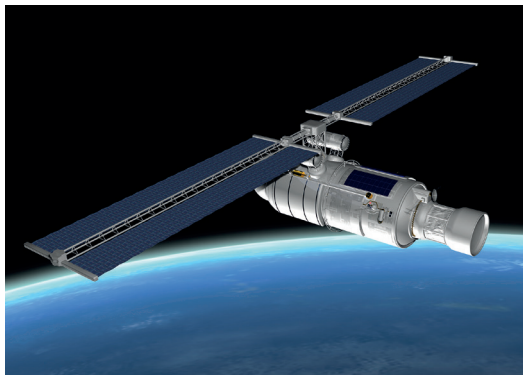


# Compact and lightweight space grade connector.



# Souriau D-Sub space grade series

## Typical applications



Satellite



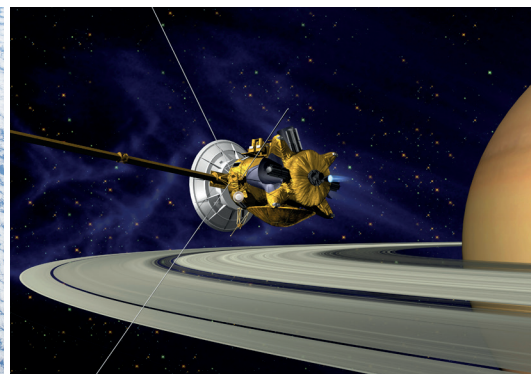
Space Station



Launcher



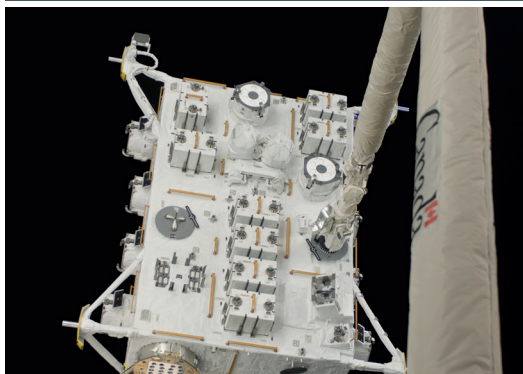
Spacecraft



Space Probe



Transfer Vehicle



Space experiment

# Souriau D-Sub space grade series

## We are space experts

Since the 1980's Souriau now Eaton has been supplying the satellite industry, supporting worldwide customers and space agencies in the research of better interconnect solutions and the highest grade of space connectors. This continuous effort has resulted in the commercialization of several standard ranges off the shelf (COTS) to satisfy the needs of performance, availability, cost optimization and high reliability. Besides, based on our capabilities, many solutions have been designed and qualified on purpose to meet specific requirements, thus bringing in all our support to your outstanding missions.

## Reliable solutions

The satellite industry is the perfect example of a business where failure is not an option. Strong partners you can rely on are mandatory. The environment requires on-board hardware to perform through magnetic fields, thermal cycles, vacuum, radiations, atomic oxygen, after having withstood the harsh launch conditions. But also, in this changing time for space industry, the reliability of the partners within the supply chain as well as the relevancy of their solutions in regard with the mission are more than ever part of the prior concerns.

## Space grade D-Sub series

The space grade D-Sub series is a compact connector ideally suited to answer to miniaturization and weight saving trends in spatial applications. It has been and is a long lasting standard solutions for LEO up to GEO applications. The large portfolio enables to serve most of the mounting configurations. Space grade D-Sub connectors are ESCC 3401, MIL-DTL-24308 class M and GSFC S-311 qualified (QPL).



Successful space heritage

Listed by space agencies

Space environment compatible

Optimized size and weight

# Souriau D-Sub space grade series

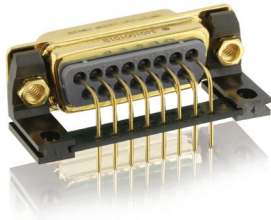
1

2

3

4

5



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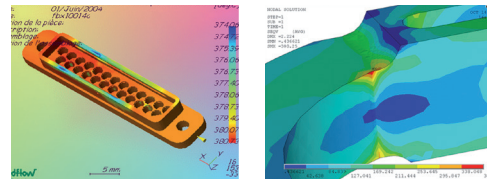
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### Product definition

Material Choice: Atomic Oxygen corrosion resistance, cold welding prevention, limited outgassing, etc.  
 Product design: expertise on launching systems design as well as robotic operated connections.  
 Know-how to support specific needs.



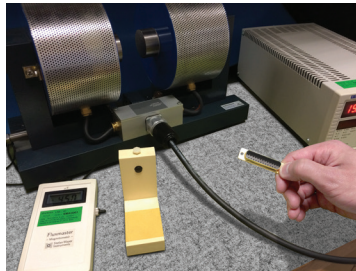
Stress and heat dissipation analysis

### Validation & qualification

In-house certified independent laboratory.  
 Capability to simulate various environments as well as to measure any key parameters.



Vacuum bell for robotic operating testing  
 -170°C/+200°C temperature gradient



Residual magnetism and magnetic permeability measurement



Binocular controls

### Production processes

Stringent production process.  
 Controlled environment.  
 Binocular inspection.  
 Rigorous traceability procedures and documentation.



Clean Room handling

### Quality assurance testing

Qualification:  
 The ESA/ESCC D-Sub non-magnetic connectors are qualified to specification 3401.  
 MIL and GSFC QPL.

Production control:  
 Visual (100%).  
 Insulation resistance (100%).  
 Contact retention (100%).  
 Dimensional (by sampling).  
 Dielectric withstanding voltage (100%).  
 Female contact capability (100%).

Final production tests:  
 Visual (100%).  
 Intermateability.  
 Dimensional (by sampling).

Lot acceptance tests:  
 ESA/ESCC 3401 Chart IV qualified.  
 Periodic requalification through ESCC 3401 Chart V.  
 MIL-DTL-24308 qualification and periodic tests.

5 shell sizes

26 layouts  
(standard, HD, mixed)

Data and power  
transmission

### Connectors

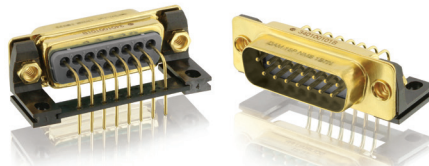


**Cable connectors**

**Contact termination**  
Rear removable crimp contacts  
Solder bucket contacts  
Wire wrap contacts

**Grommet version available**

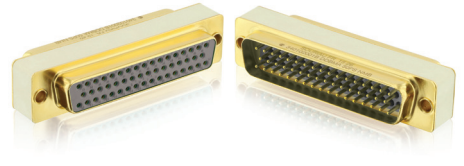
**Mounting options**  
Fixed mounting  
Floating mounting  
Clinch nuts



