 | 12.3 | 10.0 | 10.6 |
| 16 | 55.0 | 55.6 | 53.3 | 53.9 | 13.3 | 13.9 | 11.6 | 12.2 |

FIGURE 2(c)- POTTING SHELLS (All dimension in millimetres)

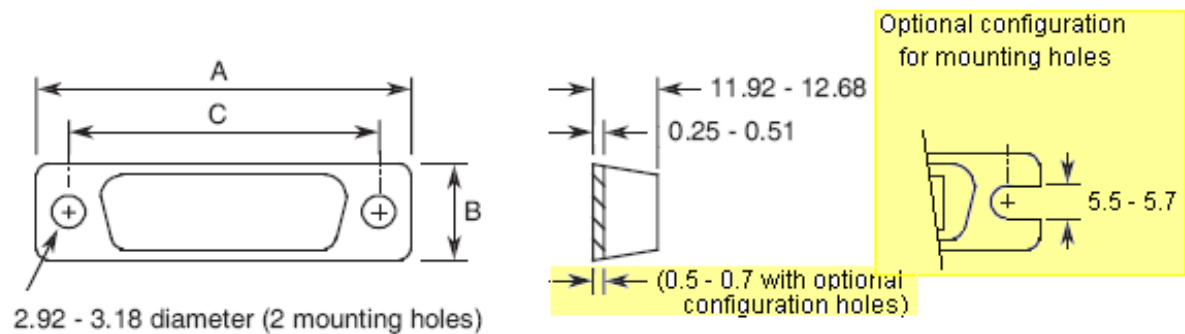


NOTES:

1. Weight: Not applicable because not on board.

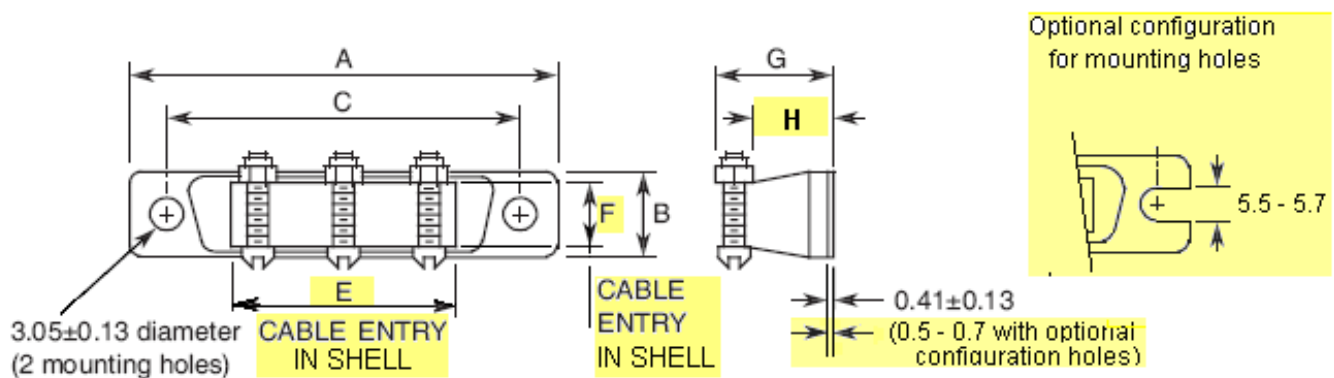
| VARIANT | A | | B | | C | | D | | E | |
|---------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|
| | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. |
| TBD | 30.32 | 31.08 | 12.32 | 13.08 | 24.74 | 25.24 | 7.1 | 8.1 | 8.48 | 9.52 |
| 17 | 38.51 | 39.27 | 12.32 | 13.08 | 33.08 | 33.58 | 7.1 | 8.1 | 14.4 | 15.44 |
| 18 | 52.4 | 53.16 | 12.32 | 13.08 | 46.79 | 47.29 | 7.1 | 8.1 | 28.0 | 29.08 |
| 19 | 68.66 | 69.42 | 12.32 | 13.08 | 63.25 | 63.75 | 7.1 | 8.1 | 43.94 | 45.0 |
| 20 | 66.29 | 67.05 | 15.09 | 15.85 | 60.86 | 61.36 | 9.4 | 10.4 | 43.94 | 45.0 |

FIGURE 2(d) - BACK SHELLS (FOR STRAPPED CONNECTIONS) (All dimensions in millimetres)



