



# ESA/SCC 3401



## Section



# MIL-DTL 38999 Space Grade Circular Connectors



# ESA/SCC 3401

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## MIL-DTL-38999

### Circular connectors and savers

The following lines have been qualified to ESA/SCC 3401 :

- **MIL-DTL-38999 Series I** : bayonet locking «scoop-proof» shell
- **MIL-DTL-38999 Series II** : bayonet locking «low-profile» shell «non scoop-proof»
- **MIL-DTL-38999 Series III** : screw-type locking «scoop-proof» shell

Electrical contact sizes range from # 22 to # 4.



## SCC Specification/MIL DTL 38999 class G

ESA/SCC Part numbers	SOURIAU Part numbers	Description
SCC 3401/052	8LTS	Connectors with removable crimp contacts according to 38999 Series I
SCC 3401/044	8TS	Connectors with removable crimp contacts according to 38999 Series II
SCC 3401/058	8975-xxxx	Crimp contacts for 3401/052 and 3401/056
SCC 3401/056	8DS	Connectors with removable crimp contacts according to 38999 Series III
SCC 3401/045	8975-xxxx	Crimp contacts for 3401/044
SCC 3401/057	8DS-H	Hermetic receptacles according to 38999 Series III
SCC 3401/062	-	Backshells for 3401/052, 3401/056 and 3401/044
SCC 3401/066	SN 1767	Triax crimp for 3401/056
SCC 3401/070	8DS	Straight spill version

## Quality Assurance Testing

### • Qualification

Is the European Source approved to ESA/SCC circular connectors specifications and USA MIL-DTL-38999 Class G QPL Source

### • Production control

Visual (100%)

Dimensional (by sampling)

Insulation resistance (100%)

Dielectric withstanding voltage (100%)

Contact retention (100%)

Female contact capability (100%)

### • Final production tests

Visual (100%)

Dimensional (by sampling)

Intermateability

### • Lot acceptance tests

Two levels are proposed according to the ESA/SC specification 3401 CHART V.

Lot acceptance level shall be specified in the purchase order (LAT1 and LAT2).

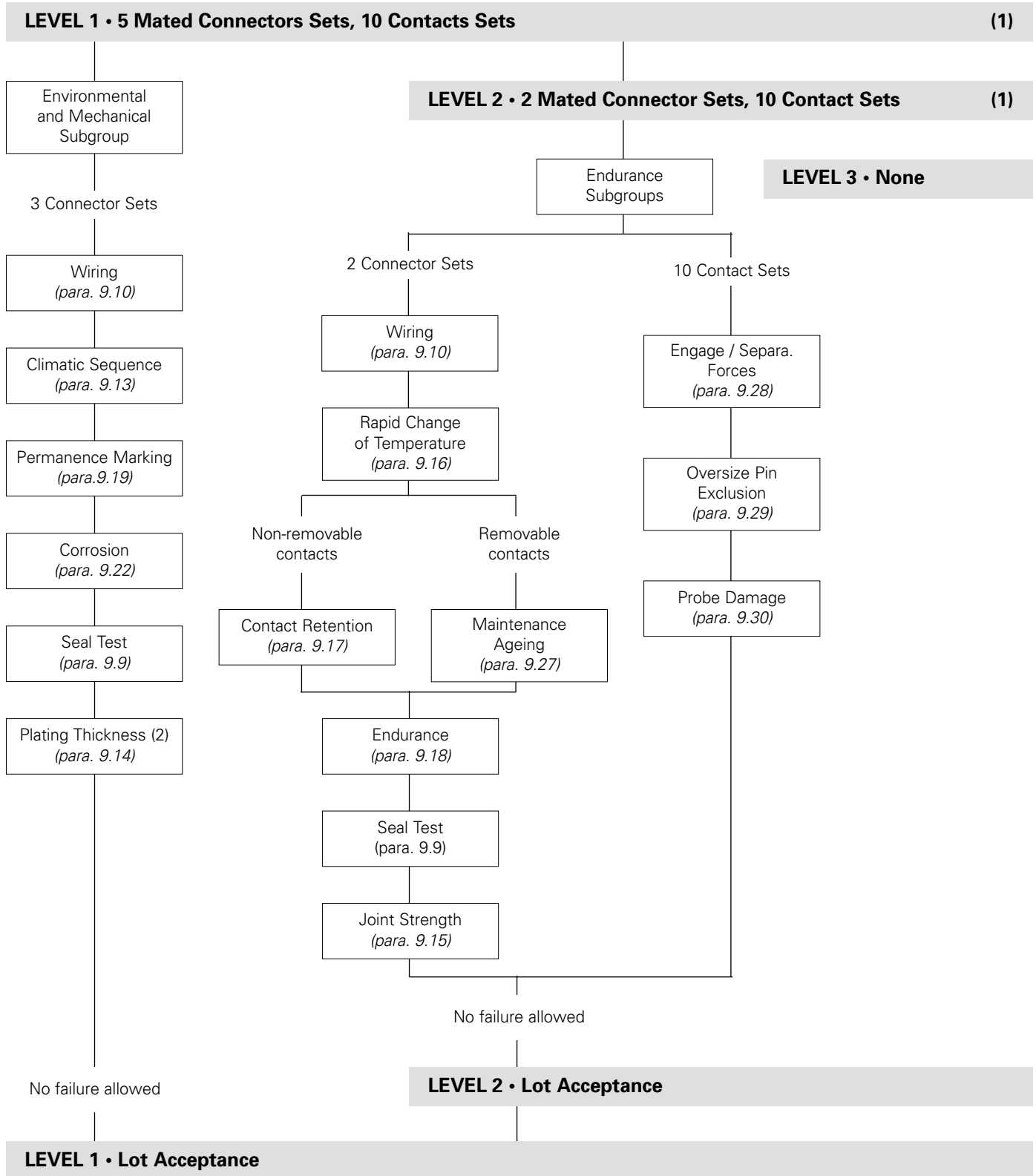
LAT 1 \_\_\_\_\_ Environmental and mechanical sub-group

└── LAT2 \_\_\_\_\_ Endurance sub-group



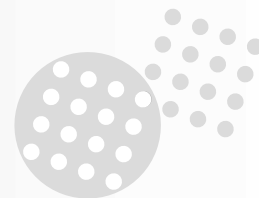
# ESA/SCC 3401

## CHART V - Lot Acceptance Tests



**Notes :**

- (1) For distribution within the sample, see Para. 8.2.2.
  - (2) Hermetic connectors only.
- All Para. refer to ESA/SCC Generic Specification n° 3401.



## Materials & Finishes

	Materials	Plating
Shells	Aluminium alloy <i>Hermetic</i> : Passivated stainless steel	Matt Electroless Nickel plated, Burr free Note : 38999 Series II, plug with grounding : shell size 8, 10 and 12 are gold plated body and grounding (1,27 micron gold mini) Nickel plated
Grounding	Beryllium copper	
Insulators	Bounded sandwich thermoset / silicone or Thermoplastic / silicone <i>Hermetic</i> : Sintered glass	Qualified non outgassing materials <b>TML</b> : 1% according to ECSS-Q-70.02A <b>CVCM</b> : 0,1%
Contacts retaining clip	Beryllium copper	
Contacts	Copper alloy. Plating 1,27 <i>Hermetic</i> : Nickel Iron	1,27 micron gold mini. over 2 micron nickel
Backshells	Aluminium alloy	Nickel plated

## Electrical characteristics

Characteristics	Symbol	Rating	Unit
Rated current # 22 contacts # 20 contacts # 16 contacts # 12 contacts # 8 contacts # 4 contacts	I	5,0 7,5 13 23 46 80	A
Insulation resistance	RI	≥ 10 000	MΩ
Contact resistance (low level current) All under 10 mA	Rcl max.	8,0	mΩ
Contact resistance (rated current) # 22 contacts # 20 contacts # 16 contacts # 12 contacts # 8 contacts # 4 contacts	Rcr max.	14,0 7,0 4,0 3,5 0,55 0,45	mΩ

## Environmental characteristics

Characteristics	Rating	Unit	ESA/SCC 3401 test method
Operating temperature range	-65 to +200	°C	-
Storage temperature	1000 h/200°C	-	Para. 9.21
Thermal shock	from -65 to +200	°C	Para. 9.16
Damp heat	10 cycles 24 h	-	Para. 9.13.3
Mechanical endurance	500	cycles	Para. 9.18
Vibrations	20	g	Para. 9.11
Shock	50 g with an 11 ms duration pulse	-	Para. 9.12.1
Contact retention # 22 contacts # 20 contacts # 16 contacts # 12 contacts # 8 contacts # 4 contacts	44 67 111 111 150 180	N	Para. 9.17
Vacuum test (125°C/24 h)	10 <sup>-6</sup>	Torr	Para. 9.16



## Applications

Satellite  
 Launcher  
 Space station  
 Shuttle hardware

## Standards

ESA/SCC 3401/052/MIL-DTL-38999  
 class G (QPL)



## Circular connectors with removable crimp contacts

ESA/SCC 3401/052 are used with 3401/058 crimp contacts. This series is suitable for Flight Models.

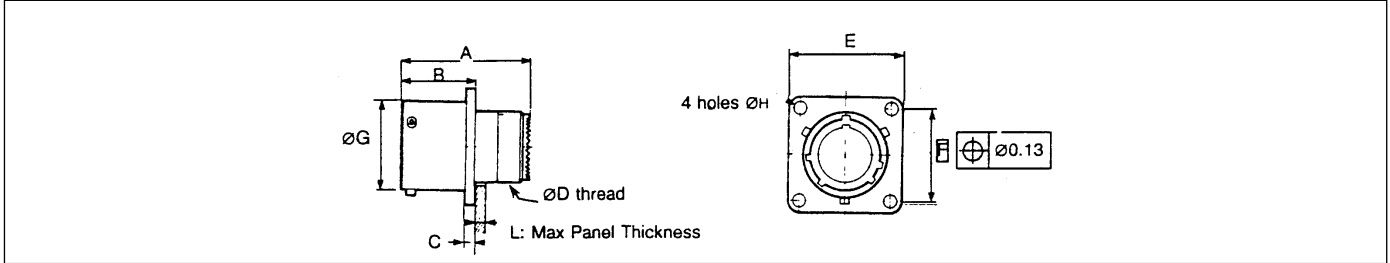
8LTS Series uses the same components as 3401/052 it is derived from. They are delivered without traceability and LAT testing which often complies with Engineering Models requirements.

## Part Number / Ordering information

<b>SCC specification number</b>	<b>3401 052</b>	<b>01</b>	<b>B</b>	<b>00</b>	<b>13</b>	<b>35</b>	<b>P</b>	<b>N</b>	<b>L</b>
<b>Type of variant ESA</b> not to be modified									
<b>B testing level</b> not to be modified									
<b>Shell type</b>									
<b>00</b> : square flange receptacle (front mounting)									
<b>03</b> : square flange receptacle (rear mounting)									
<b>06</b> : plug (with grounding ring)									
<b>07</b> : single hole mounting receptacle									
<b>Shell size</b>									
<b>09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 -25</b>									
<b>Contact arrangement</b> (see table page 83)									
<b>Contact type</b>									
<b>P</b> : pin <b>S</b> : socket									
<b>Clocking position</b>									
<b>N</b> : normal (standard clocking position) Other positions : <b>A, B, C &amp; D</b>									
<b>L</b> : connectors ordered without contacts («L» is not marked on the connector) connectors are only supplied less contacts									
<b>8LTS Series</b>	<b>8LTS</b>	<b>00</b>	<b>13</b>	<b>35</b>	<b>P</b>	<b>N</b>	<b>L</b>		
<b>Shell type</b>									
<b>00</b> : square flange receptacle (front mounting)									
<b>03</b> : square flange receptacle (rear mounting)									
<b>06G</b> : plug («G» for grounding)									
<b>07</b> : single hole mounting receptacle									
<b>Shell size</b>									
<b>09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 -25</b>									
<b>Contact arrangement</b> (see table page 83)									
<b>Contact type</b>									
<b>P</b> : pin <b>S</b> : socket									
<b>Clocking position</b>									
<b>N</b> : normal Other positions : <b>A, B, C &amp; D</b>									
<b>L</b> : connectors ordered without contacts («L» is not marked on the connector) connectors are only supplied less contacts									