**PC Tail connectors**

**Contact termination**  
Straight or 90° PC tail

**Mounting options**  
Fixed mounting  
Clinch nuts  
Brackets  
Brittle drilled bar...

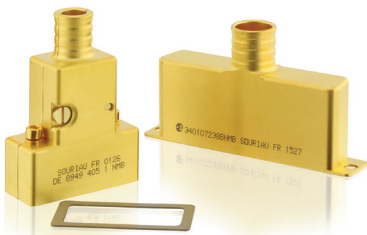


**Saver connectors**

**QPL connectors**

**Used to protect the flight equipment connectors from multiple test matings**

### Accessories



**Backshells**

**EMI/RFI shielded version**

**Lightweight version**

**Cable clamp**

**Shorting can**

**Castellated backshell**



**Screw locks**

**Male and female versions**

**Brass or stainless steel**



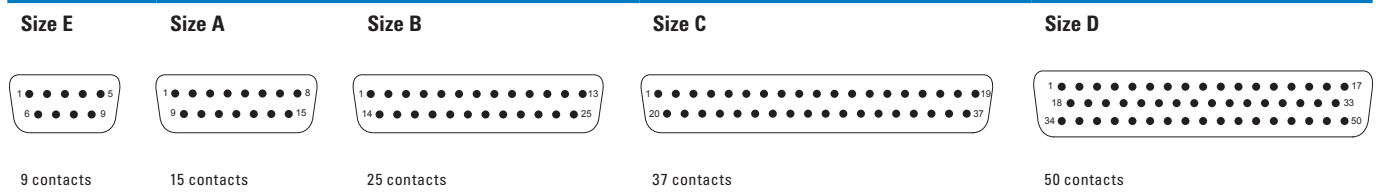
**Dust caps**

**Antistatic dust caps**

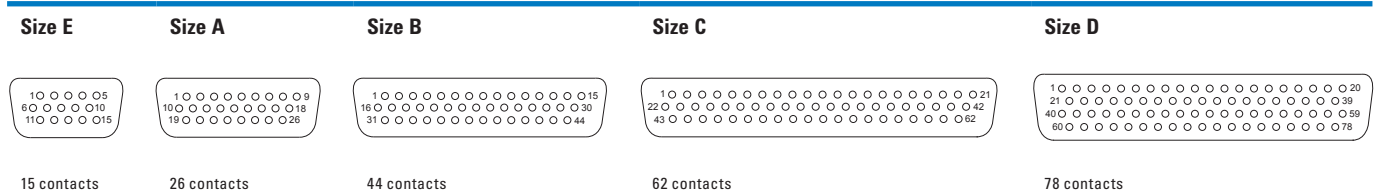
# Contact layouts

## Male insulator front view

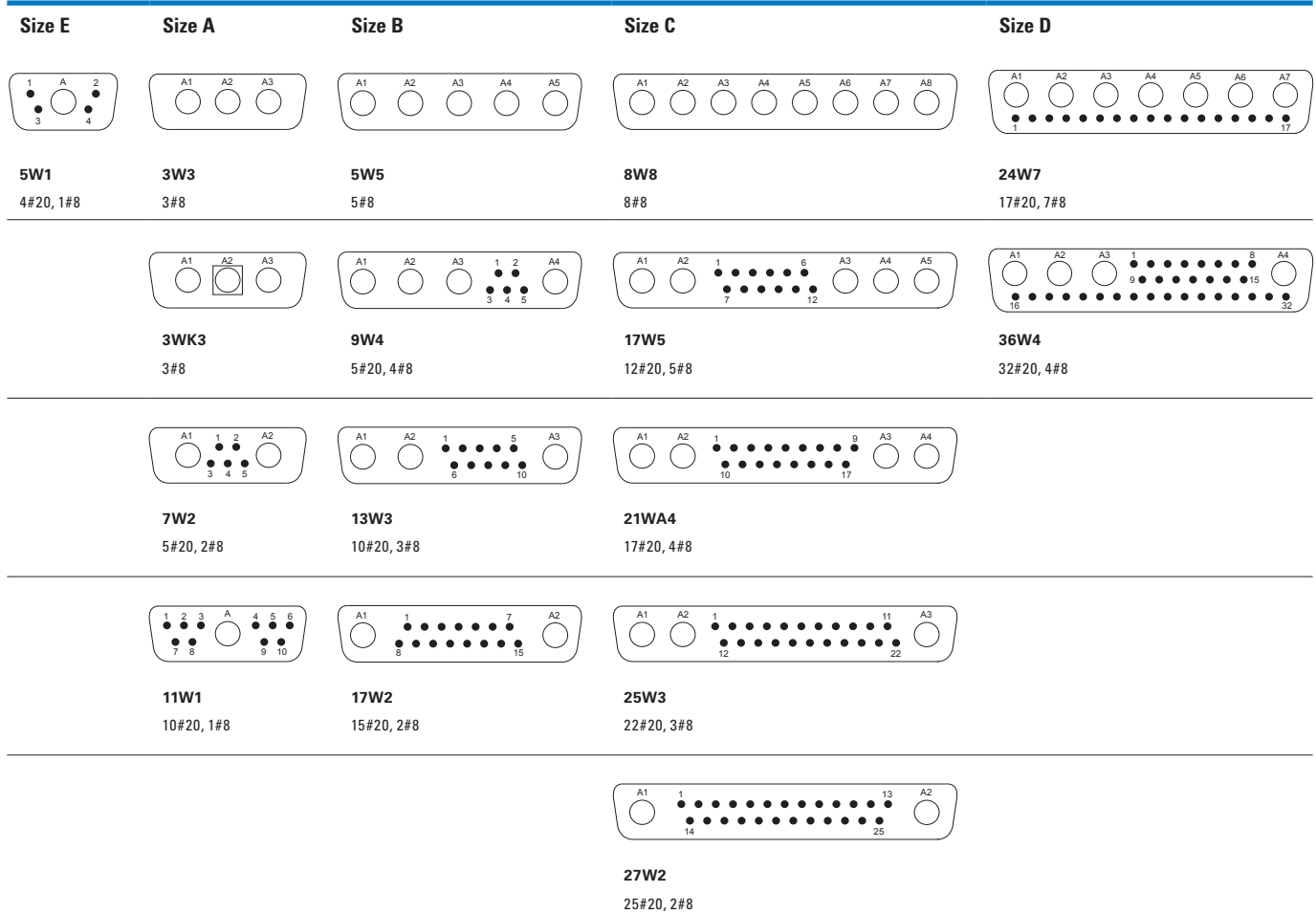
### Standard density layouts - Contacts #20

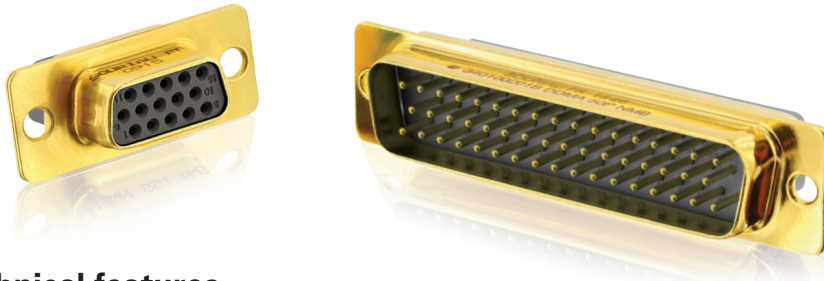


### High density layouts - Contacts #22



### Mixed layouts - Contacts #20 (non removable signal contact) and contacts #8 (coax, twinax and power)





## Technical features

### Materials

- Shell: Brass
- Shell plating:
  - 1.27 micron gold to meet MIL/NASA
  - 0.7 micron gold to meet ESA
- Insulator:
  - Glass-fibre filled diallylphthalate resin
  - Thermoplastic material
- Outgassing: according to ESA PSS-01-702 TML<1%; CVCIM<0.1%
- Contacts retaining clip: Beryllium copper
- Contacts Copper Alloy:
  - 3401/005 /040 & /021: 1.27 microns gold mini over 1 micron copper mini
  - 3401/004 : 2.54 microns gold mini over 1 micron copper mini
- Accessories: Brass, 0.7 micron gold mini over 1 micron copper mini

### Environmental

Note: As per ESA/ESCC 3401 test methods and applicable ESA/ESCC detail specifications

- Operating temperature: -55°C to +125°C
- Storage temperature: 1000h/125°C
- Thermal shock: from -55°C to +125°C
- Damp heat: 10 cycles 24h
- Vacuum test (125°C/24h): 10-6 Torr

### Electrical

Note: As per ESA/ESCC 3401 test methods and applicable ESA/ESCC detail specifications

- Working voltage (sea level /50Hz):
  - #20 contacts 300 Vrms
  - #22 contacts 250 Vrms
  - Power and straight coax 250 Vrms
  - 90° coax/twinax 200 Vrms
- Dielectric withstanding voltage (at sea level/33000 m):

- #20 contacts 1250/200 Vrms
- #22 contacts 1250/200 Vrms
- Power and straight coax 1000/100 Vrms
- 90° coax/twinax 800/100 Vrms
- Rated current:
  - #20 and coax (center) 7.5A
  - #22 PC tail 3A
  - #20 crimp (AWG 26/28) 3A
  - #22 crimp 5A
  - Power (wire size #8) 40A
  - Power (wire size #10) 30A
  - Power (wire size #12) 20A
  - Power (wire size #14) 15A
  - Power (wire size #16) 10A
- Contact resistance Rcr max. (at rated current):
  - #20 (under 7.5A) 5mΩ
  - #22 PC tail (under 3A) 10mΩ
  - #22 crimp (under 5A) 5mΩ
  - #20 crimp AWG 26/28 (under 3A) 5mΩ
  - #20 crimp (under 7.5A) 5mΩ
  - Coax (see rated current charac.) 7mΩ
  - Power (see rated current charac.) 7mΩ
- Contact resistance Rcl max. (low level current, under 10 mA):
  - #20 contacts 6mΩ
  - #22 contacts 6mΩ
  - Coax (center and outer) 8.5mΩ
  - Power 2.5mΩ