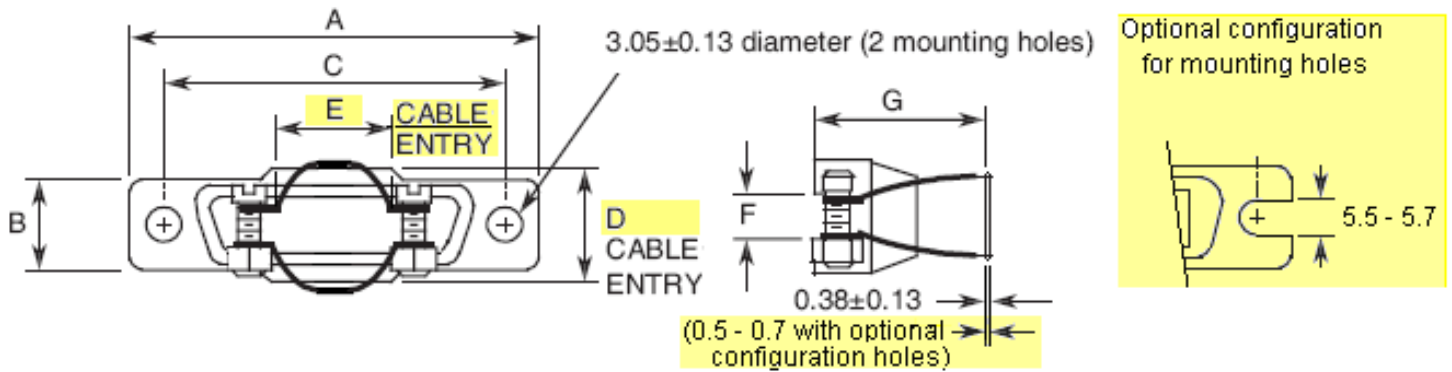
| VARIANT | A | | B | | C | |
|---------|--------------|--------------|--------------|--------------|--------------|--------------|
| | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. |
| TBD | 30.32 | 31.08 | 12.32 | 13.08 | 24.74 | 25.24 |
| 21 | 38.51 | 39.27 | 12.32 | 13.08 | 33.08 | 33.58 |
| 22 | 52.4 | 53.16 | 12.32 | 13.08 | 46.79 | 47.29 |
| 23 | 68.66 | 69.42 | 12.32 | 13.08 | 63.25 | 63.75 |
| 24 | 66.29 | 67.05 | 15.09 | 15.85 | 60.86 | 61.36 |

FIGURE 2(e) - CABLE CLAMPS (All dimensions in millimetres)
STRAIGHT CLAMP



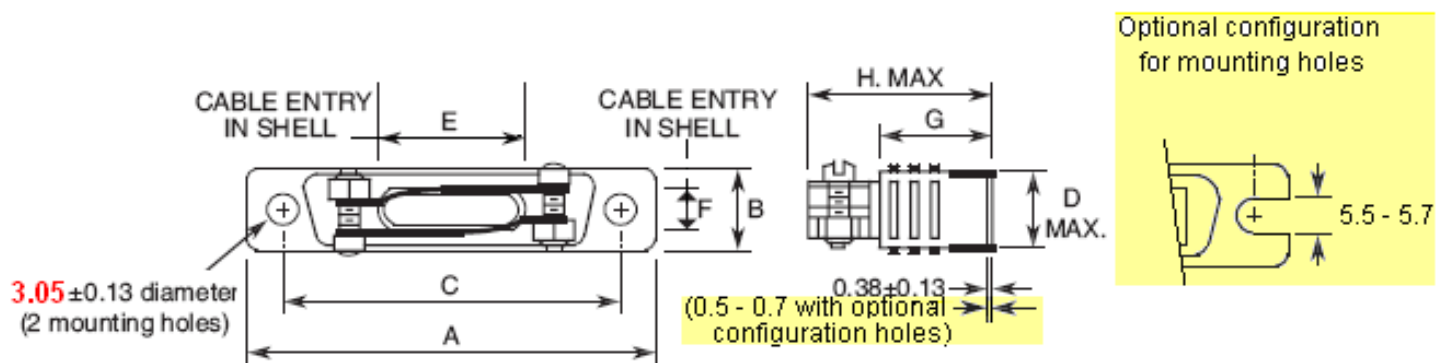
| VARIANT | No. of Cable Locking Screws Required | A | | B | | C | | E | | F | | G | | H | |
|---------|--------------------------------------|-------|-------|-------|-------|--------------|--------------|--------------|--------------|------|-------|------|------|--------------|--------------|
| | | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. |
| TBD | 2 | 30.32 | 31.08 | 12.32 | 13.08 | 24.74 | 25.24 | 10.62 | 11.38 | 7.12 | 7.88 | 15.7 | 16.7 | 10.32 | 11.08 |
| 25 | 2 | 38.51 | 39.27 | 12.32 | 13.08 | 33.08 | 33.58 | 18.62 | 19.38 | 7.12 | 7.88 | 15.7 | 16.7 | 10.32 | 11.08 |
| 26 | 2 | 52.4 | 53.16 | 12.32 | 13.08 | 46.79 | 47.29 | 31.62 | 32.38 | 7.12 | 7.88 | 15.7 | 16.7 | 10.32 | 11.08 |
| 27 | 3 | 68.66 | 69.42 | 12.32 | 13.08 | 63.25 | 63.75 | 47.62 | 48.38 | 7.12 | 7.88 | 15.7 | 16.7 | 10.32 | 11.08 |
| 28 | 3 | 66.29 | 67.05 | 15.09 | 15.85 | 60.86 | 61.36 | 45.62 | 46.38 | 9.52 | 10.28 | 17.3 | 18.3 | 11.92 | 12.68 |