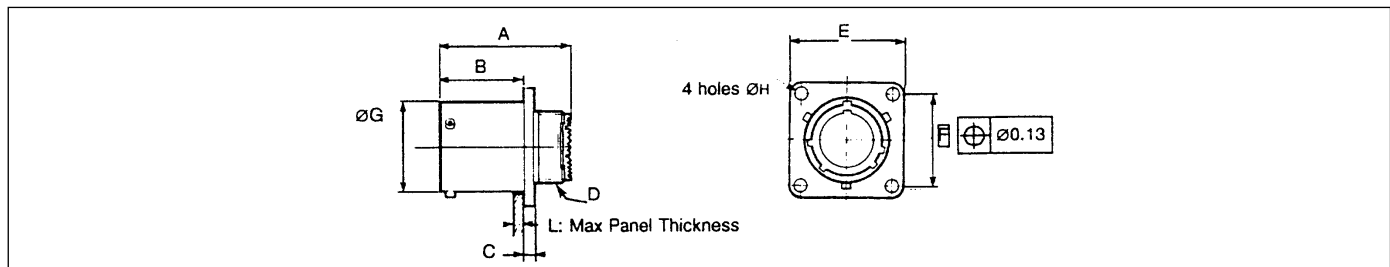


## Type 00 : Square flange receptacle front mounting



Shell size	9		11		13		15		17		19		21		23		25	
	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max
A		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261
B		18,53 .730		18,53 .730		18,53 .730		18,53 .730		18,53 .730		18,53 .730		15,3 .602		15,3 .602		15,3 .602
C		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098
D UNEF-2A	.4375-28		.5625-24		.6875-24		.8125-20		.9375-20		1.0625-18		1.1875-18		1.3125-18		1.4375-18	
E	23,95 .943	24,55 .967	26,3 1.035	26,9 1.059	28,7 1.130	29,3 1.154	31,05 1.222	31,65 1.246	33,45 1.317	34,05 1.341	36,6 1.441	37,2 1.465	39,8 1.567	40,4 1.591	42,95 1.691	43,55 1.715	46,2 1.819	46,7 1.839
F		18,26 .719		20,62 .812		23,01 .906		24,61 .969		26,97 1.062		29,36 1.156		31,75 1.250		34,93 1.375		38,1 1.500
G	14,41 .567	14,53 .572	17,66 .695	17,78 .700	21,47 .845	21,59 .860	24,65 .970	24,77 .975	27,82 1.095	27,94 1.100	30,54 1.202	30,66 1.207	33,71 1.327	33,83 1.332	36,88 1.452	37 1.457	40,06 1.577	40,18 1.582
H	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,63 .143	3,93 .155	3,63 .143	3,93 .155
L		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098

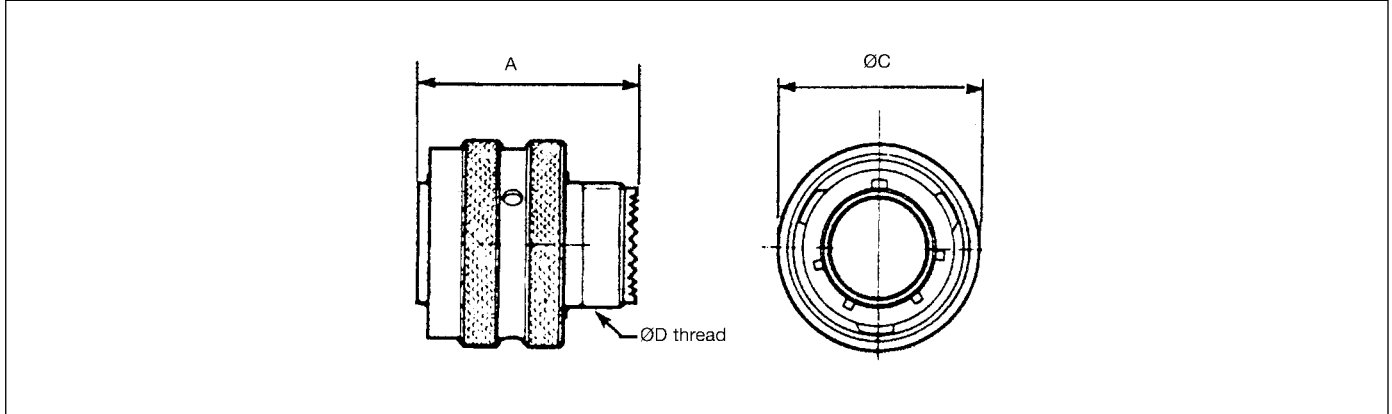
## Type 03 : Square flange receptacle back mounting



Shell size	9		11		13		15		17		19		21		23		25	
	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max
A		31,33 1.233		31,33 1.233		31,33 1.233		31,33 1.233		31,33 1.233		31,33 1.233		31,33 1.233		31,33 1.233		31,33 1.233
B		20,83 .820		20,83 .820		20,83 .820		20,83 .820		20,83 .820		20,83 .820		20,08 .791		20,08 .791		20,08 .791
C		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098
D UNEF-2A	.4375-28		.5625-24		.6875-24		.8125-20		.9375-20		1.0625-18		1.1875-18		1.3125-18		1.4375-18	
E	23,95 .943	24,55 .967	26,3 1.035	26,9 1.059	28,7 1.130	29,3 1.154	31,05 1.222	31,65 1.246	33,45 1.317	34,05 1.341	36,6 1.441	37,2 1.465	39,8 1.567	40,4 1.591	42,95 1.691	43,55 1.715	46,2 1.819	46,7 1.839
F		18,26 .719		20,62 .812		23,01 .906		24,61 .969		26,97 1.062		29,36 1.156		31,75 1.250		34,93 1.375		38,1 1.500
G	14,41 .567	14,53 .572	17,66 .695	17,78 .700	21,47 .845	21,59 .860	24,65 .970	24,77 .975	27,82 1.095	27,94 1.100	30,54 1.202	30,66 1.207	33,71 1.327	33,83 1.332	36,88 1.452	37 1.457	40,06 1.577	40,18 1.582
H	3,45 .124	3,15 .136	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,15 .124	3,45 .136	3,63 .143	3,93 .155	3,63 .143	3,93 .155
L		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098

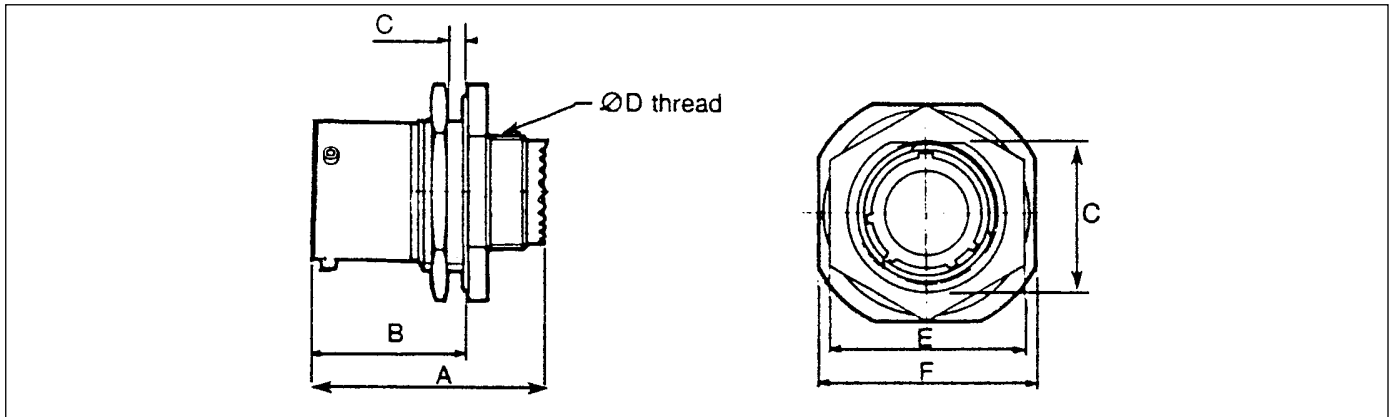


## Type 06G : Plug with grounding ring



Shell size	09 Max.	11 Max.	13 Max.	15 Max.	17 Max.	19 Max.	21 Max.	23 Max.	25 Max.
<b>A</b>	31,32 .1261	31,32 .1261	31,32 .1261	31,32 .1261	31,32 .1261	31,32 .1261	31,32 .1261	31,32 .1261	31,32 .1261
<b>C</b>	21,80 .858	25,00 .984	29,40 .1157	32,50 .1280	35,70 .1406	38,50 .1516	41,70 .1642	44,85 .1766	48,00 .1890
<b>D UNEF-2A</b>	.4375-28	.5625-24	.6875-24	.8125-20	.9375-20	1.0625-18	1.1875-18	1.3125-18	1.4375-18

## Type 07 : Single hole mounting receptacle



Shell size	09		11		13		15		17		19		21		23		25	
	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max
<b>A</b>		31,68 .1247		31,68 .1247		31,68 .1247		31,68 .1247		31,68 .1247		31,68 .1247		31,68 .1247		31,68 .1247		31,68 .1247
<b>B</b>		23,36 .820		23,36 .820		23,36 .820		23,36 .820		23,36 .820		23,36 .820		23,36 .820		23,36 .820		23,36 .820
<b>C</b>	16,43 .647	16,63 .655	18,97 .747	19,17 .755	23,72 .934	23,92 .942	26,87 .1058	27,07 .1066	30,05 .1183	30,25 .1191	33,22 .1308	33,42 .1316	36,40 .1433	36,60 .1441	39,57 .1558	39,77 .1566	42,75 .1683	42,95 .1691
<b>D UNEF-2A</b>	.4375-28		.5625-24		.6875-24		.8125-20		.9375-20		1.0625-18		1.1875-18		1.3125-18		1.4375-18	
<b>E</b>	22,25 .876	22,45 .884	25,45 .1002	25,65 .1010	30,20 .1189	30,40 .1197	33,35 .1313	33,55 .1321	36,55 .1439	36,75 .1447	39,70 .1563	39,90 .1571	42,90 .1689	43,10 .1697	46,05 .1813	46,25 .1821	50,85 .2002	51,05 .2010
<b>F</b>	26,95 .1061	27,75 .1093	31,70 .1248	32,50 .1280	34,91 .1374	35,71 .1406	39,09 .1539	38,89 .1531	41,23 .1623	42,03 .1655	45,97 .1810	46,77 .1841	49,18 .1936	49,98 .1968	52,36 .2061	53,16 .2093	55,53 .2186	56,33 .2218
<b>L</b>		3,20 .126		3,20 .126		3,20 .126		3,20 .126		3,20 .126		3,20 .126		3,20 .126		3,20 .126		3,20 .126





## Applications

Satellite  
 Launcher  
 Space station  
 Shuttle hardware

## Standards

ESA/SCC 3401/044/MIL-DTL-38999  
 class G (QPL)



## Circular connectors with removable crimp contacts

ESA/SCC 3401/044 are used with 3401/045 crimp contacts. This series is suitable for Flight Models.

8TS Series uses the same components as 3401/044 it is derived from. They are delivered without traceability and LAT testing which often complies with Engineering Models requirements.

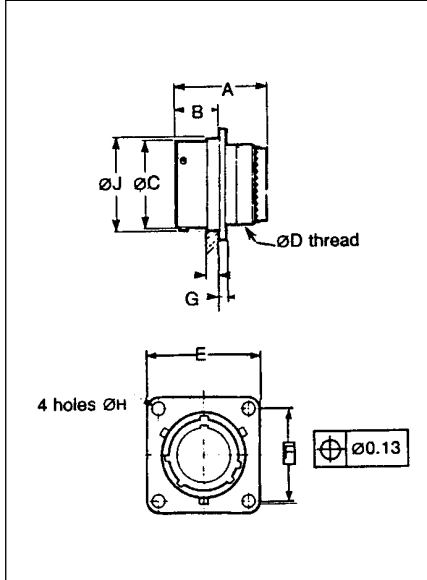
## Part Number / Ordering information

<b>SCC specification number</b>	<b>3401 044</b>	<b>01</b>	<b>B</b>	<b>00</b>	<b>12</b>	<b>35</b>	<b>P</b>	<b>N</b>	<b>L</b>
<b>Type of variant ESA</b> not to be modified									
<b>B testing level</b> not to be modified									
<b>Shell type</b> <b>03</b> : square flange receptacle (rear mounting) <b>06</b> : plug (without grounding) <b>06G</b> : plug («G» for grounding) <b>07</b> : single hole mounting receptacle									
<b>Shell size</b> <b>08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24</b>									
<b>Contact arrangement</b> (see table page 83)									
<b>Contact type</b> <b>P</b> : pin <b>S</b> : socket									
<b>Clocking position</b> <b>N</b> : normal (standard clocking position) Other positions : <b>A, B, C &amp; D</b>									
<b>L</b> : connectors ordered without contacts («L» is not marked on the connector) connectors are only supplied less contacts									

<b>8TS Series</b>	<b>8TS</b>	<b>00</b>	<b>12</b>	<b>35</b>	<b>P</b>	<b>N</b>	<b>L</b>			
<b>Shell type</b> <b>03</b> : square flange receptacle (rear mounting) <b>06</b> : plug (without grounding) <b>06G</b> : plug («G» for grounding) <b>07</b> : single hole mounting receptacle										
<b>Shell size</b> <b>08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24</b>										
<b>Contact arrangement</b> (see table page 83)										
<b>Contact type</b> <b>P</b> : pin <b>S</b> : socket										
<b>Clocking position</b> <b>N</b> : normal (standard clocking position) Other positions : <b>A, B, C &amp; D</b>										
<b>L</b> : connectors ordered without contacts («L» is not marked on the connector) connectors are only supplied less contacts										