### Mechanical

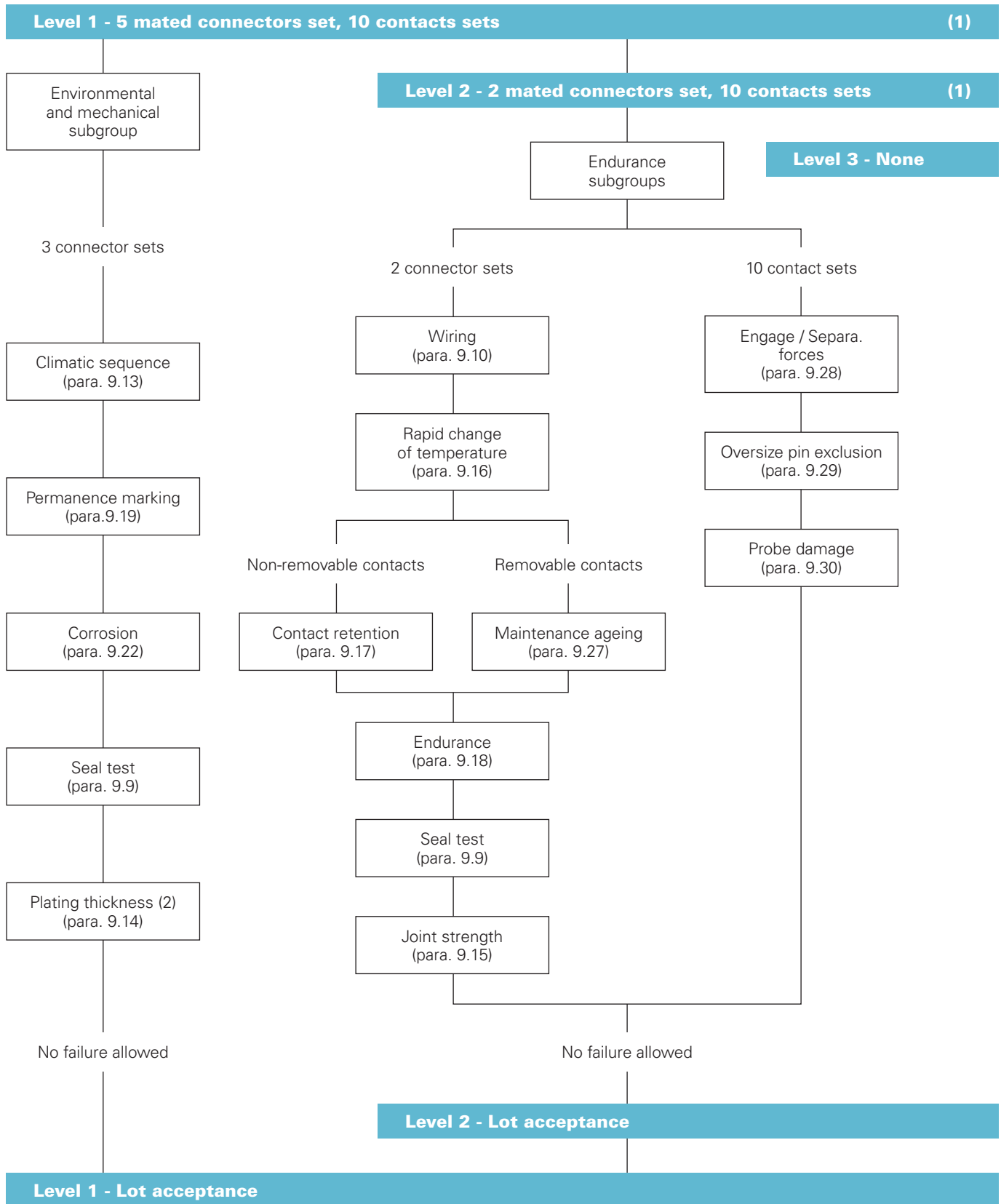
Note: As per ESA/ESCC 3401 test methods and applicable ESA/ESCC detail specifications

- Endurance: 500 mating cycles
- Shock: 50g with an 11ms duration pulse
- Vibration: 20g
- Contact retention: 40N

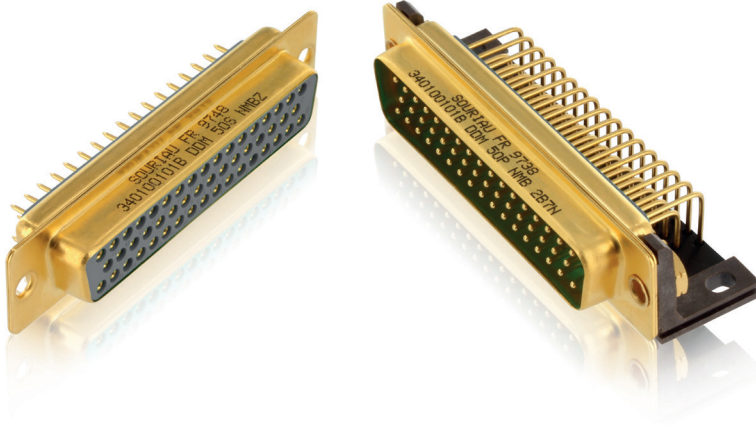
## Cross reference table for GSFC/ESCC/SOURIAU

	ESA/SCC	Souriau	GSFC	Description
Connectors	<b>3401/001/01/B</b>	<b>D*M-NMB</b>	S311-P-10	Standard density connectors with non removable contacts
	<b>3401/001/02/B</b>	<b>8635-NMB (PC tail)</b>	-	High density connectors with non removable contacts
	<b>3401/002/01/B</b>	<b>8630-NMB</b>	S311-P-4/09	Standard density connectors with removable crimp contacts
	<b>3401/002/02/B</b>	<b>8635-NMB (crimp)</b>	S311-P-4/07	High density connectors with removable crimp contacts
	<b>3401/020/01/B</b>	<b>D*BMA #20</b>	-	Standard density connectors savers with removable crimp contacts
	<b>3401/020/02/B</b>	<b>D*BMA #22</b>	-	High density connectors savers with removable crimp contacts
Contacts	<b>3401/004 *</b>	<b>8949 004 xx NMB</b>	-	Coaxial contacts for SCC 3401/001/01B
	<b>3401/040 *</b>	<b>8949 040 xx NMB</b>	-	Power contacts for SCC 3401/001/01B
	<b>3401/005</b>	<b>8949 xxxx</b>	S311-P-4/08 & /10	Crimp contacts for SCC 3401/002
	<b>3401/069</b>	<b>8949 004 xxNMB</b>	-	Twinax contacts
	<b>3401/021</b>	<b>8949 xxxx EL</b>	-	Savers contacts for SCC 3401/020
Accessories	<b>3401/022 *</b>	<b>Dx 8949 xx NM</b>	-	Screw lock, dust caps
	<b>3401/072 **</b>	<b>Dx 8949 xx NMB</b>	-	Light weight backshell

\* These components have no ESA/SCC certification (no ESA trademark on the component). \*\* Pending ESA Qualification.



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.



### Standard density with non removable contacts

#### Standards

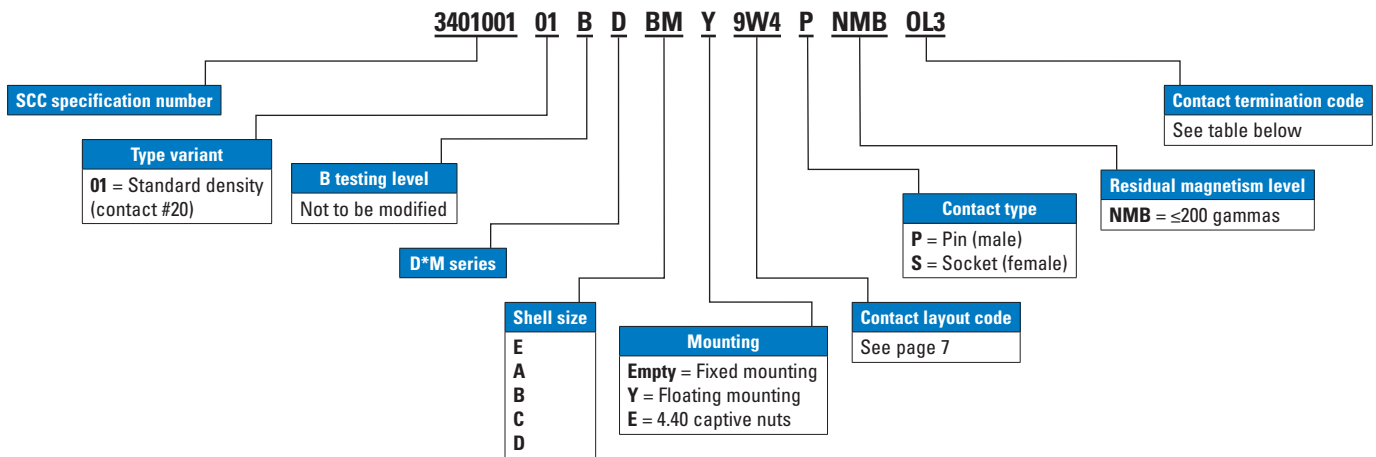
ESCC 3401/001 / GSFC / MIL-DTL-24308 Class M (QPL)

ESCC 3401/001 non-magnetic connectors are equipped with non removable contacts.

They are available with solder buckets straight PC tail, 90° PC tail, wire wrap contacts and mixed layouts with coaxial and power contacts.

The connectors are flight qualified parts.