ROUND CLAMP



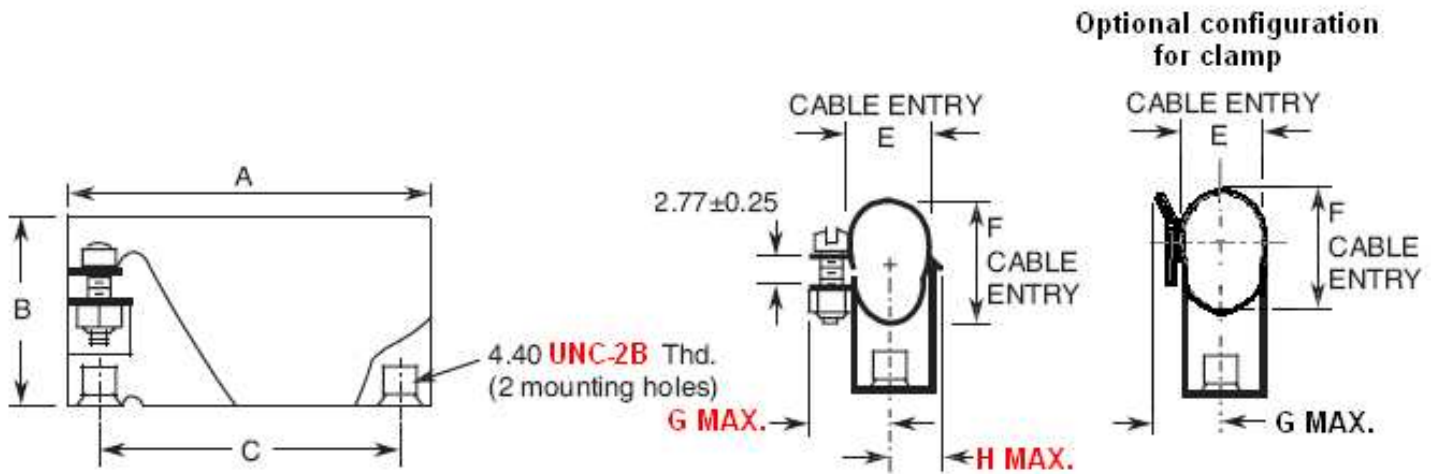
| VARIANT | A | | B | | C | | D | | E | | F | | G | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. |
| 29 | 30.32 | 31.08 | 12.32 | 13.08 | 24.74 | 25.24 | 10.12 | 10.88 | 10.12 | 10.88 | 2.82 | 3.58 | 25.4 | 27.0 |
| 30 | 38.51 | 39.27 | 12.32 | 13.08 | 33.08 | 33.58 | 10.72 | 11.48 | 10.72 | 11.48 | 2.82 | 3.58 | 25.4 | 27.0 |
| 31 | 52.40 | 53.16 | 12.32 | 13.08 | 46.79 | 47.29 | 10.72 | 11.48 | 17.72 | 18.48 | 4.32 | 5.08 | 26.2 | 27.8 |
| 32 | 68.66 | 69.42 | 12.32 | 13.08 | 63.25 | 63.75 | 10.72 | 11.48 | 24.72 | 25.48 | 5.92 | 6.73 | 26.2 | 27.8 |
| 33 | 66.29 | 67.05 | 15.09 | 15.85 | 60.86 | 61.36 | 13.62 | 14.28 | 26.52 | 27.28 | 7.52 | 8.28 | 26.2 | 27.8 |