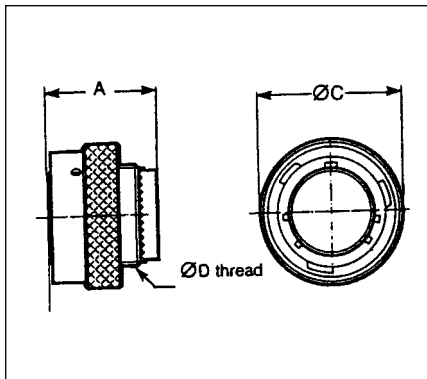


**Type 03 : Square flange receptacle (back mounting)**



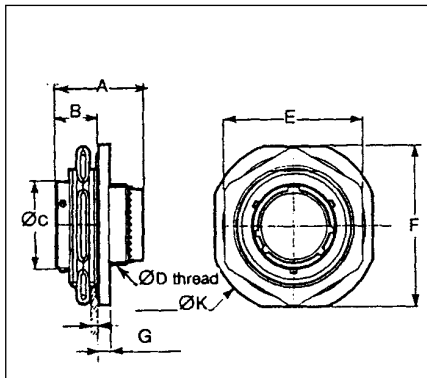
Shell size	08	10	12	14	16	18	20	22	24
<b>A Max</b>	25,37 .999	25,37 .999	25,37 .999	25,37 .999	25,37 .999	25,37 .999	25,37 .999	25,37 .999	27,10 1.067
<b>B Max</b>	11,35 .447	11,35 .447	11,35 .447	11,35 .447	11,35 .447	11,35 .447	11,35 .447	11,35 .447	11,35 .447
<b>C Max</b>	12,04 .474	15,02 .591	19,08 .751	22,25 .876	25,43 1.001	28,61 1.126	31,78 1.251	34,95 1.376	38,13 1.501
<b>D UNEF-2A</b>	.4375- 28	.5625- 24	.6875- 24	.8125- 20	.9375- 20	1.0625- 18	1.1875- 18	1.3125- 18	1.4375- 18
<b>E Max</b>	21,03 .828	24,23 .954	26,59 1.047	28,98 1.141	31,34 1.234	33,73 1.238	36,91 1.453	40,08 1.578	43,26 1.703
<b>F</b>	15,09 .594	18,26 .719	20,62 .812	23,01 .906	24,61 .969	26,97 1.062	29,36 1.156	31,75 1.250	34,93 1.375
<b>G Max</b>	1,75 .069	1,75 .069	1,75 .069	1,75 .069	1,75 .069	1,75 .069	1,75 .069	1,75 .069	1,75 .069
<b>H Max</b>	3,30 .130	3,30 .130	3,30 .130	3,30 .130	3,30 .130	3,30 .130	3,30 .130	3,30 .130	3,30 .130
<b>J Max</b>	13,89 .547	17,07 .672	21,44 .844	24,61 .969	27,79 1.094	30,96 1.219	34,14 1.344	37,31 1.469	40,49 1.594
<b>L Max</b>	3,71 .146	3,71 .146	3,71 .146	3,71 .146	3,71 .146	3,71 .146	4,27 .168	4,27 .168	4,27 .168

**Type 06 and 06G : Plug**

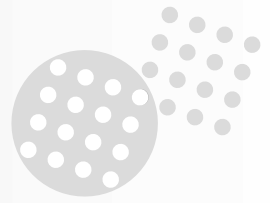


Shell size	08	10	12	14	16	18	20	22	24
<b>A Max</b>	23,27 .916	23,27 .916	23,27 .916	23,27 .916	23,27 .916	23,27 .916	23,27 .916	23,27 .916	25,00 .984
<b>C Max</b>	19,05 .750	21,82 .859	26,19 1.031	29,36 1.156	32,54 1.281	35,71 1.406	38,89 1.531	41,68 1.641	44,86 1.766
<b>D UNEF-2A</b>	.4375- 28	.5625- 24	.6875- 24	.8125- 20	.9375- 20	1.0625- 18	1.1875- 18	1.3125- 18	1.4375- 18

**Type 07 : Single hole mounting receptacle**



Shell size	08	10	12	14	16	18	20	22	24
<b>A Max</b>	26,48 1.043	26,48 1.043	26,48 1.043	26,48 1.043	26,48 1.043	26,48 1.043	26,32 1.036	26,32 1.036	27,67 1.089
<b>B Max</b>	11,26 .443	11,26 .443	11,26 .443	11,26 .443	11,26 .443	11,26 .443	11,92 .469	11,92 .469	11,92 .469
<b>C Max</b>	12,04 .474	15,02 .591	19,08 .751	22,25 .876	25,43 1.001	28,61 1.126	31,78 1.251	34,95 1.376	38,13 1.501
<b>D UNEF-2A</b>	.4375- 28	.5625- 24	.6875- 24	.8125- 20	.9375- 20	1.0625- 18	1.1875- 18	1.3125- 18	1.4375- 18
<b>E Max</b>	27,40 1.079	30,61 1.205	33,75 1.329	36,96 1.455	40,10 1.579	43,31 1.705	46,45 1.829	51,23 2.017	54,41 2.142
<b>F</b>	32,16 1.266	35,34 1.391	38,51 1.516	41,69 1.641	45,65 1.797	48,42 1.906	51,62 2.032	54,77 2.156	57,94 2.281
<b>G Max</b>	2,67 .105	2,67 .105	2,67 .105	2,67 .105	2,67 .105	2,67 .105	2,67 .105	2,67 .105	2,67 .105
<b>K Max</b>	35,34 1.391	38,51 1.516	41,69 1.641	45,65 1.797	48,42 1.906	51,62 2.032	54,79 2.157	57,94 2.281	61,12 2.406
<b>L Max</b>	2,90 .114	2,90 .114	2,90 .114	2,90 .114	2,90 .114	2,90 .114	2,90 .114	2,90 .114	2,90 .114



## Applications

Satellite  
 Launcher  
 Space station  
 Shuttle hardware

## Standards

ESA/SCC 3401/056/MIL-DTL-38999  
 class G (QPL)



## Circular connectors with removable crimp contacts

ESA/SCC 3401/056 are used with 3401/058 crimp contacts. This series is suitable for Flight Models.

8DS Series uses the same components as 3401/056 it is derived from. They are delivered without traceability and LAT testing which often complies with Engineering Models requirements.

Note : The ESA/SCC 3401/056 are fully interchangeable with NATC (NASA Thread Coupling) connectors (according to NASA specification SSQ 21635).

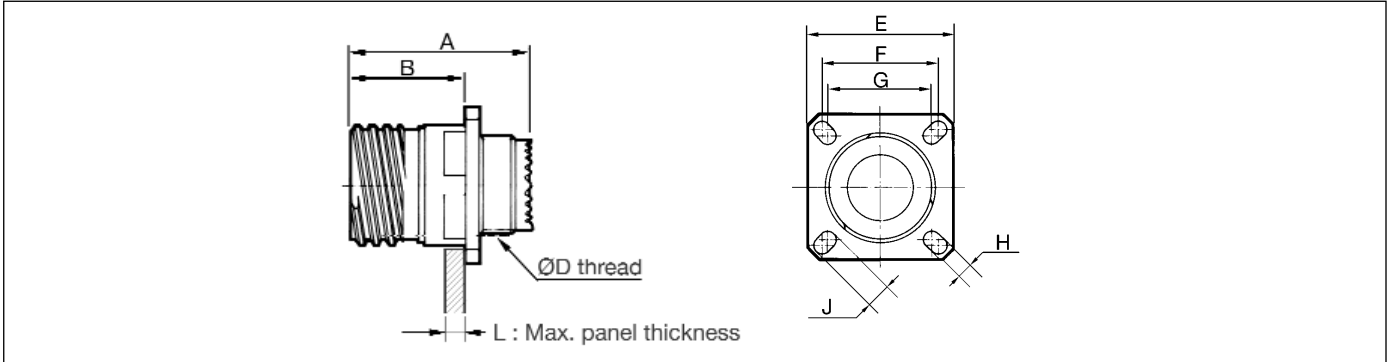
## Part Number / Ordering information

<b>SCC specification number</b>	<b>3401 056</b>	<b>01</b>	<b>B</b>	<b>00</b>	<b>19</b>	<b>32</b>	<b>P</b>	<b>N</b>	<b>L</b>
<b>Type of variant ESA</b> not to be modified									
<b>B testing level</b> not to be modified									
<b>Shell type</b>									
<b>00</b> : square flange receptacle (front mounting)									
<b>06</b> : plug (with grounding ring)									
<b>07</b> : jam nut receptacle									
<b>66</b> : plug (with grounding ring) with mirror image contact									
<b>Shell size</b>									
<b>09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25</b>									
<b>Contact arrangement</b> (see table page 83)									
<b>Contact type</b>									
<b>P</b> : pin <b>S</b> : socket									
<b>Clocking position</b>									
<b>N</b> : normal (standard clocking position) Other positions : <b>A, B, C, D &amp; E</b>									
<b>L</b> : connectors ordered without contacts («L» is not marked on the connector) connectors are only supplied less contacts									

<b>8DS Series</b>	<b>8DS</b>	<b>00</b>	<b>19</b>	<b>32</b>	<b>P</b>	<b>N</b>	<b>L</b>
<b>Shell type</b>							
<b>00</b> : square flange receptacle (front mounting)							
<b>06G</b> : plug («G» for grounding)							
<b>07</b> : jam nut receptacle							
<b>66G</b> : plug (G for grounding) with mirror image contact							
<b>Shell size</b>							
<b>09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25</b>							
<b>Contact arrangement</b> (see table page 83)							
<b>Contact type</b>							
<b>P</b> : pin <b>S</b> : socket							
<b>Clocking position</b>							
<b>N</b> : normal (standard clocking position) Other positions : <b>A, B, C, D &amp; E</b>							
<b>L</b> : connectors ordered without contacts («L» is not marked on the connector) connectors are only supplied less contacts							

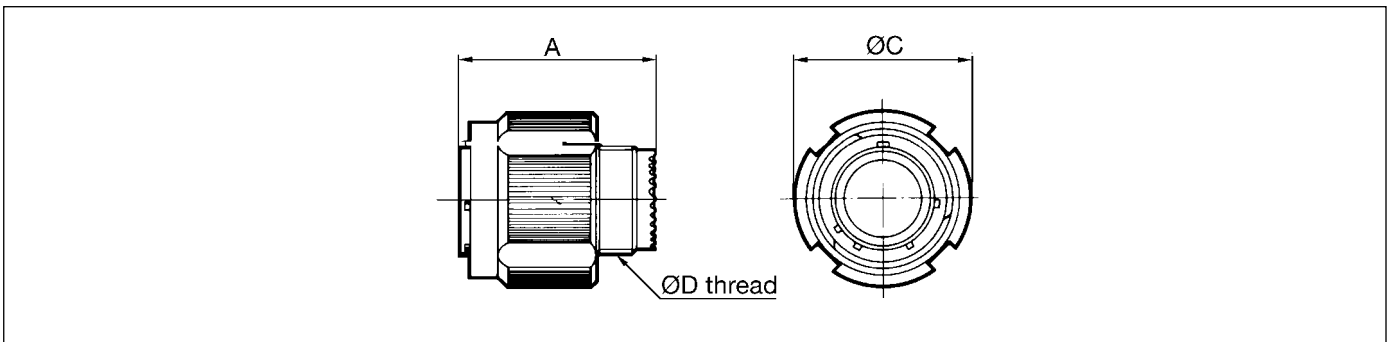


**Type 00 : Square flange receptacle**



Shell size	09		11		13		15		17		19		21		23		25	
	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max
A		31,50 .1240		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261		32,02 .1261
B		20,90 .823		20,90 .823		20,90 .823		20,90 .823		20,90 .823		20,90 .823		20,01 .791		20,01 .791		20,01 .791
C		2,50 .098		2,50 .098		2,50 .098		2,50 .098		2,50 .098		2,50 .098		2,50 .098		2,50 .098		2,50 .098
D	M12 x 1-6 g		M15 x 1-6 g		M18 x 1-6 g		M22 x 1-6 g		M25 x 1-6 g		M28 x 1-6 g		M31 x 1-6 g		M34 x 1-6 g		M37 x 1-6 g	
E	23,50 .925	24,10 .949	25,90 1.020	26,50 1.043	28,30 1.114	28,90 1.138	30,70 1.209	31,30 1.232	33,00 1.299	33,60 1.323	36,20 1.425	36,80 1.449	39,40 1.551	40,00 1.575	42,60 1.677	43,20 1.701	45,70 1.799	46,30 1.823
F	18,16 .715	18,36 .723	20,52 .808	20,72 .816	22,91 .902	23,11 .910	24,51 .965	24,71 .973	26,87 1.058	27,07 1.066	29,26 1.152	29,46 1.160	31,65 1.246	31,85 1.254	34,83 1.371	35,03 1.379	38,00 1.496	38,2 1.504
G	14,99 .567	15,19 .572	18,16 .715	18,36 .723	20,52 .808	20,72 .816	22,91 .902	23,11 .910	24,51 .965	24,71 .973	26,87 1.058	27,07 1.066	29,26 1.152	29,46 1.160	31,65 1.246	31,85 1.245	34,83 1.371	35,03 1.379
H	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,71 .146	4,11 .162	3,71 .146	4,11 .162
J	5,29 .208	5,69 .224	4,73 .186	5,13 .202	4,73 .186	5,13 .202	4,73 .186	5,13 .202	4,73 .186	5,13 .202	4,73 .186	5,13 .202	4,73 .186	5,13 .202	5,95 .234	6,35 .250	5,95 .234	6,35 .250
L		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098		2,5 .098