### Flight models ordering information



### Flight models contact termination code

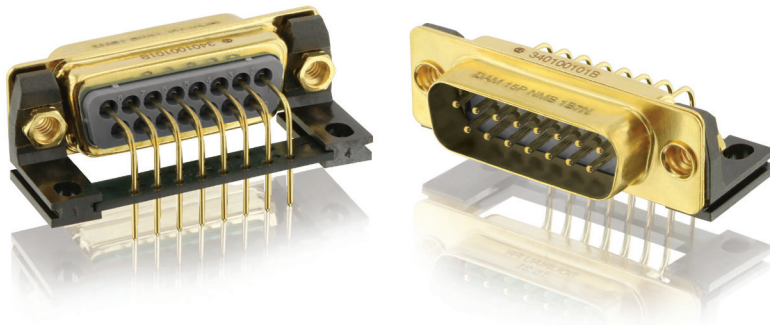
Code for Ø0.63	Code for Ø0.76	Contact type	Bracket	Pitch	Clinch nuts
Without indication	Without indication	Solder buckets			
OL3	Z	Straight PC tail			
1A0N	2A0N	90° PC tail	No	2,54 mm	
1B0N	2B0N	90° PC tail	No	2,84 mm	
1A7N	2A7N	90° PC tail	Yes	2,54 mm	UNC 4-40
1B7N	2B7N	90° PC tail	Yes	2,84 mm	UNC 4-40
1A9N	2A9N	90° PC tail	Yes	2,54 mm	M3
1B9N	2B9N	90° PC tail	Yes	2,84 mm	M3
F179A	F179A	Wire wrap 3 wraps			

Note: Mixed layout are not available in 90° PC tail

### Contact layouts

\* 3WK3 insulator with built-in keying (middle part recessed or protruding with respect to each side), to avoid mismounting (K = Keying) Available only with Space Grade version D\*M, insulator material : VALOX NOT DAP

## Standard density D-Sub connector with non removable contacts



## Standard density with non removable contacts

2

## Standards

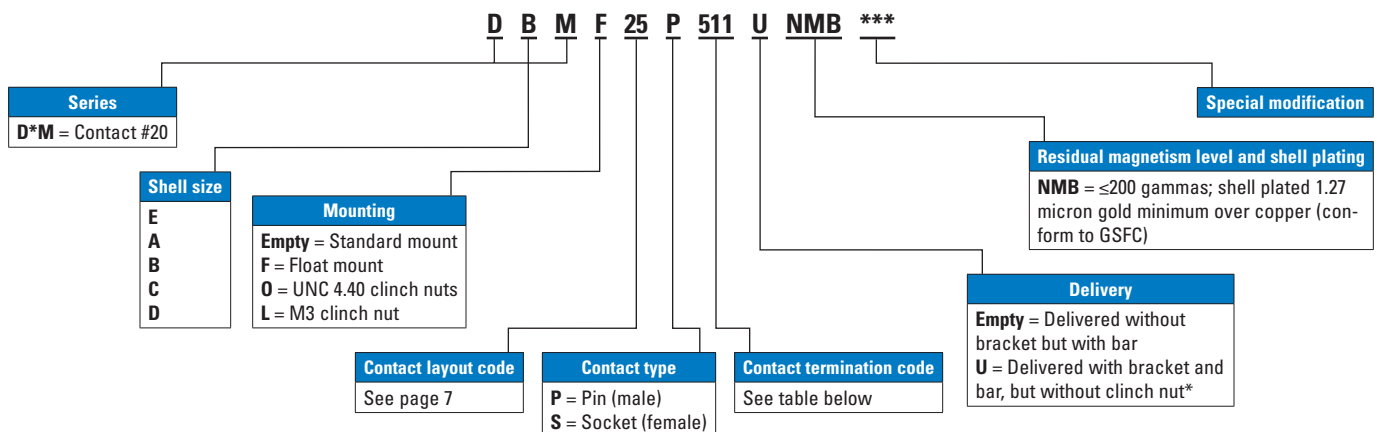
D\*M-NMB

D\*M-NMB non-magnetic connectors use the same components as the 3401/001 ESCC and S311 P-10 GSFC connectors. However they are manufactured in accordance with ESA NASA and MIL-DTL-24308.

Consequently no traceability information can be delivered for these items.

This version is suitable for engineering models as well as flight models.

## Engineering models ordering information



Note: Code U only used for the 5\*\*, 8\*\* and 7\*\* series.

## Engineering models contact termination code

Code for Ø0.63	Code for Ø0.76	Contact type	Bracket	Pitch	Clinch nuts	Footprint
011	011	Solder buckets				
311	211	Straight PC tail				
	711	90° PC tail		2.84 mm		US
511	2A0N	90° PC tail	No	2.54 mm		European
811	2B0N	90° PC tail	No	2.84 mm		European
1A9N	2A9N	90° PC tail	Yes	2.54 mm	M3	European
1B9N	2B9N	90° PC tail	Yes	2.84 mm	M3	European
	2AUN	90° PC tail	Yes	2.54 mm		European
	2BUN	90° PC tail	Yes	2.84 mm		European
1A7N	2A7N	90° PC tail	Yes	2.54 mm	UNC 4-40	European
1B7N	2B7N	90° PC tail	Yes	2.84 mm	UNC 4-40	European
	2B7S	90° PC tail	Yes	2.84 mm	UNC 4-40	US
	2B9S	90° PC tail	Yes	2.84 mm	M3	US
411	411	Wire wrap 3 wraps				

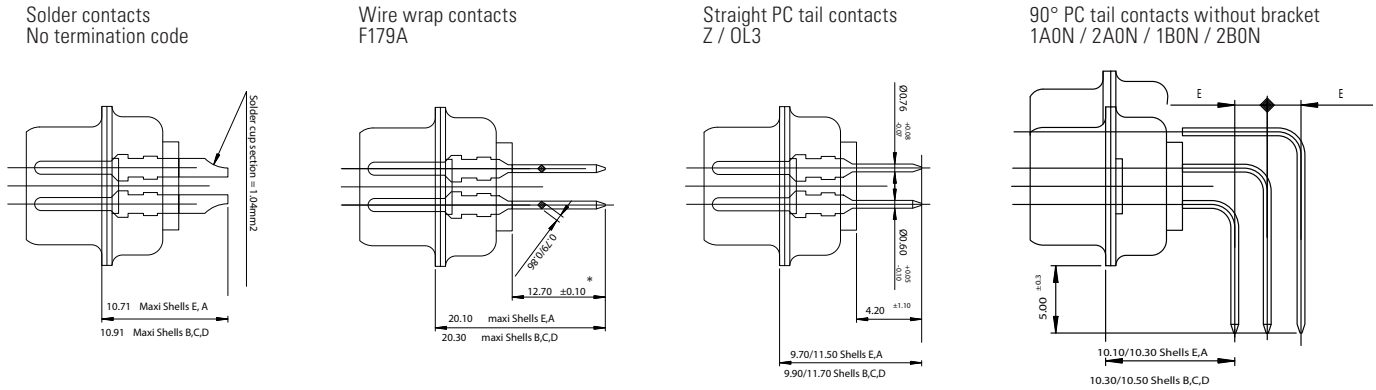
European Footprint: Distance from rear of flange to first row: 9.40 mm (.37 inch).

US Footprint: Distance from rear of flange to first row: 7.19 mm (.283 inch).

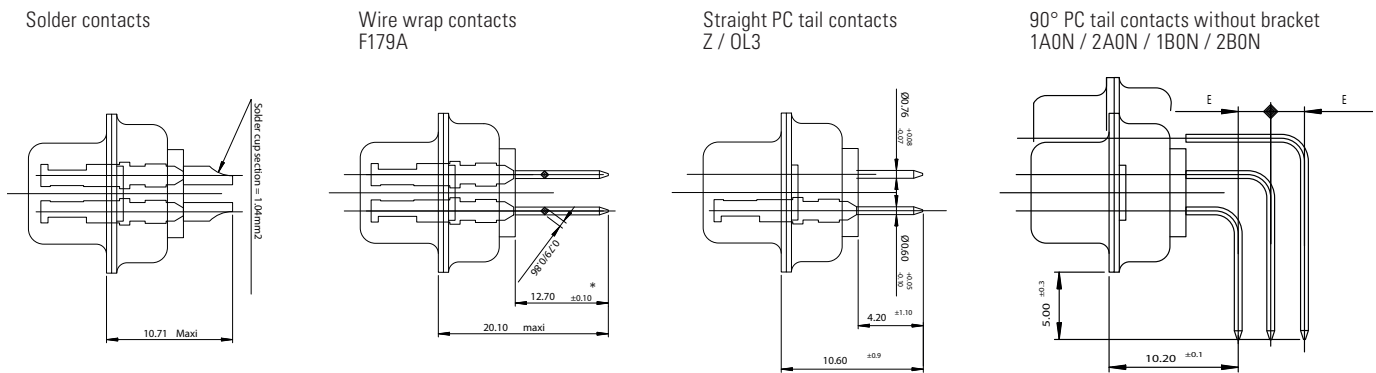
### Flight models dimensions

2

#### Male connectors (solder contacts / wire wrap contacts / straight PC tail contacts / 90° PC tail contacts, without bracket)

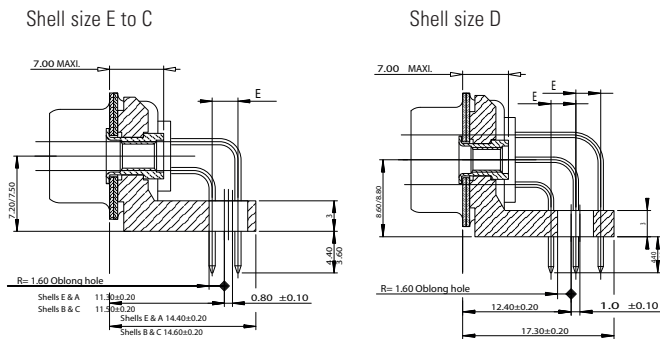


#### Female connectors (solder contacts / wire wrap contacts / straight PC tail contacts / 90° PC tail contacts without bracket)

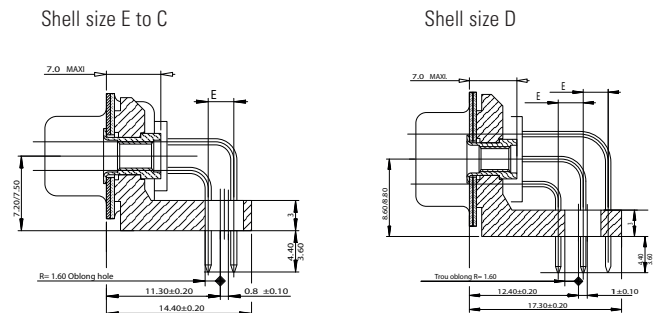


\* The dimension is the length of the square part of the contact.

