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Pages 1 to 11

ACCESSORIES FOR CIRCULAR

CONNECTORS 3401/008

ESA/SCC Detail Specification No. 3401/064



**space components
coordination group**

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		SCCG Chairman	ESA Director General or his Deputy
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**SCC**ESA/SCC Detail Specification
No. 3401/064

Rev. 'C'

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ISSUE 1

DOCUMENTATION CHANGE NOTICE

Rev. Letter	Rev. Date	Reference	CHANGE Item	Approved DCR No.
'A'	Sept. '96	P1. Cover page P2. DCN	: Title corrected	23829 None
'B'	July '97	P1. Cover page P2. DCN P6. Table 1(b) P9. Figure 2(e) Figure 2(f) P11. Para. 4.4.1	: For Items 1 and 2, maximum temperature corrected : In the Table, ØC for Variant 35 corrected : In the drawing, ØC corrected to internal diameter : In the text, materials corrected	None None 23831 23831 23831 23831
'C'	May '00	P1. Cover page P2. DCN P5. Table 1(a) P6. Table 1(a)	: Weight amended for all Variants : Weight amended for all Variants	None None 221553 221553



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APPENDICES (Applicable to specific Manufacturers only)

None.

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1. GENERAL

1.1 SCOPE

This specification details the ratings, physical and electrical characteristics, test and inspection data for Accessories for Circular Connectors 3401/008. It shall be read in conjunction with ESA/SCC Generic Specification No. 3401, the requirements of which are supplemented herein and ESA/SCC Detail Specification No. 3401/008.

1.2 COMPONENT TYPE VARIANTS

The type variants of accessories covered by this specification are given in Table 1(a).

1.3 MAXIMUM RATINGS

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

1.4 PARAMETER DERATING INFORMATION (FIGURE 1)

Not applicable.

1.5 PHYSICAL DIMENSIONS

The physical dimensions of the accessories specified herein are shown in Figure 2.

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 for Connectors, Electrical, Circular and Rectangular.
- (b) ESA/SCC Detail Specification No. 3401/008, Connectors, Miniature, Electrical, Circular Push-Pull Coupling, Crimp-type Removable Contacts, based on Type DBAS.

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) - TYPE VARIANTS

VARIANT	BACKSHELL DESCRIPTION	PART NUMBER	SHELL SIZE	TIGHTENING TORQUE (m.daN Max)	WEIGHT (g) (Max)
01	Rear Nut	006-0909-03-A499	03	0.40	5.0
02	Rear Nut	006-0909-12-A499	07	0.50	6.0
03	Rear Nut	006-0909-14-A499	12	0.60	8.0
04	Rear Nut	006-0909-16-A499	19	0.65	9.0
05	Rear Nut	006-0909-18-A499	27	0.70	10
06	Rear Nut	006-0909-20-A499	37	0.75	12
07	Rear Nut	006-0909-61-A499	61	0.95	15
08	Cable Clamp, Straight	006-0910-03-A499	03	0.40	8.0
09	Cable Clamp, Straight	006-0910-12-A499	07	0.50	10
10	Cable Clamp, Straight	006-0910-14-A499	12	0.60	11
11	Cable Clamp, Straight	006-0910-16-A499	19	0.65	14
12	Cable Clamp, Straight	006-0910-18-A499	27	0.70	15
13	Cable Clamp, Straight	006-0910-20-A499	37	0.75	17
14	Cable Clamp, Straight	006-0910-61-A499	61	0.95	22
15	Cable Clamp, Right Angle	006-0908-03-A499	03	0.40	12
16	Cable Clamp, Right Angle	006-0908-12-A499	07	0.50	13
17	Cable Clamp, Right Angle	006-0908-14-A499	12	0.60	17
18	Cable Clamp, Right Angle	006-0908-16-A499	19	0.65	19
19	Cable Clamp, Right Angle	006-0908-18-A499	27	0.70	22
20	Cable Clamp, Right Angle	006-0908-20-A499	37	0.75	27
21	Cable Clamp, Right Angle	006-0908-61-A499	61	0.95	36
22	Potting Shell	006-0701-03-A499	03	0.40	5.0
23	Potting Shell	006-0701-12-A499	07	0.50	7.0
24	Potting Shell	006-0701-14-A499	12	0.60	10
25	Potting Shell	006-0701-16-A499	19	0.65	12
26	Potting Shell	006-0701-18-A499	27	0.70	15
27	Potting Shell	006-0701-20-A499	37	0.75	18
28	Potting Shell	006-0701-61-A499	61	0.95	20
29	Cable Clamp Sleeve	006-0005-08	03	-	1.0
30	Cable Clamp Sleeve	006-0005-12	07	-	1.5
31	Cable Clamp Sleeve	006-0005-14	12	-	1.5
32	Cable Clamp Sleeve	006-0005-16	19	-	3.0