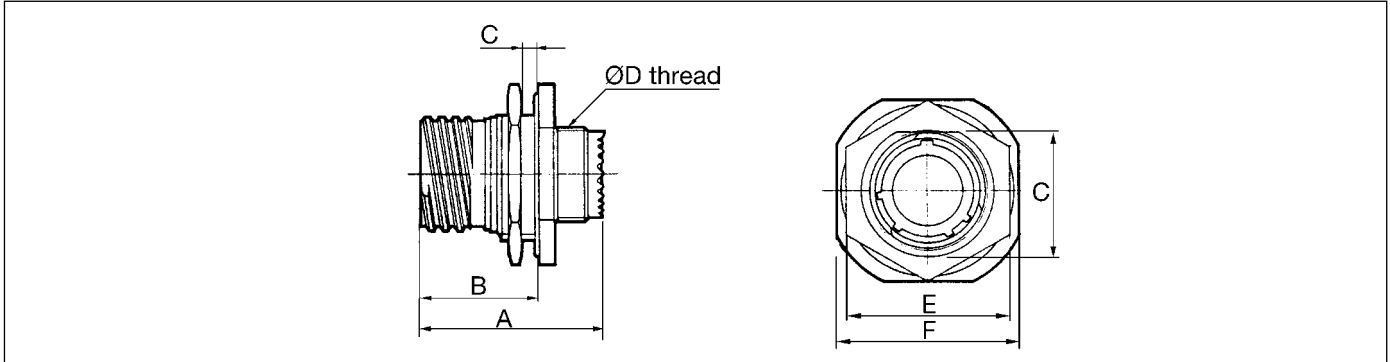
**Type 06G : Plug with grounding ring /  
Type 66G : Plug with mirror image contact**



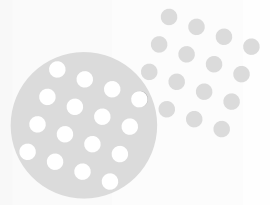
Shell size	09 Max.	11 Max.	13 Max.	15 Max.	17 Max.	19 Max.	21 Max.	23 Max.	25 Max.
A	31 1.220	31 1.220	31 1.220	31 1.220	31 1.220	31 1.220	31 1.220	31 1.220	31 1.220
C	21,8 .858	25 .984	29,4 1.157	32,5 1.280	35,7 1.406	38,5 1.516	41,7 1.642	44,85 1.766	48 1.890
D	M12x1-6g	M15x1-6g	M18x1-6g	M22x1-6g	M25x1-6g	M28x1-6g	M31x1-6g	M34x1-6g	M37x1-6g



## Type 07 : Single hole mounting receptacle



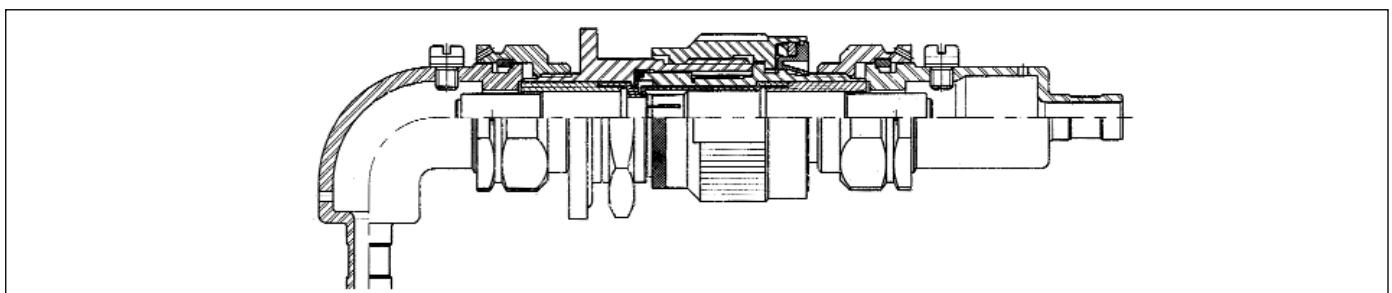
Shell size	9		11		13		15		17		19		21		23		25	
	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max
A		32,50 1.280		32,50 1.280		32,50 1.280		32,50 1.280		32,50 1.280		32,50 1.280		32,50 1.280		32,50 1.280		32,50 1.280
B		22,60 .890		22,60 .890		22,60 .890		22,60 .890		22,60 .890		22,60 .890		20,01 .791		20,01 .791		20,01 .791
C	16,38 .645	16,63 .655	18,92 .745	19,17 .755	23,67 .932	23,92 .42	26,82 1.056	27,07 1.066	30,00 1.181	30,25 1.191	33,17 1.306	33,42 1.316	36,35 1.431	36,60 1.441	39,52 1.556	39,77 1.566	42,70 1.681	42,95 1.691
D	M12 x 1-6 g		M15 x 1-6 g		M18x 1-6 g		M22 x 1-6 g		M25 x 1-6 g		M28 x 1-6 g		M31 x 1-6 g		M34 x 1-6 g		M37 x 1-6 g	
E		24,00 .945		27,00 1.063		32,00 1.260		36,00 1.417		37,00 1.457		41,00 1.614		46,00 1.811		50,00 1.969		51,23 2.017
F	26,60 1.047	27,40 1.079	31,40 1.236	32,20 1.268	34,50 1.358	35,30 1.390	37,70 1.484	38,50 1.516	40,90 1.610	41,70 1.642	45,60 1.795	46,40 1.827	48,80 1.921	49,60 1.953	52,00 2.047	52,80 2.079	55,20 2.173	56,00 2.205
L		3,20 .126		3,20 .126		3,20 .126		3,20 .126		3,20 .126		3,20 .126		3,20 .126		3,20 .126		3,20 .126



## Part Number / Ordering information

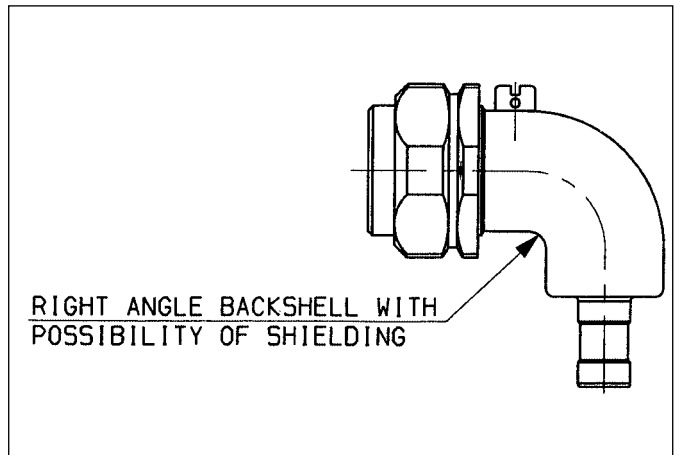
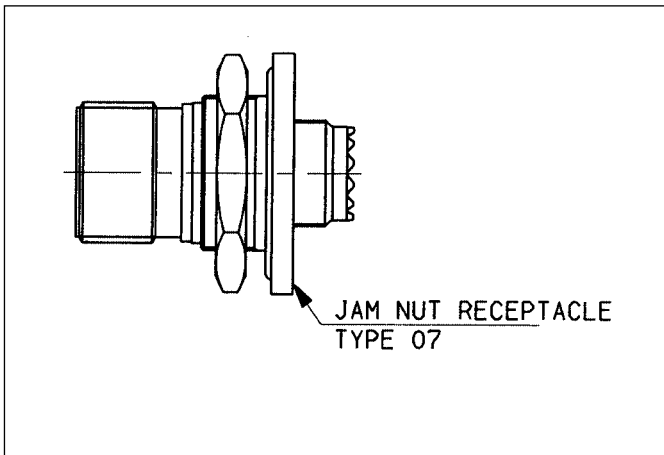
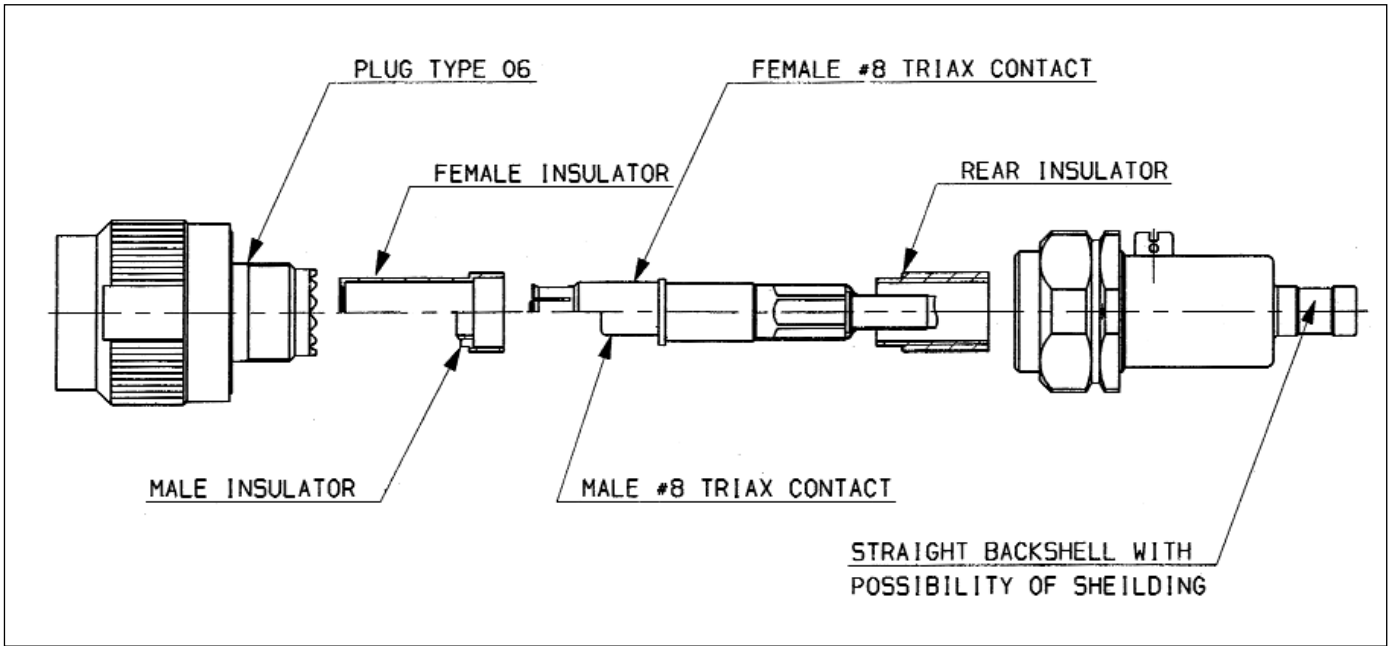
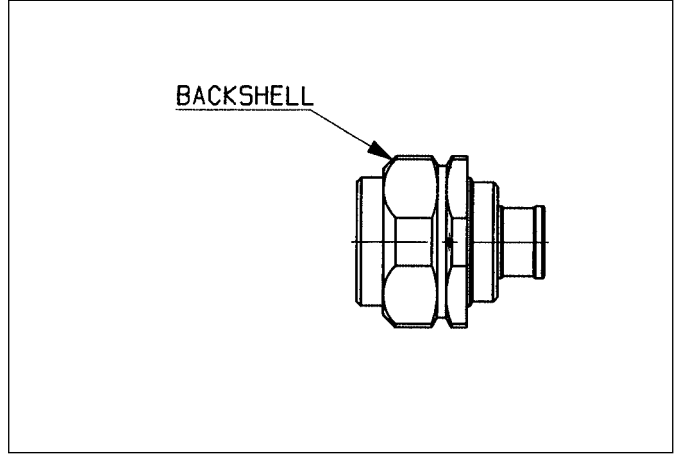
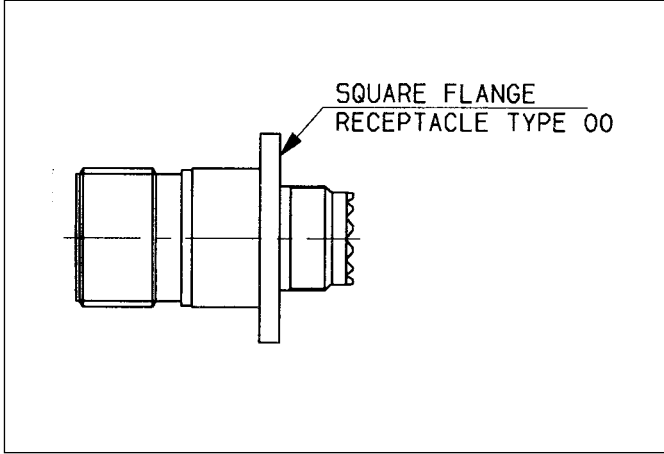
<b>SCC specification number</b>	<b>3401 056</b>	<b>01</b>	<b>B</b>	<b>00</b>	<b>-</b>	<b>09</b>	<b>-</b>	<b>01</b>	<b>P</b>	<b>N</b>	<b>L</b>
<b>Type of variante ESA</b>	not to be modified										
<b>B testing level</b>	not to be modified										
<b>Shell type</b>	<ul style="list-style-type: none"> <li><b>00</b> : square flange receptacle</li> <li><b>07</b> : jam nut receptacle</li> <li><b>06</b> : plug with RFI shielding</li> </ul>										
<b>Dash"- "mandatory</b>											
<b>Shell type:</b>	9										
<b>Dash"- "mandatory</b>											
<b>Contact arrangement</b>	(see table page 83)										
<b>Contact type</b>	<b>P</b> : Pin <b>S</b> : Socket										
<b>Clocking position</b>	<b>N</b> : normal (standard clocking position) Other positions : <b>A, B, C, D &amp; E</b>										
<b>L</b>	: connectors ordered without contacts («L» is not marked on the connector)										