#### Male connectors with 90° PC tail contacts and bracket



#### Female connectors with 90° PC tail contacts and bracket



Contact termination code	E (pitch between row)
1A0N, 2A0N, 1A7N, 2A7N, 1A9N, 2A9N	2.54mm
1B0N, 2B0N, 1B7N, 2B7N, 1B9N, 2B9N	2.84mm

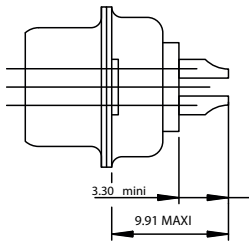
The dimensions of the 90° PC tail are the same as the PC tail for the part number 1A0N & 2A0N.

Standard density D-Sub connector with non removable contacts

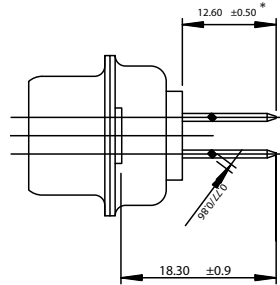
Engineering models dimensions

Male and female connectors (solder contacts / wire wrap contacts / straight PC tail contacts)

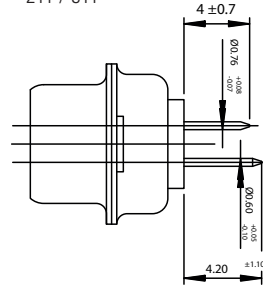
Solder contacts  
011



Wire wrap contacts  
411



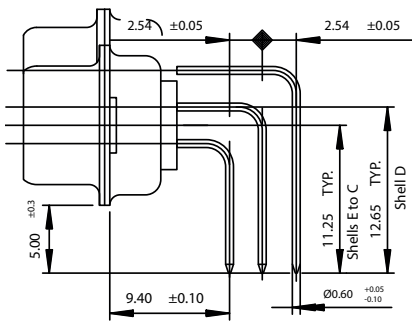
Straight PC tail contacts  
211 / 311



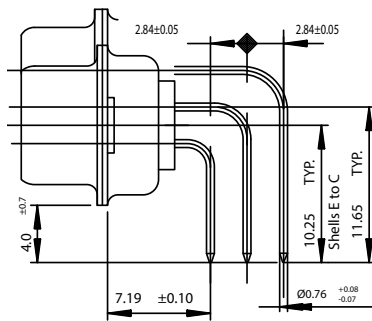
\* The dimension is the length of the square part of the contact.

Male and female connectors with 90° PC tail contacts, without bracket

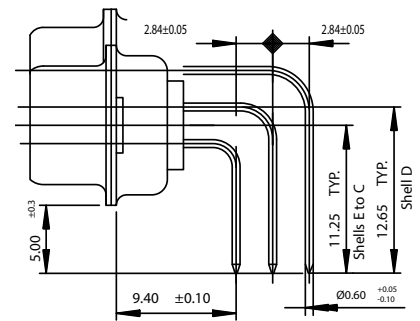
European footprint  
511



US footprint  
711



European footprint  
811

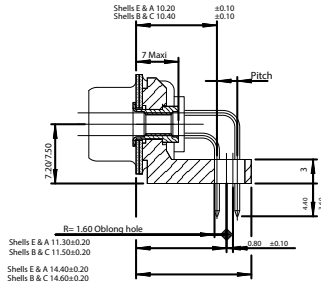


### Engineering models dimensions

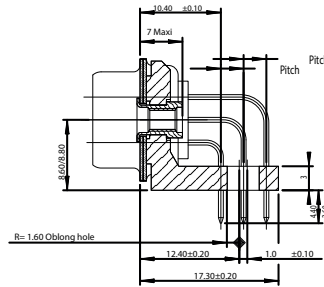
2

#### Male connectors with 90° PC tail contacts and bracket

European footprint  
Shell size E to C

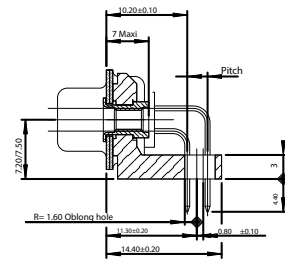


European footprint  
Shell size D

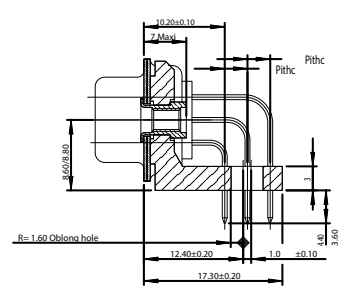


#### Female connectors with 90° PC tail contacts and bracket

European footprint  
Shell size E to C



European footprint  
Shell size D

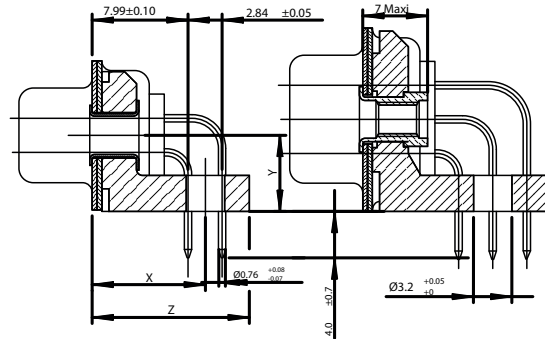
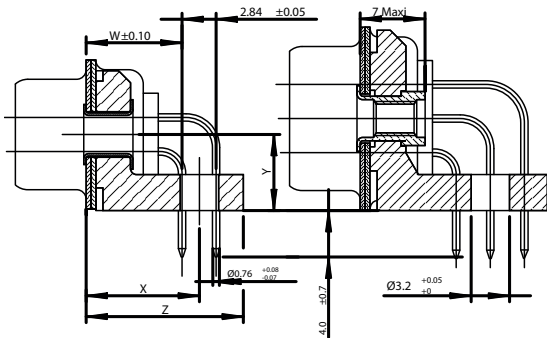


#### Contact termination code Pitch between row

1A9N, 2A9N, 1A7N, 2A7N	2.54mm
1B9N, 2B9N, 1B7N, 2B7N	2.84mm

#### Male and female connectors with 90° PC tail contacts and bracket

US footprint  
711 / 2B7S / 2B9S

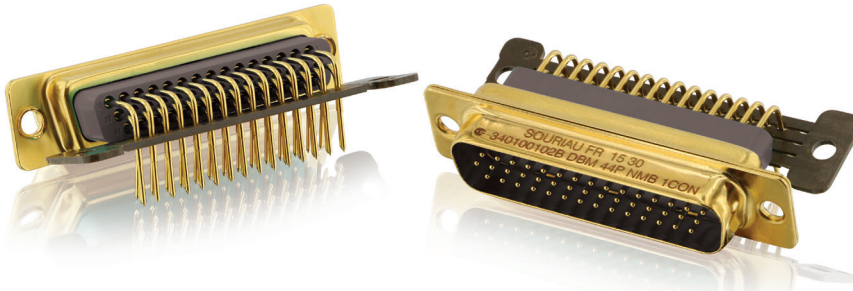


	W		X min		X max		Y		Z min		Z max	
Shell size	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E, A	.315	7.99	.365	9.28	.378	9.60	.250	6.34	.509	12.94	.518	13.16
B, C	.322	8.19	.373	9.48	.386	9.80	.250	6.34	.517	13.14	.526	13.36
D	.322	8.19	.428	10.87	.441	11.19	.302	7.67	.615	15.63	.624	15.85

	X min		X max		Y		Z min		Z max	
Shell size	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E, A, B, C	.365	9.28	.378	9.60	.250	6.34	.509	12.94	.518	13.16
D	.420	10.67	.433	10.99	.302	7.67	.607	15.43	.616	15.65