TABLE 1(a) - TYPE VARIANTS (CONTINUED)

VARIANT	BACKSHELL DESCRIPTION	PART NUMBER	SHELL SIZE	TIGHTENING TORQUE (m.daN Max)	WEIGHT (g) (Max)
33	Cable Clamp Sleeve	006-0005-18	27	-	4.0
34	Cable Clamp Sleeve	006-0005-20	37	-	5.0
35	Cable Clamp Sleeve	006-0005-61	61	-	6.0
36	Cable Clamp Intermediate Sleeve	006-0006-12	7 to 27	-	3.0
37	Cable Clamp Intermediate Sleeve	006-0006-14	12 to 37	-	4.0
38	Cable Clamp Intermediate Sleeve	006-0006-18	27 to 37	-	5.0
39	Cable Clamp Intermediate Sleeve	006-0006-20	37 to 61	-	4.0
40	Cable Clamp Intermediate Sleeve	006-0006-22	61	-	6.0
41	Cable Clamp Intermediate Sleeve	006-0006-24	61	-	9.0

TABLE 1(b) - MAXIMUM RATINGS

No.	CHARACTERISTIC	SYMBOL	MAXIMUM RATING	UNIT
1	Operating Temperature Range	T_{op}	-55 to +200	°C
2	Storage Temperature Range	T_{stg}	-55 to +200	°C
3	Tightening Torque	T_q	See Table 1(a)	-

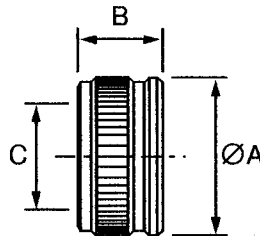
FIGURE 1 - PARAMETER DERATING INFORMATION

Not applicable.



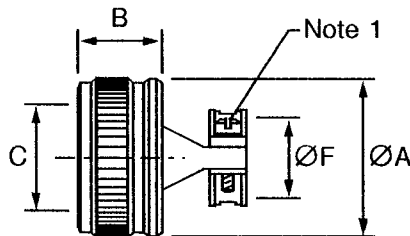
FIGURE 2 - PHYSICAL DIMENSIONS

FIGURE 2(a) - REAR NUT



Variant	Used With Shell Size	Dimensions (mm)		
		ØA (max.)	B (± 0.10)	C Thread
01	03	17.00	12.60	9/16-24 UNEF 2B
02	07	21.80	12.60	3/4-20 UNEF 2B
03	12	25.00	12.60	7/8-20 UNEF 2B
04	19	28.25	12.60	1-20 UNEF 2B
05	27	30.95	12.60	1-1/16-18 UNEF 2B
06	37	34.15	12.60	1-3/16-18 UNEF 2B
07	61	42.00	12.60	1-1/2-18 UNEF 2B