<b>8DS Series</b>	<b>8DS</b>	<b>00</b>	<b>19</b>	<b>32</b>	<b>P</b>	<b>N</b>	<b>L</b>
<b>Shell type</b>	<ul style="list-style-type: none"> <li><b>00</b> : square flange receptacle (front mounting)</li> <li><b>06G</b> : plug («G» for grounding)</li> <li><b>07</b> : jam nut receptacle</li> <li><b>66G</b> : plug (G for grounding) with mirror image contact</li> </ul>						
<b>Shell size</b>	09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25						
<b>Contact arrangement</b>	(see table page 83)						
<b>Contact type</b>	<b>P</b> : pin <b>S</b> : socket						
<b>Clocking position</b>	<b>N</b> : normal (standard clocking position) Other positions : <b>A, B, C, D &amp; E</b>						
<b>L</b>	: connectors ordered without contacts («L» is not marked on the connector) connectors are only supplied less contacts						



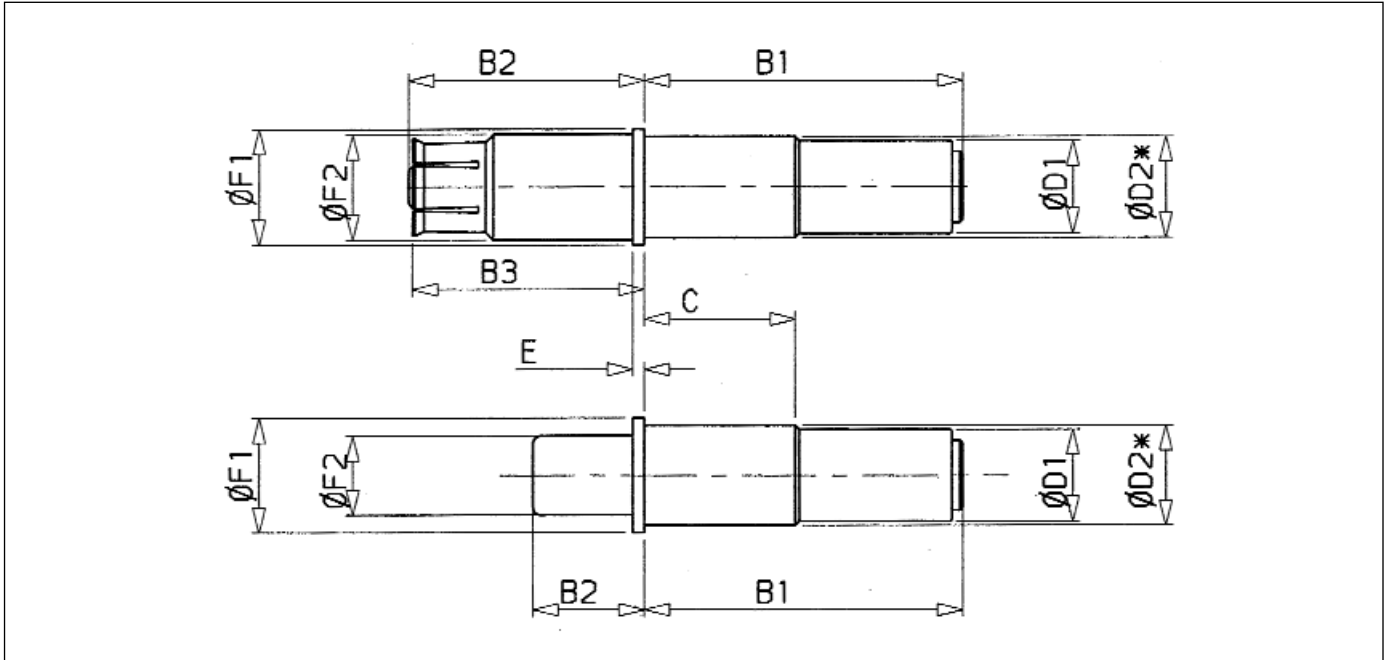


**Connector, Electrical, Triax, Crimp for 34010/56 Connectors**





**Contact electrical, Triax, Crimp for 34010/56 Connectors**



Symb.	Min.	Max.	Contact type			
			Male		Female	
			Min.	Max.	Min.	Max.
<b>B1</b>	21.34	22.86				
<b>B2</b>			7.49	7.74	15.80	16.43
<b>B3</b>					15.88	16.03
<b>C</b>	10.00	11.00				
<b>ØD1</b>	6.93	7.01				
<b>ØD2*</b>		6.53				
<b>E</b>	0.74	0.84				
<b>ØF1</b>	7.95	8.03				
<b>ØF2</b>			5.515	5.565	7.22	7.32

\* After crimping

Contact Type	ESA/ESA/SCC P/N	SOURIAU P/N
<b>MALE</b>	3401066 01B	SN 1767K 988-A
<b>FEMALE</b>	3401066 02 B	SN 1767K 988-A



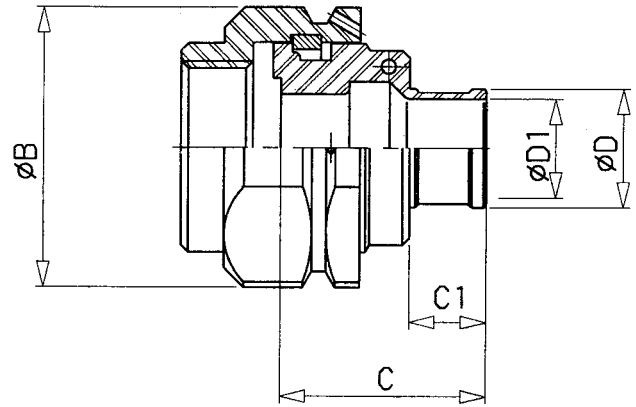
# Backshell for 3401/056 monotriax connectors



## Straight Short Backshell

$\varnothing B$ Max.	C Max.	C1 Max.	$\varnothing D$ Max.	$\varnothing D1$ Max.
20(1)	14.5	5.5	8.5	7.0

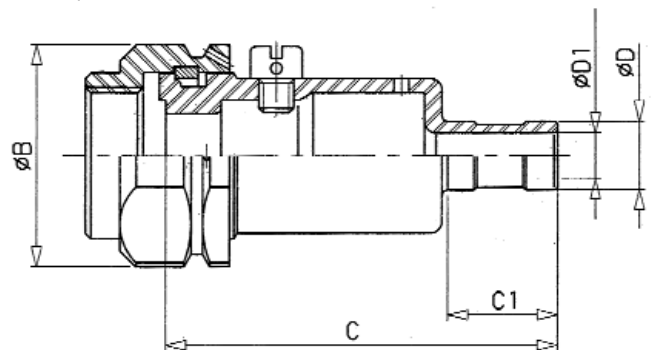
ESA/SCC P/N	SOURIAU P/N
3401 062 65B	8975-6650A



## Straight Shield Termination

$\varnothing B$ Max.	C Max.	C1 Max.	$\varnothing D$ Max.	$\varnothing D1$ $\pm 0.25$
20(1)	34.5	10.5	7	4.25

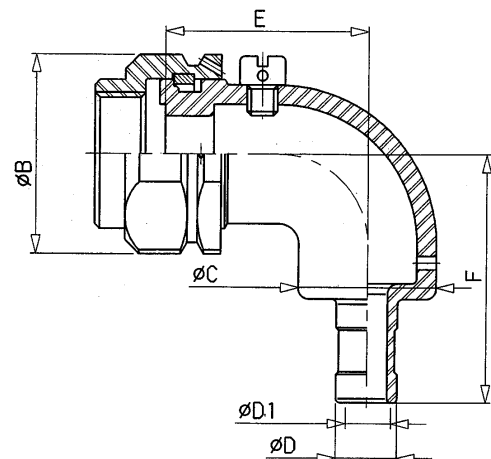
ESA/SCC P/N	SOURIAU P/N
3401 062 66B	8975-6641A



## 90° Shield Termination

$\varnothing B$ Max.	$\varnothing C$ Max.	$\varnothing D$ Max.	$\varnothing D1$ $\pm 0.25$	E Max.	F Max.
20(1)	14	7	4.25	20.5	24.5

ESA/SCC P/N	SOURIAU P/N
3401 062 67B	8975-6644A





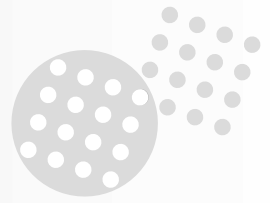
## Part Number / Ordering information

<b>SCC specification number</b>	<b>3401070</b>	<b>01</b>	<b>B</b>	<b>00</b>	<b>C</b>	<b>09</b>	<b>-</b>	<b>01</b>	<b>P</b>	<b>N</b>
<b>Type of variant ESA</b> not to be modified										
<b>B testing level</b> not to be modified										
<b>Shell type</b> <b>00</b> : square flange receptacle <b>07</b> : jam nut receptacle										
<b>Contact post it</b> <b>L</b> : long spill <b>C</b> : short spill										
<b>Shell size: 9 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25</b>										
<b>Dash"- "mandatory</b>										
<b>Contact arrangement</b> (see table page 83)										
<b>Contact type</b> <b>P</b> : pin <b>S</b> : socket										
<b>Clocking position</b> <b>N</b> : normal (standard clocking position) Other positions : <b>A, B, C, D &amp; E</b>										

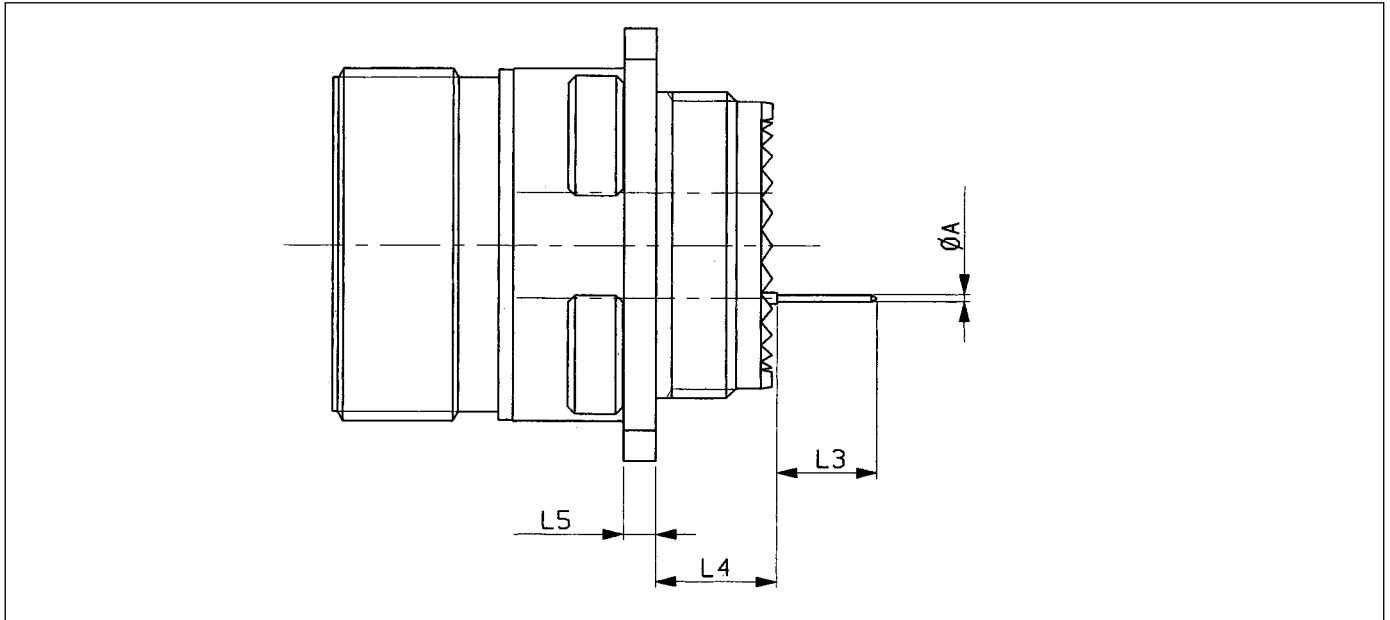
Supplied only with contacts fitted

<b>8DS Series</b>	<b>8DS</b>	<b>00</b>	<b>C</b>	<b>09</b>	<b>-</b>	<b>01</b>	<b>P</b>	<b>N</b>
<b>Shell type</b> <b>00</b> : square flange receptacle <b>07</b> : jam nut receptacle								
<b>Contact post it</b> <b>L</b> : long spill <b>C</b> : short spill								
<b>Shell size: 9 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25</b>								
<b>Dash"- "mandatory</b>								
<b>Contact arrangement</b> (see table page 83)								
<b>Contact type</b> <b>P</b> : pin <b>S</b> : Socket								
<b>Clocking position</b> <b>N</b> : Normal Other positions : <b>A, B, C, D &amp; E</b>								