## Cross reference - Connector with solder contacts

		<b>GSFC part number</b>	<b>MIL-DTL-24308E part number</b>	<b>ESA/SCC part number (flight models)</b>	<b>Eaton Souriau part number (engineering models)</b>		
Pin contacts	Standard mount	311P10-1P-B-12	M24308/7-23	340100101BDEM9PNMB	<b>DEM 09P 011 NMB</b>		
		311P10-6P-B-12		340100101BDEM5W1PNMB	<b>DEM 5W1P 011 NMB</b>		
		311P10-2P-B-12	M24308/7-24	340100101BDAM15PNMB	<b>DAM 15P 011 NMB</b>		
		311P10-7P-B-12		340100101BDAM3W3PNMB	<b>DAM 3W3P 011 NMB</b>		
		311P10-8P-B-12		340100101BDAM7W2PNMB	<b>DAM 7W2P 011 NMB</b>		
		311P10-9P-B-12		340100101BDAM11W1PNMB	<b>DAM 11W1P 011 NMB</b>		
		311P10-3P-B-12	M24308/7-25	340100101BDBM25PNMB	<b>DBM 25P 011 NMB</b>		
		311P10-10P-B-12		340100101BDBM5W5PNMB	<b>DBM 5W5P 011 NMB</b>		
		311P10-11P-B-12		340100101BDBM9W4PNMB	<b>DBM 9W4P 011 NMB</b>		
		311P10-12P-B-12		340100101BDBM13W3PNMB	<b>DBM 13W3P 011 NMB</b>		
		311P10-13P-B-12		340100101BDBM17W2PNMB	<b>DBM 17W2P 011 NMB</b>		
		311P10-4P-B-12	M24308/7-26	340100101BDCM37PNMB	<b>DCM 37P 011 NMB</b>		
		311P10-15P-B-12		340100101BDCM8W8PNMB	<b>DCM 8W8P 011 NMB</b>		
		311P10-17P-B-12		340100101BDCM17W5PNMB	<b>DCM 17W5P 011 NMB</b>		
		311P10-18P-B-12		340100101BDCM21WA4PNMB	<b>DCM 21WA4P 011 NMB</b>		
		311P10-20P-B-12		340100101BDCM25W3PNMB	<b>DCM 25W3P 011 NMB</b>		
		311P10-21P-B-12		340100101BDCM27W2PNMB	<b>DCM 27W2P 011 NMB</b>		
		311P10-5P-B-12	M24308/7-27	340100101BDDM50PNMB	<b>DDM 50P 011 NMB</b>		
		311P10-22P-B-12		340100101BDDM24W7PNMB	<b>DDM 24W7P 011 NMB</b>		
		311P10-23P-B-12		340100101BDDM36W4PNMB	<b>DDM 36W4P 011 NMB</b>		
		Float mount		M24308/7-39			<b>DEMF 09P 011 NMB</b>
				M24308/7-40			<b>DAMF 15P 011 NMB</b>
				M24308/7-41			<b>DBMF 25P 011 NMB</b>
	M24308/7-42				<b>DCMF 37P 011 NMB</b>		
	M24308/7-43				<b>DDMF 50P 011 NMB</b>		
Socket contacts	Standard mount	311P10-1S-B-12	M24308/5-34	340100101BDEM9SNMB	<b>DEM 09S 011 NMB</b>		
		311P10-6S-B-12		340100101BDEM5W1SNMB	<b>DEM 5W1S 011 NMB</b>		
		311P10-2S-B-12	M24308/5-35	340100101BDAM15SNMB	<b>DAM 15S 011 NMB</b>		
		311P10-7S-B-12		340100101BDAM3W3SNMB	<b>DAM 3W3S 011 NMB</b>		
		311P10-8S-B-12		340100101BDAM7W2SNMB	<b>DAM 7W2S 011 NMB</b>		
		311P10-9S-B-12		340100101BDAM11W1SNMB	<b>DAM 11W1S 011 NMB</b>		
		311P10-3S-B-12	M24308/5-36	340100101BDBM25SNMB	<b>DBM 25S 011 NMB</b>		
		311P10-10S-B-12		340100101BDBM5W5SNMB	<b>DBM 5W5S 011 NMB</b>		
		311P10-11S-B-12		340100101BDBM9W4SNMB	<b>DBM 9W4S 011 NMB</b>		
		311P10-12S-B-12		340100101BDBM13W3SNMB	<b>DBM 13W3S 011 NMB</b>		
		311P10-13S-B-12		340100101BDBM17W2SNMB	<b>DBM 17W2S 011 NMB</b>		
		311P10-4S-B-12	M24308/5-37	340100101BDCM37SNMB	<b>DCM 37S 011 NMB</b>		
		311P10-15S-B-12		340100101BDCM8W8SNMB	<b>DCM 8W8S 011 NMB</b>		
		311P10-17S-B-12		340100101BDCM17W5SNMB	<b>DCM 17W5S 011 NMB</b>		
		311P10-18S-B-12		340100101BDCM21WA4SNMB	<b>DCM 21WA4S 011 NMB</b>		
		311P10-20S-B-12		340100101BDCM25W3SNMB	<b>DCM 25W3S 011 NMB</b>		
		311P10-21S-B-12		340100101BDCM27W2SNMB	<b>DCM 27W2S 011 NMB</b>		
		311P10-5S-B-12	M24308/5-38	340100101BDDM50SNMB	<b>DDM 50S 011 NMB</b>		
		311P10-22S-B-12		340100101BDDM24W7SNMB	<b>DDM 24W7S 011 NMB</b>		
		311P10-23S-B-12		340100101BDDM36W4SNMB	<b>DDM 36W4S 011 NMB</b>		
		Float mount		M24308/5-56			<b>DEMF 09S 011 NMB</b>
				M24308/5-57			<b>DAMF 15S 011 NMB</b>
				M24308/5-58			<b>DBMF 25S 011 NMB</b>
	M24308/5-59				<b>DCMF 37S 011 NMB</b>		
	M24308/5-60				<b>DDMF 50S 011 NMB</b>		



### High density with non removable contacts

**Standards**

ESA/ESCC 3401/001 / MIL-DTL-24308

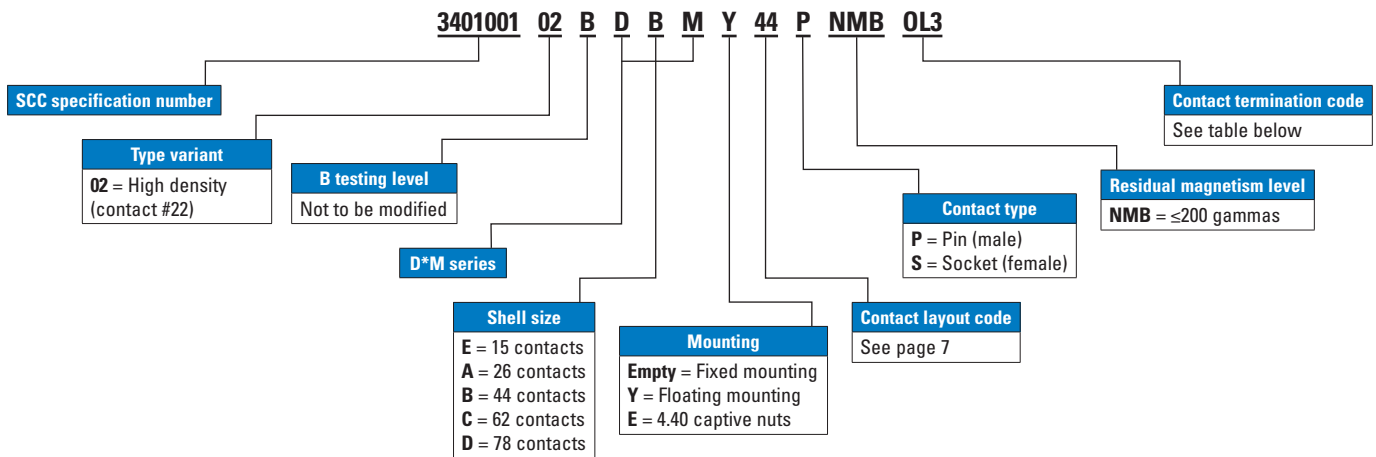
High density and Non removable contacts.

ESCC 3401/001 non-magnetic connectors are equipped with non removable contacts.

They are available with straight PC tail, 90° PC tail, contacts.

The connectors are flight qualified parts.