DEEP STRAIGHT CLAMP



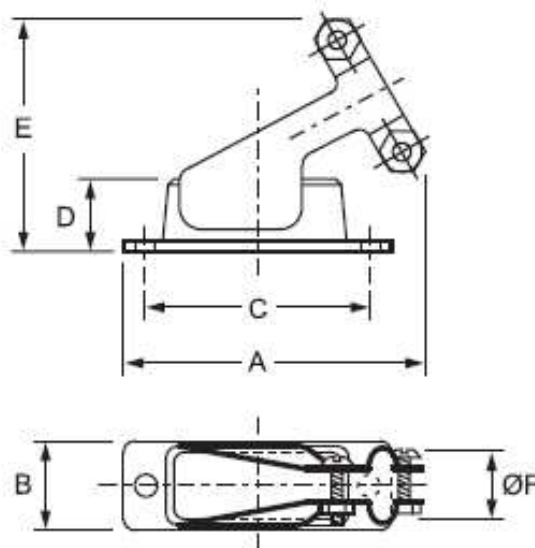
| VARIANT | A | | B | | C | | D | E | | F | | G | | H |
|---------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|-------|------|
| | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MAX. |
| 34 | 30.32 | 31.08 | 12.32 | 13.08 | 24.74 | 25.24 | 14.7 | 10.62 | 11.38 | 7.12 | 7.88 | 18.62 | 19.38 | 31.7 |
| 35 | 38.51 | 39.27 | 12.32 | 13.08 | 33.08 | 33.58 | 14.7 | 18.62 | 19.38 | 7.12 | 7.88 | 18.62 | 19.38 | 31.7 |
| 36 | 52.40 | 53.16 | 12.32 | 13.08 | 46.79 | 47.29 | 14.7 | 31.62 | 32.38 | 7.12 | 7.88 | 25.02 | 25.78 | 39.7 |
| 37 | 68.66 | 69.42 | 12.32 | 13.08 | 63.25 | 63.75 | 14.7 | 47.62 | 48.38 | 7.12 | 7.88 | 25.02 | 25.78 | 39.7 |
| 38 | 66.29 | 67.05 | 15.09 | 15.85 | 60.86 | 61.36 | 17.4 | 45.62 | 46.38 | 9.52 | 10.28 | 28.22 | 28.98 | 42.9 |

RIGHT ANGLE CLAMP



| VARIANT | A | | B | | C | | E | | F | | G | | H | |
|---------|-------|-------|------|------|-------|-------|------|------|------|------|------|------|------|------|
| | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. |
| 39 | 30.32 | 31.08 | 17.4 | 19.0 | 24.74 | 25.24 | 10.3 | 11.9 | 10.3 | 11.9 | — | 12.7 | — | 7.9 |
| 40 | 38.51 | 39.27 | 17.4 | 19.0 | 33.08 | 33.58 | 10.3 | 11.9 | 10.3 | 11.9 | — | 12.7 | — | 7.9 |
| 41 | 52.40 | 53.16 | 23.8 | 25.4 | 46.79 | 47.29 | 10.3 | 11.9 | 15.1 | 16.7 | — | 12.7 | — | 7.9 |
| 42 | 68.66 | 69.42 | 29.3 | 30.9 | 63.25 | 63.75 | 10.3 | 11.9 | 19.8 | 21.4 | — | 12.7 | — | 7.9 |
| 43 | 66.29 | 67.05 | 30.9 | 32.5 | 60.86 | 61.36 | 13.5 | 15.1 | 22.3 | 23.9 | — | 14.3 | — | 9.5 |

60° ANGLED CLAMP



| VARIANT | A | B | C | D | E | ØF |
|---------|-------|-------|-------|-------|-------|-------|
| 60 | 39.00 | 1.270 | 24.99 | 12.30 | 30.60 | 10.00 |