Supplied only with contacts fitted



### Connector, Electrical, Square Flange receptacle (triple start, with straight spill contacts) 3401/070 & 8DS 00 Series



L5 : Shells sizes 9 to 19 2.26 ± 0.10 Shells sizes 21 to 25 2.97 ± 0.10

Shell size		9	11	13	15	17	19	21	23	25
ØA	# 22D	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028
	# 20	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028
	# 16	1.15 .045	1.15 .045	1.15 .045	1.15 .045	1.15 .045	1.15 .045	1.15 .045	1.15 .045	1.15 .045
L4CM # 22D	Min.	9.48 .414	9.48 .414	9.48 .373	9.48 .373	9.48 .373	9.48 .373	9.59 .378	9.59 .378	9.59 .378
	Max.	10.58 .417	10.58 .417	10.58 .417	10.58 .417	10.58 .417	10.58 .417	10.69 .421	10.69 .421	10.69 .421
L4CF # 22D	Min.	9.15 .360	9.15 .360	9.15 .360	9.15 .360	9.15 .360	9.15 .360	9.26 .365	9.26 .365	9.26 .365
	Max.	10.58 .417	10.58 .417	10.58 .417	10.58 .417	10.58 .417	10.58 .417	10.69 .421	10.69 .421	10.69 .421
L4CM # 20	Min.	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.76 .384	9.76 .384	9.76 .384
	Max.	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.86 .428	10.86 .428	10.86 .428
L4CF # 20	Min.	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.76 .384	9.76 .384	9.76 .384
	Max.	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.86 .428	10.86 .428	10.86 .428
L4CM # 16	Min.	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.76 .384	9.76 .384	9.76 .384
	Max.	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.86 .428	10.86 .428	10.86 .428
L4CF # 16	Min.	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.65 .380	9.76 .384	9.76 .384	9.76 .384
	Max.	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.75 .423	10.86 .428	10.86 .428	10.86 .428
L3	PL # 22D	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335
	PC # 22D	4.00 .157	4.00 .157	4.00 .157	4.00 .157	4.00 .157	4.00 .157	4.00 .157	4.00 .157	4.00 .157
	PL # 20	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335
	PC # 20	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201
	PL # 16	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335
	PC # 16	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201

CM: male contact

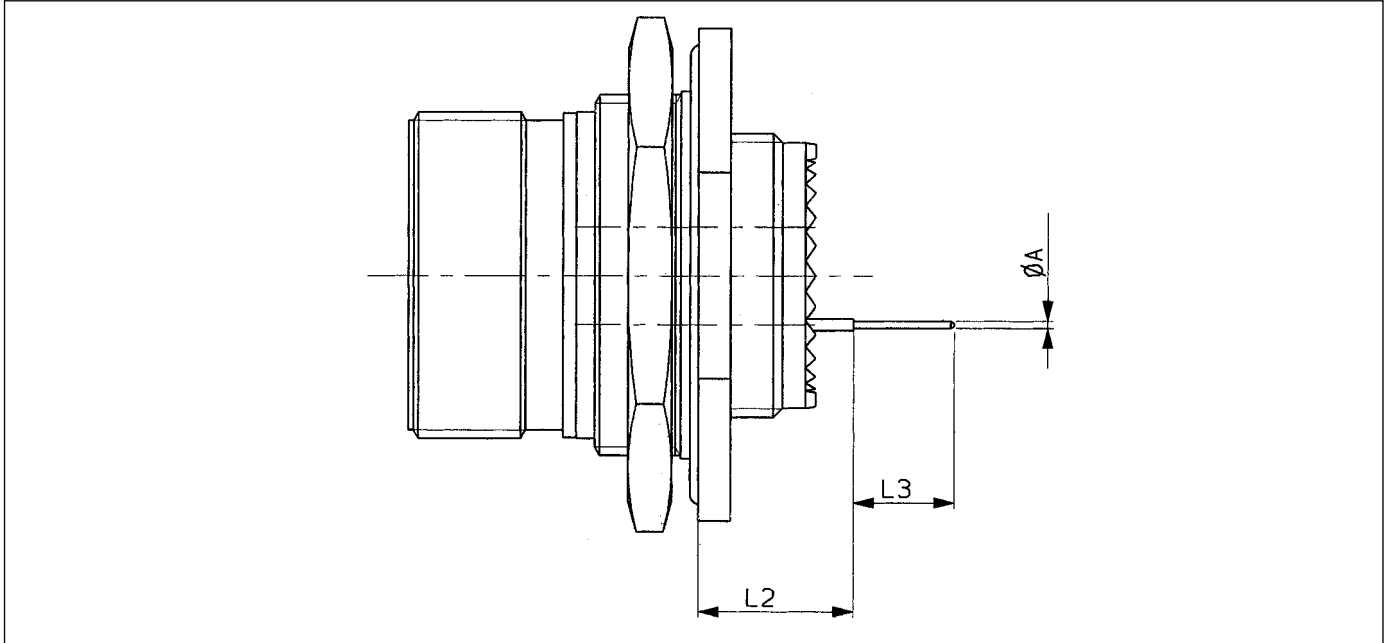
CF: female contact

PL: long spill

PC: Short spill



**Connector, Electrical, Jam-nut mounted receptacle  
(triple start, with straight spill contacts) 3401/070 & 8DS 07 series**



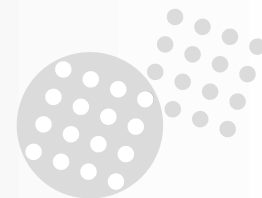
Shell size		9	11	13	15	17	19	21	23	25
ØA	# 22D	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028
	# 20	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028	0.70 .028
	# 16	1.15 .045	1.15 .045	1.15 .045	1.15 .045	1.15 .045	1.15 .045	1.15 .045	1.15 .045	1.15 .045
L2CM # 22D	Min.	10.52 .414	10.52 .414	10.34 .407	10.34 .407	10.34 .407	10.34 .407	10.34 .407	10.34 .407	10.34 .407
	Max.	11.46 .451	11.46 .451	11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444
L2CF # 22D	Min.	10.19 .401	10.19 .401	10.01 .394	10.01 .394	10.01 .394	10.01 .394	10.01 .394	10.01 .394	10.01 .394
	Max.	11.46 .451	11.46 .451	11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444	11.28 .444
L2CM # 20	Min.	10.69 .421	10.69 .421	10.51 .414	10.51 .414	10.51 .414	10.51 .414	10.51 .414	10.51 .414	10.51 .414
	Max.	11.63 .458	11.63 .458	11.45 .451	11.45 .451	11.45 .451	11.45 .451	11.45 .451	11.45 .451	11.45 .451
L2CF # 20	Min.	10.69 .421	10.69 .421	10.51 .380	10.51 .380	10.51 .380	10.51 .380	10.51 .384	10.51 .384	10.51 .384
	Max.	11.63 .458	11.63 .458	11.45 .414	11.45 .414	11.45 .414	11.45 .414	11.45 .414	11.45 .414	11.45 .414
L2CM # 16	Min.	10.69 .421	10.69 .421	10.51 .414	10.51 .414	10.51 .414	10.51 .414	10.51 .414	10.51 .414	10.51 .414
	Max.	11.63 .458	11.63 .458	11.45 .451	11.45 .451	11.45 .451	11.45 .451	11.45 .451	11.45 .451	11.45 .451
L2CF # 16	Min.	10.69 .421	10.69 .421	10.51 .414	10.51 .414	10.51 .414	10.51 .414	10.51 .414	10.51 .414	10.51 .414
	Max.	11.63 .458	11.63 .458	11.45 .451	11.45 .451	11.45 .451	11.45 .451	11.45 .451	11.45 .451	11.45 .451
L3	PL # 22D	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335
	PC # 22D	4.00 .157	4.00 .157	4.00 .157	4.00 .157	4.00 .157	4.00 .157	4.00 .157	4.00 .157	4.00 .157
	PL # 20	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335
	PC # 20	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201
	PL # 16	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335	8.50 .335
	PC # 16	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201	5.10 .201

CM: male contact

CF: female contact

PL: long spill

PC: Short spill



# Hermetic receptacle

## Applications

Satellite  
Launcher  
Space station  
Shuttle hardware

## Standards

ESA/SCC 3401/057



## Circular connectors with solder contacts

ESA/SCC 3401/057 Hermetic series, suitable for Flight Models, is in accordance with MIL-DTL-38999 class H.

8DS-H Series uses the same components as 3401/057 it is derived from. They are delivered without traceability and LAT testing which these are acceptable for Engineering Models requirements.

## Part Number / Ordering information

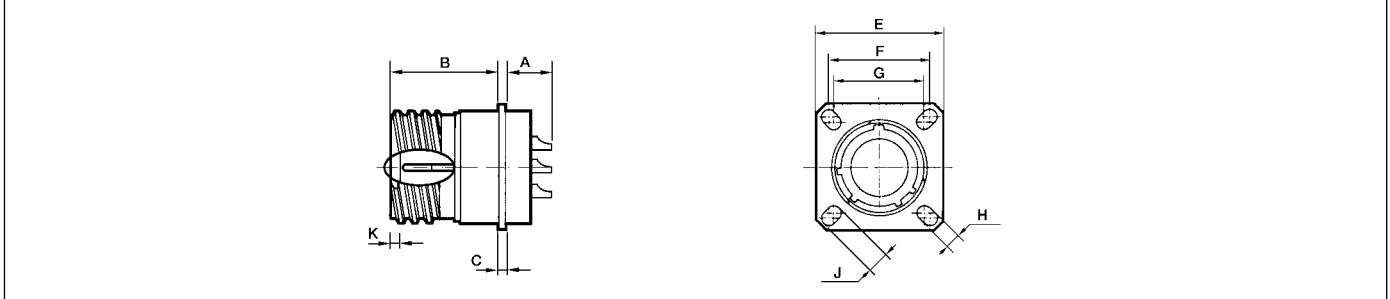
<b>SCC specification number</b>	<b>3401 057</b>	<b>01</b>	<b>B</b>	<b>00</b>	<b>H</b>	<b>19</b>	<b>32</b>	<b>P</b>	<b>N</b>
<b>Type of variant ESA</b> not to be modified									
<b>B testing level</b> not to be modified									
<b>Shell type</b> <b>00</b> : square flange receptacle <b>01</b> : solder mount receptacle <b>07</b> : single hole mounting receptacle 77 feedthrough <b>77</b> : through bulkhead									
<b>Hermetic version</b>									
<b>Shell size</b> <b>09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25</b>									
<b>Contact arrangement</b> (see table page 83)									
<b>Contact type</b> <b>P</b> : pin only									
<b>Clocking position</b> <b>N</b> : normal (standard clocking position) Other positions : <b>A, B, C, D &amp; E</b>									

<b>8DS-H Series</b>	<b>8DS</b>	<b>00</b>	<b>H</b>	<b>19</b>	<b>32</b>	<b>P</b>	<b>N</b>
<b>Shell type</b> <b>00</b> : square flange receptacle <b>01</b> : solder mount receptacle <b>07</b> : single hole mounting receptacle <b>77</b> : through bulkhead							
<b>Hermetic version</b>							
<b>Shell size</b> <b>09 - 11 - 13 - 15 - 17 - 19 - 21 - 23 - 25</b>							
<b>Contact arrangement</b> (see table page 83)							
<b>Contact type</b> <b>P</b> : pin only							
<b>Clocking position</b> <b>N</b> : normal (standard clocking position) Other positions : <b>A, B, C, D &amp; E</b>							