FIGURE 2(b) - STRAIGHT CABLE CLAMP



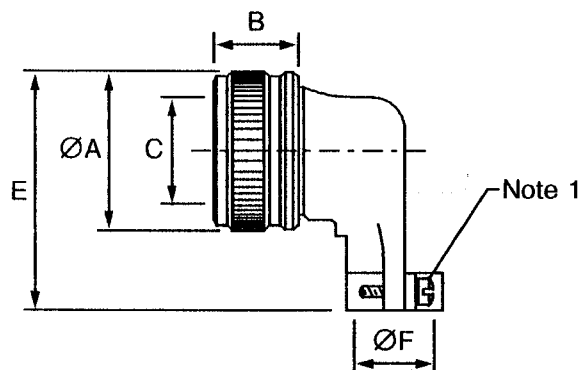
Variant	Used With Shell Size	Dimensions (mm)			
		ØA (max.)	B (± 0.10)	C Thread	ØF (max.)
08	03	17.00	12.60	9/16-24 UNEF 2B	5.15
09	07	21.80	12.60	3/4-20 UNEF 2B	10.55
10	12	25.00	12.60	7/8-20 UNEF 2B	12.05
11	19	28.25	12.60	1-20 UNEF 2B	15.85
12	27	30.95	12.60	1-1/16-18 UNEF 2B	17.90
13	37	34.15	12.60	1-3/16-18 UNEF 2B	21.05
14	61	42.00	12.60	1-1/2-18 UNEF 2B	27.40

NOTES

1. Maximum torque: 0.1m.daN
2. ØF max. = clamps tightened.

FIGURE 2 - PHYSICAL DIMENSIONS (CONTINUED)

FIGURE 2(c) - CABLE CLAMP, RIGHT ANGLE

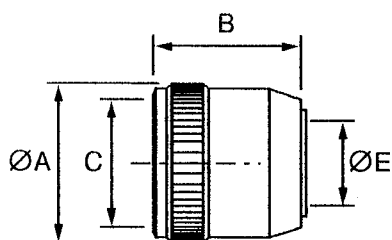


Variant	Used With Shell Size	Dimensions (mm)				
		ØA (max.)	B (± 0.10)	C Thread	E (max.)	ØF (max.)
15	03	17.00	12.60	9/16-24 UNEF 2B	29.90	5.15
16	07	21.80	12.60	3/4-20 UNEF 2B	34.70	10.55
17	12	25.00	12.60	7/8-20 UNEF 2B	37.80	12.05
18	19	28.25	12.60	1-20 UNEF 2B	40.95	15.85
19	27	30.95	12.60	1-1/16-18 UNEF 2B	43.80	17.90
20	37	34.15	12.60	1-3/16-18 UNEF 2B	47.00	21.05
21	61	42.00	12.60	1-1/2-18 UNEF 2B	54.50	27.40

NOTES

1. Maximum torque: 0.1m.daN
2. ØF max. = clamps tightened.

FIGURE 2(d) - POTTING SHELL

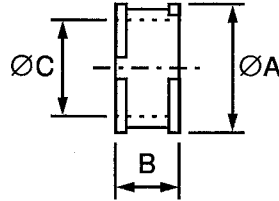


Variant	Used With Shell Size	Dimensions (mm)			
		ØA (max.)	B (max.)	C Thread	ØE (min.)
22	03	17.00	21.95	9/16-24 UNEF 2B	4.60
23	07	21.80	21.95	3/4-20 UNEF 2B	10.00
24	12	25.00	27.45	7/8-20 UNEF 2B	11.50
25	19	28.25	27.45	1-20 UNEF 2B	15.30
26	27	30.95	27.45	1-1/16-18 UNEF 2B	17.30
27	37	34.15	27.95	1-3/16-18 UNEF 2B	20.50
28	61	42.00	27.95	1-1/2-18 UNEF 2B	26.80



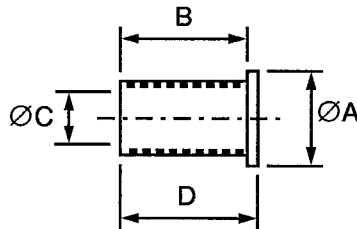
FIGURE 2 - PHYSICAL DIMENSIONS (CONTINUED)