### Flight models ordering information



### Flight models contact termination code

For 15 to 62 contacts (shell size: E, A, B & C)	For 78 contacts (shell size: D)	Contact type	Bracket	Click nuts
OL3	OL3	Straight PC tail		
1CON	1DON	90° PC tail	No	
1C7N	1D7N	90° PC tail	Yes	UNC 4-40
1C9N	1D9N	90° PC tail	Yes	M3

## High density D-Sub connector with non removable contacts



## High density with non removable contacts

2

**Standards**

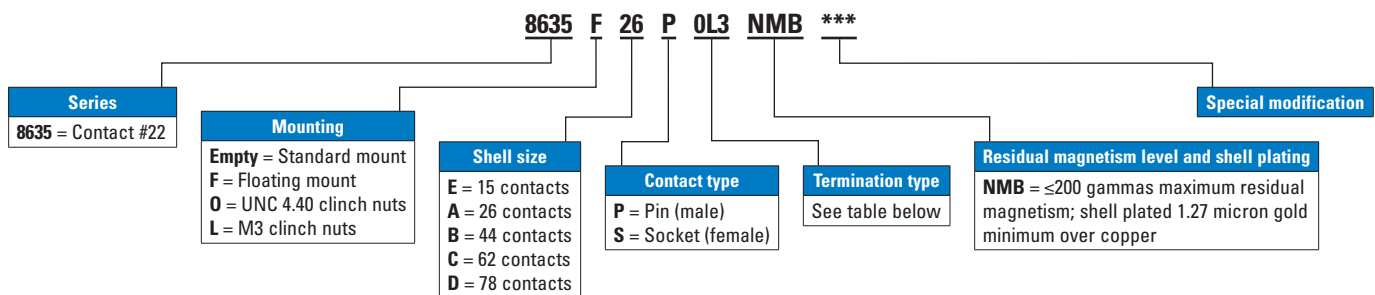
8635-NMB with PC tail contacts

These 8635-NMB non-magnetic connectors use the same components as the ESA and NASA specification.

Consequently no traceability information can be delivered for these items.

This version is suitable for engineering models as well as flight models.

## Engineering models ordering information



## Engineering models contact termination code

Code	Contact type	Shell size	Bracket	Clinch nuts	Pitch
OL3	Straight PC tail				
1CON	90° PC tail, disposable drilled bar	E, A, B, C			1.98
1DON	90° PC tail, disposable drilled bar	D			2.08
1CUN*	90° PC tail	E, A, B, C	Yes		1.98
1DUN*	90° PC tail	D	Yes		2.08
1C7N	90° PC tail	E, A, B, C	Yes	UNC 4-40	1.98
1D7N	90° PC tail	D	Yes	UNC 4-40	2.08
1C9N	90° PC tail	E, A, B, C	Yes	M3	1.98
1D9N	90° PC tail	D	Yes	M3	2.08

\* No ESA/SCC equivalent version.

# 2

## Connectors

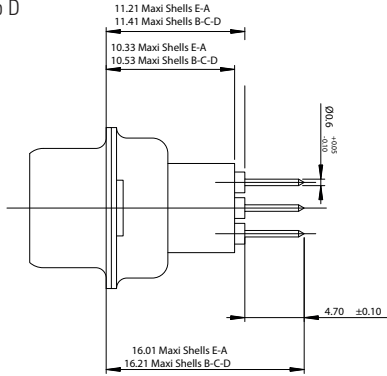
High density D-Sub connector with non removable contacts

### Dimensions

2

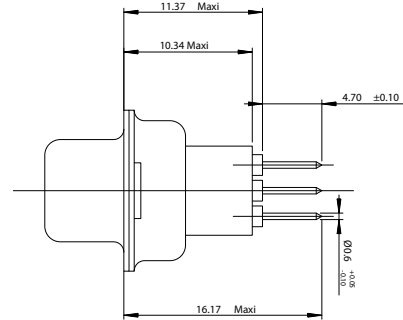
#### Male connectors with straight PC tail contacts

Shell size E to D  
OL3



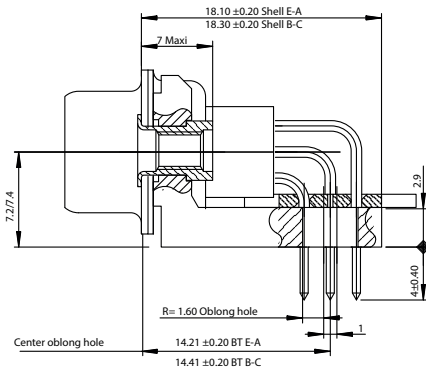
#### Female connectors with straight PC tail contacts

Shell size E to D  
OL3

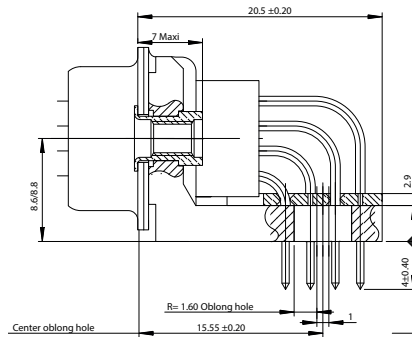


#### Male connectors with 90° PC tail contacts and bracket

Shell size E to C  
1C7N / 1C9N

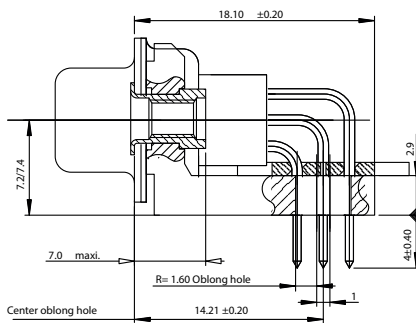


Shell size D  
1C7N / 1C9N

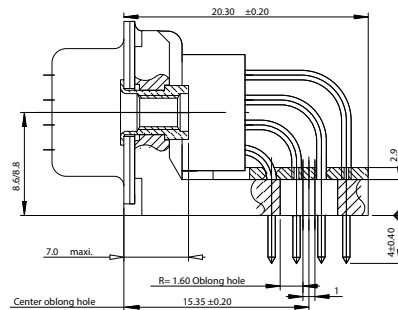


#### Female connectors with 90° PC tail contacts and bracket

Shell size E to C  
1C7N / 1C9N



Shell size D  
1C7N / 1C9N



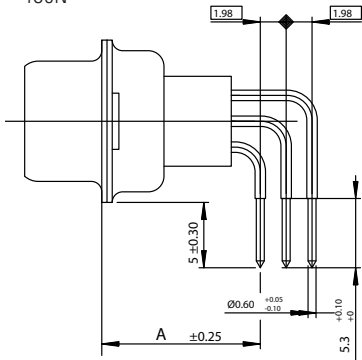
Note: the dimensions of the 90° PC tail are the same for all configurations.

## Dimensions

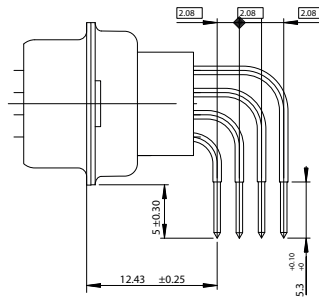
### Male connectors with 90° PC tail contacts, without bracket

2

Shell size E to C  
1CON

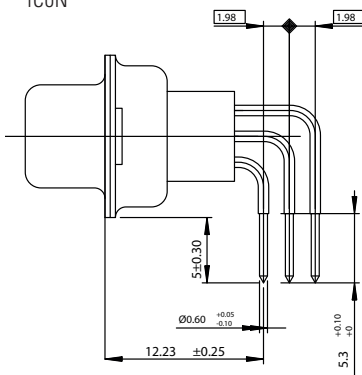


Shell size D  
1DON

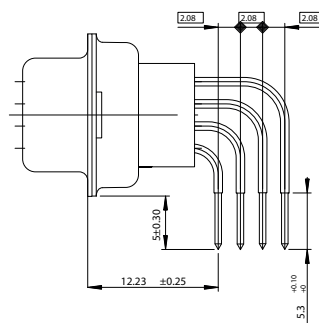


### Female connectors with 90° PC tail contacts, without bracket

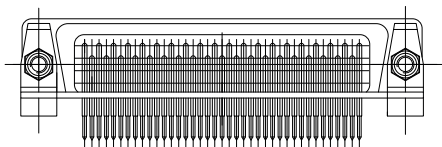
Shell size E to C  
1CON



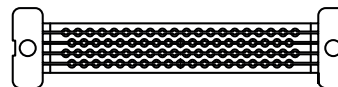
Shell size D  
1DON



### Rear view of the connectors with 90° PC tail contacts



### Connectors delivered with brittle drilled bar



Note: the dimensions of the 90° PC tail are the same for all configurations.