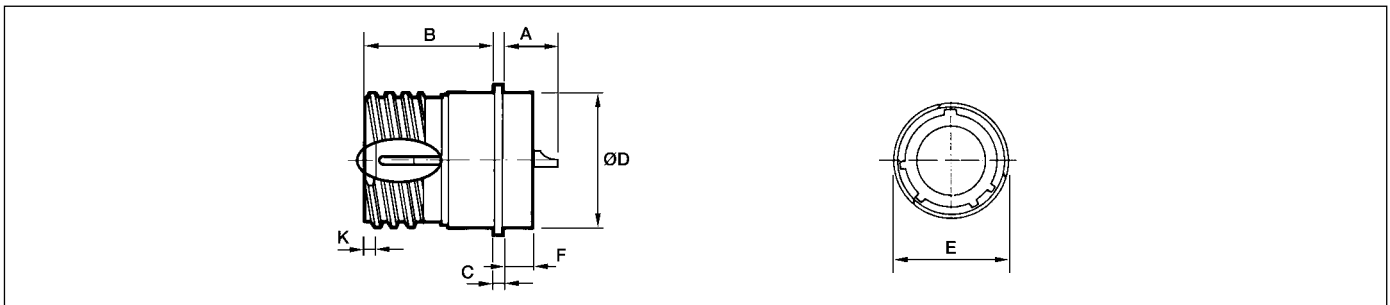
# Hermetic receptacle

## Type 00 : Square flange receptacle



Shell size	09		11		13		15		17		19		21		23		25	
	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max
A		5,7 .224		5,7 .224		5,7 .224		5,7 .224		5,7 .224		5,7 .224		5,7 .224		5,7 .224		5,7 .224
B		21,4 .843		21,4 .843		21,4 .843		21,4 .843		21,4 .843		21,4 .843		21,4 .843		21,4 .843		21,4 .843
C	1,9 .75	2,6 .102	1,9 .75	2,6 .102	1,9 .75	2,6 .102	1,9 .75	2,6 .102	1,9 .75	2,6 .102	1,9 .75	2,6 .102	1,9 .75	2,6 .102	1,9 .75	2,6 .102	1,9 .75	2,6 .102
E	23,50 .925	24,10 .949	25,90 1.020	26,50 1.043	28,30 1.114	28,90 1.138	30,70 1.209	31,30 1.232	33,00 1.299	33,60 1.323	36,20 1.425	36,80 1.449	39,40 1.551	40,00 1.575	42,60 1.677	43,20 1.701	45,70 1.799	46,30 1.823
F	18,16 .715	18,36 .723	20,52 .808	20,72 .816	22,91 .902	23,11 .910	24,51 .965	24,71 .973	26,87 1.058	27,07 1.066	29,26 1.152	29,46 1.160	31,65 1.254	31,85 1.246	34,83 1.371	35,03 1.379	38,00 1.496	38,20 1.504
G	14,99 .567	15,19 .572	18,16 .715	18,36 .723	20,52 .808	20,72 .816	22,91 .902	23,11 .910	24,51 .965	24,71 .973	26,87 1.058	27,07 1.066	29,26 1.152	29,46 1.160	31,65 1.246	31,85 1.245	34,83 1.371	35,03 1.379
H	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,05 .120	3,45 .136	3,71 .146	4,11 .162	3,71 .146	4,11 .162
J	5,29 .208	5,69 .224	4,73 .186	5,13 .202	4,73 .186	5,13 .202	4,73 .186	5,13 .202	4,73 .186	5,13 .202	4,73 .186	5,13 .202	4,73 .186	5,13 .202	5,95 .234	6,35 .250	5,95 .234	6,35 .250
K	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415

## Type 01 : Solder mount receptacle

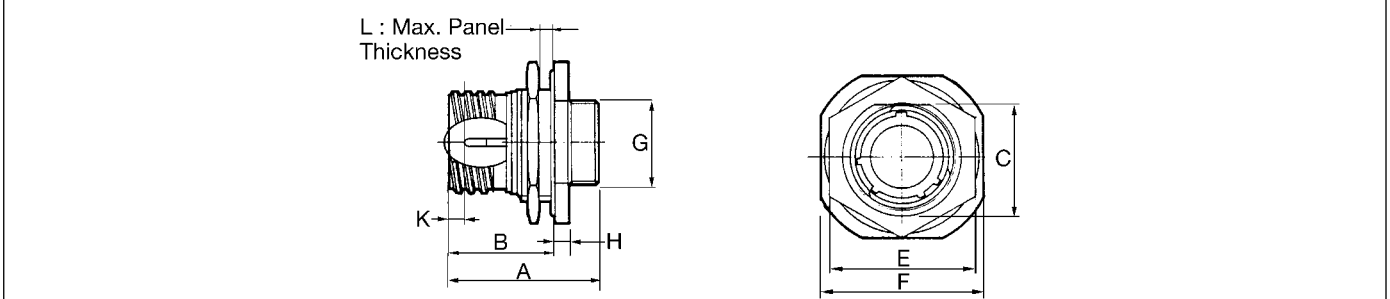


Shell size	09		11		13		15		17		19		21		23		25	
	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max
A		9,7 .382		9,7 .382		9,7 .382		9,7 .382		9,7 .382		9,7 .382		9,7 .382		9,7 .382		9,7 .382
B		17,8 .701		17,8 .701		17,8 .701		17,8 .701		17,8 .701		17,8 .701		17,8 .701		17,8 .701		17,8 .701
C	0,6 .024	1,2 .047	0,6 .024	1,2 .047	0,6 .024	1,2 .047	0,6 .024	1,2 .047	0,6 .024	1,2 .047	0,6 .024	1,2 .047	0,6 .024	1,2 .047	0,6 .024	1,2 .047	0,6 .024	1,2 .047
D		17,1 .673		19,9 .783		23,1 .909		26,2 1.031		29,4 1.157		31,8 1.252		35 1.378		38,2 1.504		41,3 1.626
E		19,4 .764		21,8 .858		24,9 .98		28,1 1.106		31,3 1.232		33,6 1.323		36,8 1.449		40 1.575		43,2 1.701
F		5,1 .201		5,1 .201		5,1 .201		5,1 .201		5,1 .201		5,1 .201		5,1 .201		5,9 .232		5,9 .232
K	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415



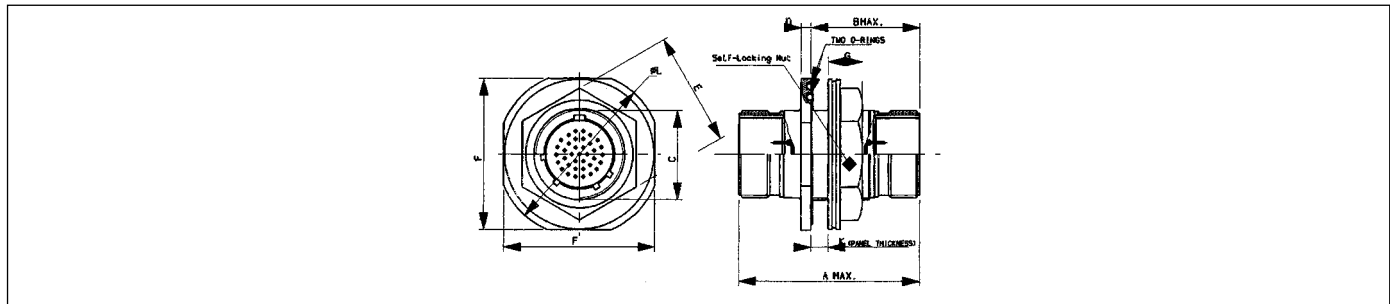
# Hermetic receptacle

## Type 07 : Single hole mounting receptacle



Shell size	09		11		13		15		17		19		21		23		25	
	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max
A		29,2 1.150		29,2 1.150		29,3 1.154		29,3 1.154		29,3 1.154		30,1 1.185		30,1 1.185		30,1 1.185		30,1 1.185
B		22,6 .890		22,6 .890		22,6 .890		22,6 .890		22,6 .890		22,6 .890		22,6 .890		22,6 .890		22,6 .890
C	16,38 .645	16,63 .645	18,92 .745	19,17 .755	23,67 .932	23,92 .942	26,82 1.056	27,07 1.066	30 1.181	30,25 1.191	33,17 1.306	33,42 1.316	36,35 1.431	36,6 1.441	39,52 1.556	39,77 1.566	42,7 1.681	42,95 1.691
E		24 .945		27 1.063		32 1.260		36 1.427		37 1.457		41 1.614		46 1.811		50 1.969		51,23 2.017
F	26,6 1.047	27,4 1.079	31,4 1.236	32,2 1.268	34,5 1.358	35,3 1.390	37,7 1.484	38,5 1.516	40,9 1.610	41,7 1.642	45,6 1.795	46,4 1.827	48,8 1.921	49,6 1.953	52 2.047	52,8 2.079	55,2 2.173	56 2.205
G	16,1 .634	16,3 .642	19,1 .752	19,4 .764	22,4 .882	22,7 .894	25,6 1.008	25,9 1.020	28,7 1.130	29 1.142	31,9 1.256	32,2 1.268	35,1 1.382	35,4 1.394	38,3 1.508	38,6 1.520	41,4 1.630	41,7 1.642
H		5,3 .209		5,3 .209		5,3 .209		5,3 .209		5,3 .209		5,3 .209		5,3 .209		5,3 .209		5,3 .209
K	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415	9,5 .374	10,54 .415
L	1,6 .063	3,2 .126	1,6 .063	3,2 .126	1,6 .063	3,2 .126	1,6 .063	3,2 .126	1,6 .063	3,2 .126	1,6 .063	3,2 .126	1,6 .063	3,2 .126	1,6 .063	3,2 .126	1,6 .063	3,2 .126

## Feedthrough Receptacle : Shell Type 77 H



Shell size	09		11		13		15		17		19		21		23		25	
	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max	min	Max
A		52.80		52.80		52.80		52.80		52.80		52.80		52.80		52.80		52.80
B		31.40		31.40		31.57		31.57		31.57		31.57		31.57		31.57		31.57
C	16.38	16.63	18.92	19.17	23.67	23.92	26.82	27.07	30.00	30.25	33.17	33.42	36.35	36.60	36.52	39.77	42.70	42.95
D	2.50	2.90	2.50	2.90	2.50	2.90	2.50	2.90	2.50	2.90	3.30	3.70	3.30	3.70	3.30	3.70	3.30	3.70
E	22.27	22.8	24.99	25.83	29.77	30.60	32.92	33.76	36.12	36.96	39.27	40.11	42.47	43.31	45.62	46.46	50.39	51.23
F	33.00	33.53	37.85	38.38	41.02	41.55	44.20	44.73	47.37	47.90	50.55	51.08	53.72	54.25	56.90	57.43	60.07	60.60
G	9.90	10.20	9.90	10.20	9.90	10.20	9.90	10.20	9.90	10.20	9.90	10.20	9.90	10.20	9.90	10.20	9.90	10.20
K	1.57	6.35	1.57	6.35	1.57	6.35	1.57	6.35	1.57	6.35	1.57	6.35	1.57	6.35	1.57	6.35	1.57	6.35
ØL		36.88		41.58		44.75		47.93		51.10		54.28		57.45		60.63		63.80



**Contact layouts for circular connector series ESA/SCC 3401/52 (8LTS), 3401/044 (8TS), 3401/56 (8DS), 3401/057 (8DS), 3401/070 (8DS), MIL-DTL-38999 series I (8LTS), series II (8TS), series III (8DS), Space grade 8LTS (series I), 8TS (series II), 8DS (series III)**

shell size									
8LTS 8DS	8TS								
09	08	<b>35</b> 6 # 22D 	8LTS 8DS 8DS-H 8TS	<b>98</b> 3 # 20 	8LTS 8DS 8DS-H	<b>01</b> 	8DS		
11	10	<b>35</b> 13 # 22D 	8LTS 8DS 8DS-H 8TS	<b>98</b> 6 # 20 	8LTS 8DS 8DS-H	<b>01</b> 1 # 20 	8LTS 8DS	<b>05</b> 5 # 20 	8LTS 8DS
13	12	<b>35</b> 22 # 22D 	8LTS 8DS 8TS	<b>98</b> 19 # 20 	8LTS 8DS 8DS-H	<b>08</b> 8 # 20 	8LTS 8DS	<b>26</b> 6 # 22 2 # 12 	8DS
15	14	<b>35</b> 37 # 22D 	8LTS 8DS 8DS-H 8TS	<b>19</b> 19 # 20 	8LTS 8DS	<b>05</b> 5 # 16 	8LTS 8DS	<b>97</b> 8 # 20 4 # 16 	8LTS 8DS
17	16	<b>35</b> 55 # 22D 	8LTS 8DS 8TS	<b>26</b> 26 # 20 	8LTS 8DS	<b>06</b> 6 # 12 	8LTS 8DS 8TS	<b>08</b> 8 # 16 	8LTS 8DS 8DS-H 8TS
19	18	<b>35</b> 66 # 22D 	8LTS 8DS 8TS	<b>32</b> 32 # 20 	8LTS 8DS	<b>11</b> 11 # 16 	8LTS 8DS 8DSH		
21	20	<b>35</b> 79 # 22D 	8LTS 8DS 8TS	<b>41</b> 41 # 20 	8LTS 8DS 8TS	<b>16</b> 16 # 16 	8LTS 8DS 8TS	<b>11</b> 11 # 12 	8LTS 8DS 8TS
23	22	<b>35</b> 100 # 22D 	8LTS 8DS 8TS	<b>53</b> 53 # 20 	8LTS 8DS	<b>21</b> 21 # 16 	8LTS 8DS		
25	24	<b>35</b> 128 # 22D 	8LTS 8DS 8TS	<b>61</b> 61 # 20 	8LTS 8DS 8DS-H 8TS	<b>19</b> 19 # 12 	8LTS 8DS	<b>03*</b> 1 # 8 2 # 4 	8DS * ESA only
25	24	<b>29</b> 29 # 16 	8LTS 8DS 8TS	<b>43</b> 23 # 20 20 # 16 	8LTS 8DS	<b>24</b> 12 # 16 12 # 12 	8LTS 8DS 8TS	<b>07*</b> 7 # 8 	8DS