FIGURE 2(e) - CABLE CLAMP SLEEVE



Variant	Used With Shell Size	Dimensions (mm)		
		ØA (±0.10)	B (±0.10)	ØC (+0.20 - 0)
29	03	6.00	10.00	3.00
30	07	13.20	10.00	7.90
31	12	15.70	10.00	11.10
32	19	18.50	10.00	11.10
33	27	20.50	10.00	14.30
34	37	23.70	10.00	15.90
35	61	30.00	10.00	23.80

FIGURE 2(f) - CABLE CLAMP INTERMEDIATE SLEEVE



Variant	Used With Shell Size	Dimensions (mm)			
		ØA (±0.10)	B (±0.10)	ØC (+0.20 - 0)	D (±0.10)
36	07 to 27	10.20	47.50	5.60	49.10
37	12 to 37	12.70	44.00	7.90	45.60
38	27 to 37	17.50	40.50	11.10	42.10
39	37 to 61	20.70	37.00	14.30	38.60
40	61	23.90	33.50	15.90	35.10
41	61	27.00	30.00	19.00	31.60

**4. REQUIREMENTS****4.1 GENERAL**

The complete requirements for procurement of the accessories specified herein are stated in this specification and ESA/SCC Generic Specification No. 3401 for Connectors, Electrical, Circular and Rectangular. 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. 9.5, Magnetism Level: Not applicable.

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

Not applicable.

4.2.4 Deviations from Qualification Tests (Chart IV)

Not applicable.

4.2.5 Deviations from Lot Acceptance Tests (Chart V)

Not applicable.

4.3 MECHANICAL REQUIREMENTS**4.3.1 Dimension Check**

The dimensions of the accessories specified herein shall be verified in accordance with the requirements set out in Para. 9.6 of ESA/SCC Generic Specification No. 3401. They shall conform to those shown in Figure 2 of this specification.

4.3.2 Weight

The maximum weight of the accessories specified herein shall be as shown in Table 1(a) of this specification.

4.3.3 Torque Values

The torque value to be used for tightening of the threads of the accessories specified herein shall be as given in Table 1(a) of this specification.

The torque value to be used for tightening of the screws of the accessories specified herein shall be as given in Figures 2(b) and 2(c) of this specification.



4.4 MATERIALS AND FINISHES

The materials and finishes shall be as specified herein. Where a definite material is not specified, a material which will enable the accessories 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 Rear Nut, Cable Clamps and Potting Shell

The rear nuts, straight cable clamps and potting shells shall be made from aluminium alloy to NF AU4G and the right-angled cable clamps shall be made from aluminium alloy to NF AS10U4. All of these accessories shall be nickel-plated with a thickness of 25 to 30 µm.

4.4.2 Cable Clamp Sleeve and Intermediate Sleeve

The cable clamp sleeve and intermediate sleeve shall be made of silicone elastomer.

4.4.3 Magnetism Level

Not applicable.

4.5 MARKING

4.5.1 General

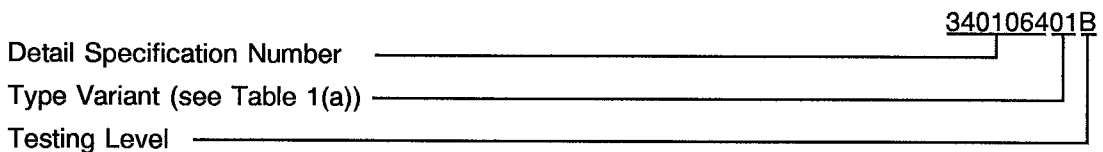
The marking of all components delivered to this specification shall be in accordance with the requirements of ESA/SCC Basic Specification No. 21700 and the following paragraphs. When the component is too small to accomodate all of the marking as specified, as much as space permits shall be marked and 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) The SCC Component Number.
- (b) Traceability Information.

4.5.2 The SCC Component Number

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



4.5.3 Traceability Information

Traceability information shall be marked in accordance with the requirements of ESA/SCC Basic Specification No. 21700.

4.6 ELECTRICAL MEASUREMENTS (TABLES 2 AND 3)

Not applicable.

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

Not applicable.

4.8 ENVIRONMENTAL AND ENDURANCE TESTS (TABLE 6)

Not applicable.