- size 20 contacts
- size 16 contacts
- size 8 contacts
- size 4 contacts
- size 12 contacts
- size 8 triax contact





# Crimp contacts

## Crimp contacts

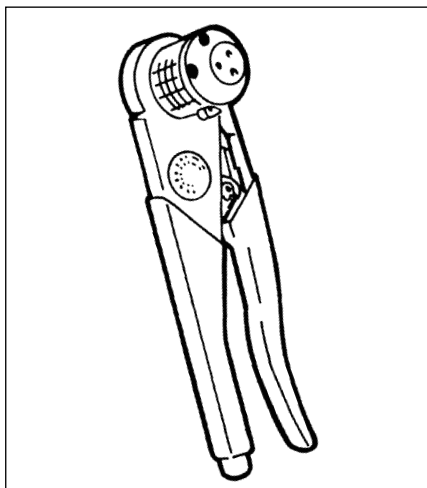
Contact size	Conductor section AWG		Part number			
			ESA/SCC 3401 052 & 3401 056 connectors	SOURIAU in accordance with ESA: 8LTS & 8DS connectors	ESA/SCC 3401 044 connectors	SOURIAU in accordance with ESA: 8TS connectors
# 22	# 22, # 24 & # 26	pin socket	3401 058 01B 3401 058 02B	<b>8975-2123</b> <b>8975-2130</b>	3401 045 01B 3401 045 02B	<b>8975-2123</b> <b>8975-2137</b>
# 20	# 20, # 22 & # 24	pin socket	3401 058 03B 3401 058 04B	<b>8975-2124</b> <b>8975-2131</b>	3401 045 03B 3401 045 04B	<b>8975-2124</b> <b>8975-2138</b>
# 16	# 16, # 18 & # 20	pin socket	3401 058 05B 3401 058 06B	<b>8975-2125</b> <b>8975-2132</b>	3401 045 05B 3401 045 06B	<b>8975-2125</b> <b>8975-2139</b>
# 12	# 12 & # 14	pin socket	3401 058 07B 3401 058 08B	<b>8975-2126</b> <b>8975-2133</b>	3401 045 07B 3401 045 08B	<b>8975-2126</b> <b>8975-2140</b>
# 8	# 8 & # 10	pin socket	3401 058 09B 3401 058 10B	<b>8975-2127</b> <b>8975-2134</b>	- -	- -
# 4	# 4 & # 6	pin socket	3401 058 11B 3401 058 12B	<b>8975-2128</b> <b>8975-2135</b>	- -	- -
# 4	# 8 & # 10	pin socket	3401 058 13B 3401 058 14B	<b>8975-3729</b> <b>8975-3780</b>	- -	- -

## Tooling for crimp contacts

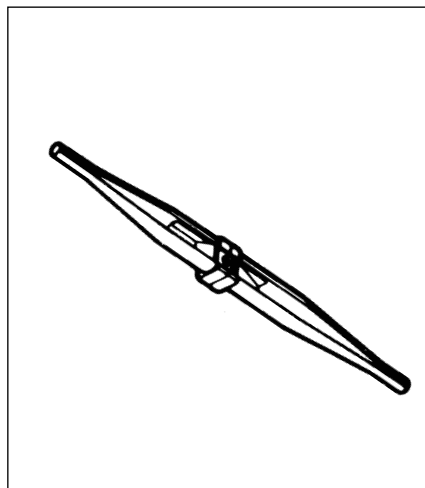
Contact size	Designation	Part number		
		Crimping tool	Locator	Insertion and removable plastic tools
# 22	pin socket	M22520/2-01 M22520/2-01	M22520/2-09 M22520/2-07	M81969/14-01 M81969/14-01
# 20	pin / socket	M22520/1-01	M22520/1-04	M81969/14-10
# 16	pin / socket	M22520/1-01	M22520/1-04	M81969/14-03
# 12	pin / socket	M22520/1-01	M22520/1-04	M81969/14-04
# 8	pin / socket	M22520/23-01	M22520/23-09 Point : M22520/23-02	M81969/29-02*
# 4 wire 4/6	pin / socket	M22520/23-01	M22520/23-11 Point : M22520/23-04	M81969/29-03*
# 4 wire 8/10	pin / socket	M22520/23-01	8975-3988 Point : M22520/23-02	M81969/29-03*

\*Removable only

M22520/1-01 with locator



M81969



# Backshells



## Applications

Satellite  
Launcher  
Space station  
Shuttle hardware

## Standards

ESA/SCC 3401/062



## Accessories for circular connectors

ESA/SCC 3401/062 backshells are approved for Flight Models. These accessories are not submitted to ESA/SCC 3401 CHART IV and CHART V.

So, they are delivered without LAT testing but with a date code limited traceability. The ESA/SCC product are also proposed for Engineering Models. The accessories are without ESA logo printing.

## Part Number / Ordering information

SCC specification number

3401 062

01

B

Variant type (see table below)

B testing level (not to be modified)

## Table of variant types

Variant	Backshell description	For connections	Shell size
01	nut	/052 (Series I)	09
		/044 (Series II)	08
02	nut	/052 (Series I)	11
		/044 (Series II)	10
03	nut	/052 (Series I)	13
		/044 (Series II)	12
04	nut	/052 (Series I)	15
		/044 (Series II)	14
05	nut	/052 (Series I)	17
		/044 (Series II)	16
06	nut	/052 (Series I)	19
		/044 (Series II)	18
07	nut	/052 (Series I)	21
		/044 (Series II)	20
08	nut	/052 (Series I)	23
		/044 (Series II)	22
09	nut	/052 (Series I)	25
		/044 (Series II)	24
10	straight cable clamp	/052 (Series I)	09
		/044 (Series II)	08
11	straight cable clamp	/052 (Series I)	11
		/044 (Series II)	10
12	straight cable clamp	/052 (Series I)	13
		/044 (Series II)	12
13	straight cable clamp	/052 (Series I)	15
		/044 (Series II)	14
14	straight cable clamp	/052 (Series I)	17
		/044 (Series II)	16
15	straight cable clamp	/052 (Series I)	19
		/044 (Series II)	18
16	straight cable clamp	/052 (Series I)	21
		/044 (Series II)	20
17	straight cable clamp	/052 (Series I)	23
		/044 (Series II)	22
18	straight cable clamp	/052 (Series I)	25
		/044 (Series II)	24
19	90° cable clamp	/052 (Series I)	09
		/044 (Series II)	08
20	90° cable clamp	/052 (Series I)	11
		/044 (Series II)	10
21	90° cable clamp	/052 (Series I)	13
		/044 (Series II)	12

Variant	Backshell description	For connections	Shell size
22	90° cable clamp	/052 (Series I)	15
		/044 (Series II)	14
23	90° cable clamp	/052 (Series I)	17
		/044 (Series II)	16
24	90° cable clamp	/052 (Series I)	19
		/044 (Series II)	18
25	90° cable clamp	/052 (Series I)	21
		/044 (Series II)	20
26	90° cable clamp	/052 (Series I)	23
		/044 (Series II)	22
27	90° cable clamp	/052 (Series I)	25
		/044 (Series II)	24
28	nut	/056 (Series III)	09
29			11
30			13
31			15
32			17
33			19
34			21
35			23
36			25
37			straight cable clamp
38	11		
39	13		
40	15		
41	17		
42	19		
43	21		
44	23		
45	25		
46	90° cable clamp	/056 (Series III)	09
47			11
48			13
49			15
50			17
51			19
52			21
53			23
54			25



# Backshells

## Dimensions (in mm/inch)

### Nut

Shell size	A Max.		B Max.		C Max	Ø D		Ø E min
	(1)	(2)	(1)	(2)		(1) UNEF-2B	(2)	
08/09	13,7 .539	16,8 .661	19,1 .752	21,79 .858	6,6 .26	.4375-28	M12 x 1-6h	6,7 .264
10/11	13,7 .539	16,8 .661	21,5 .846	24,99 .984	6,6 .26	.5624-25	M15 x 1-6h	9,9 .39
12/13	13,7 .539	16,8 .661	25,4 1	29,39 1.157	6,6 .26	.6875-24	M18 x 1-6h	12,8 .504
14/15	13,7 .539	16,8 .661	27,9 1.098	32,49 1.279	6,6 .26	.8125-20	M22 x 1-6h	16 .63
16/17	13,7 .539	16,8 .661	31,8 1.252	35,71 1.406	6,6 .26	.9375-20	M25 x 1-6h	19,2 .756
18/19	13,7 .539	16,8 .661	35,6 1.402	38,5 1.516	6,6 .26	1.0625-18	M28 x 1-6h	21,4 .843
20/21	13,7 .539	16,8 .661	38,1 1.5	41,7 1.642	6,6 .26	1.1875-18	M31 x 1-6h	24,6 .969
22/23	13,7 .539	16,8 .661	41,9 1.65	44,91 1.768	6,6 .26	1.3125-18	M34 x 1-6h	27,7 1.091
24/25	13,7 .539	16,8 .661	44,5 1.752	47,98 1.889	6,6 .26	1.4375-1	M37 x 1-6h	30,9 1.217

Notes : (1) 01 to 09 variants (2) 28 to 36 variants



### Straight cable clamp

Shell size	A Max.		B Max.		C Max	D		E		F Max.
	(1)	(2)	(1)	(2)		(1) UNEF-2B	(2)	min	Max.	
08/09	27,5 1.083	27,9 1.098	19,1 .752	21,79 .858	23,1 .909	.4375-28	M12 x 1-6h	2,49 .098	5,94 .234	21,6 .85
10/11	27,9 1.098	27,9 1.098	21,5 .846	24,99 .984	23,1 .909	.5624-25	M15 x 1-6h	3,89 .153	5,49 .216	22,5 .886
12/13	30,5 1.201	30,5 1.201	25,4 1	29,39 1.157	25,7 1.012	.6875-24	M18 x 1-6h	4,83 .19	8,33 .328	27,9 1.098
14/15	31,8 1.252	31,8 1.252	27,9 1.098	32,49 1.279	26,9 1.059	.8125-20	M22 x 1-6h	6,6 .26	11,61 .457	29,2 1.15
16/17	34,3 1.35	24,3 .957	31,8 1.252	35,71 1.406	29,5 1.161	.9375-20	M25 x 1-6h	7,19 .283	15,6 .614	33 1.299
18/19	40,6 1.598	40,6 1.598	35,6 1.402	38,5 1.516	35,8 1.409	1.0625-18	M28 x 1-6h	8,26 .325	16,1 .634	38,1 1.5
20/21	43,2 1.701	43,2 1.701	38,1 1.5	41,7 1.642	38,4 1.512	1.1875-18	M31 x 1-6h	8,71 .343	17,73 .698	40,6 1.598
22/23	47 1.85	47 1.85	41,9 1.65	44,91 1.768	42,2 1.661	1.3125-18	M34 x 1-6h	9,68 .381	20,9 .823	43,2 1.701
24/25	49,5 1.949	49,5 1.949	44,5 1.752	47,98 1.889	44,7 1.76	1.4375-18	M37 x 1-6h	10,62 .418	21,67 .853	45,7 1.799

Notes : (1) 10 to 18 variants (2) 37 to 45 variants



### 90° cable clamp

Shell size	A Max.		B Max.		C Max.		D		E		F Max.	G Max.
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	min	Max.		
08/09	30,5 1.201	35,1 1.382	19,1 .752	21,79 .858	25,7 1.012	29,5 1.161	see above		2,49 .098	5,94 .234	21,6 .85	25,4 1.000
10/11	30,5 1.201	35,1 1.382	21,5 .846	24,99 .984	25,7 1.012	29,5 1.161	see above		3,89 .153	5,49 .216	22,5 .886	27,9 1.098
12/13	35,6 1.402	37,1 1.461	25,4 1	29,39 1.157	30,7 1.209	31,5 1.240	see above		4,83 .19	8,33 .328	27,9 1.098	27,9 1.098
14/15	36,8 1.449	41,4 1.630	27,9 1.098	32,49 1.279	32,0 1.260	35,8 1.409	see above		6,6 .26	11,61 .457	29,2 1.15	31,8 1.252
16/17	40,6 1.598	45,7 1.799	31,8 1.252	35,71 1.406	35,8 1.409	40,1 1.579	see above		7,19 .283	15,6 .614	33,0 1.299	33,0 1.299
18/19	43,2 1.701	46,2 1.819	35,6 1.402	38,5 1.516	38,4 1.512	40,6 1.598	see above		8,26 .325	16,1 .634	38,1 1.500	38,1 1.500
20/21	47,0 1.850	48,3 1.902	38,1 1.5	41,7 1.642	42,2 1.661	42,7 1.681	see above		8,71 .343	17,73 .698	40,6 1.598	40,6 1.598
22/23	49,5 1.949	51,1 2.012	41,9 1.65	44,91 1.768	44,7 1.76	46,2 1.819	see above		9,68 .381	20,9 .823	43,2 1.701	44,5 1.752
24/25	53,3 2.098	54,6 2.150	44,5 1.752	47,98 1.889	48,5 1.909	49,0 1.929	see above		10,62 .418	21,67 .853	45,7 1.799	47,0 1.850

Notes : (1) 19 to 27 variants (2) 46 to 54 variants