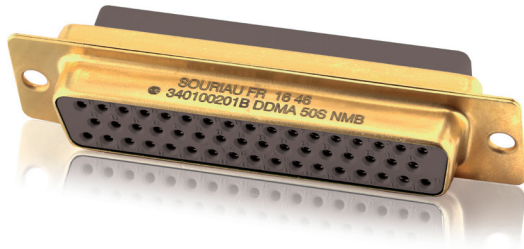
## Cross reference

2

	<b>GSFC part number</b>	<b>ESA/SCC part number (flight models)</b>	<b>Eaton Souriau part number (engineering models)</b>
Pin contacts	311P407-1P-B-12	340100202BDEMA15PNMBFO	<b>8635 15P NMBL</b>
	311P407-2P-B-12	340100202BDAMA26PNMBFO	<b>8635 26P NMBL</b>
	311P407-3P-B-12	340100202BDBMA44PNMBFO	<b>8635 44P NMBL</b>
	311P407-4P-B-12	340100202BDCMA62PNMBFO	<b>8635 62P NMBL</b>
	311P407-5P-B-12	340100202BDDMA78PNMBFO	<b>8635 78P NMBL</b>
Socket contacts	311P407-1S-B-12	340100202BDEMA15SNMBFO	<b>8635 15S NMBL</b>
	311P407-2S-B-12	340100202BDAMA26SNMBFO	<b>8635 26S NMBL</b>
	311P407-3S-B-12	340100202BDBMA44SNMBFO	<b>8635 44S NMBL</b>
	311P407-4S-B-12	340100202BDCMA62SNMBFO	<b>8635 62S NMBL</b>
	311P407-5S-B-12	340100202BDDMA78SNMBFO	<b>8635 78S NMBL</b>

		<b>Military part number for ordering</b>	<b>Eaton Souriau part number for ordering</b>
Pin contacts	Delivered with contacts	M24308/8-345	<b>8635 15P 011 NM</b>
		M24308/8-346	<b>8635 26P 011 NM</b>
		M24308/8-347	<b>8635 44P 011 NM</b>
		M24308/8-348	<b>8635 62P 011 NM</b>
		M24308/8-349	<b>8635 78P 011 NM</b>
	Delivered without contacts	M24308/8-362	<b>8635 15P NML</b>
		M24308/8-363	<b>8635 26P NML</b>
		M24308/8-364	<b>8635 44P NML</b>
		M24308/8-365	<b>8635 62P NML</b>
		M24308/8-366	<b>8635 78P NML</b>
Socket contacts	Delivered with contacts	M24308/6-512	<b>8635 15S 011 NMB</b>
		M24308/6-513	<b>8635 26S 011 NMB</b>
		M24308/6-514	<b>8635 44S 011 NMB</b>
		M24308/6-515	<b>8635 62S 011 NMB</b>
		M24308/6-516	<b>8635 78S 011 NMB</b>
	Delivered without contacts	M24308/6-545	<b>8635 15S NMBL</b>
		M24308/6-546	<b>8635 26S NMBL</b>
		M24308/6-547	<b>8635 44S NMBL</b>
		M24308/6-548	<b>8635 62S NMBL</b>
		M24308/6-548	<b>8635 78S NMBL</b>

Standard density D-Sub connector with removable crimp contacts



## Standard density with removable crimp contacts

2

### Standards

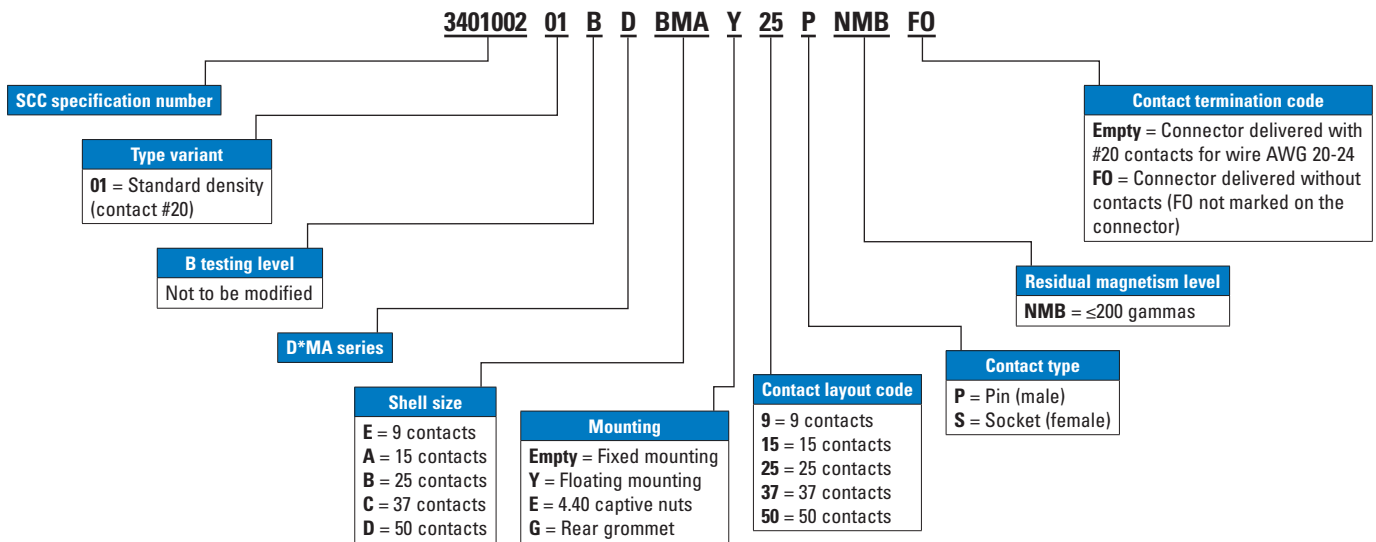
ESA/SCC 3401/002 / GSFC / MIL-DTL-24308 class M(QPL)

ESA/SCC 3401/002 non-magnetic connectors

are used with ESA/SCC 3401/005 removable crimp contacts.

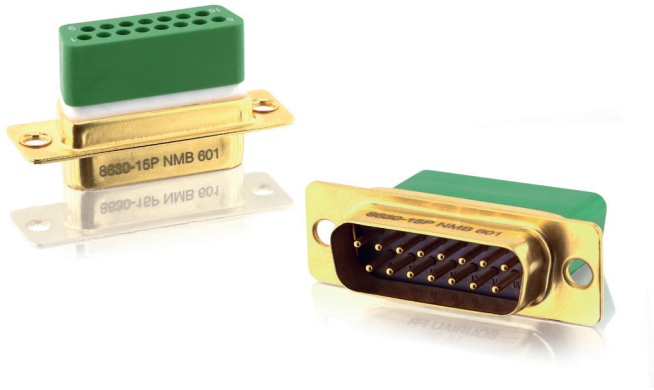
Standard density (# 20 contacts) layouts are flight qualified parts.

### Flight models ordering information



# Connectors

Standard density D-Sub connector with removable crimp contacts



## Standard density with removable crimp contacts

### Standards

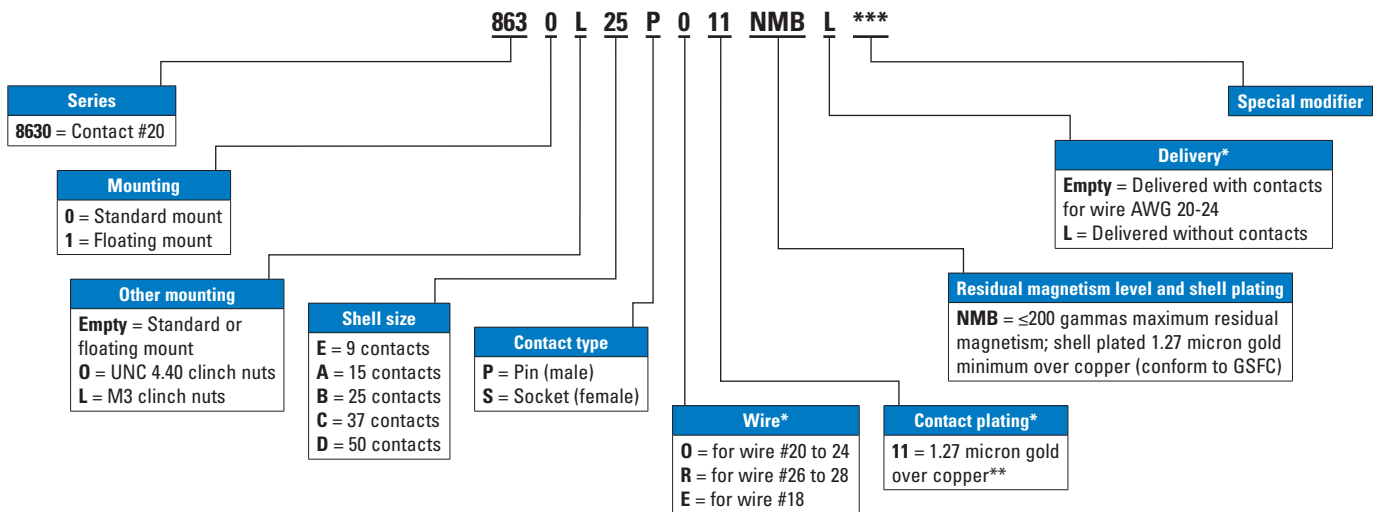
8630-NMB

8630-NMB non-magnetic connectors use the same components as the ESCC 3401 001 01B and S-311-P-4/09 GSFC.

However they are manufactured in accordance with ESA NASA MIL-DTL-24308. Consequently no traceability information can be delivered for these items.

This version is suitable for engineering models as well as flight models.

## Engineering models ordering information



\* Codes 0, 11 and L are not marked on the connector. They are only used for the P/N.  
 \*\* To be indicated if connectors are ordered with contacts (no L at the end of the P/N).

## Special modifier

Code	Characteristics
601	Grommet and compound, non outgassing
604	Grommet without compound, non outgassing

Standard density D-Sub connector with removable crimp contacts

## Cross reference

	<b>GSFC part number</b>	<b>ESA/SCC part number (flight models)</b>	<b>Eaton Souriau part number (engineering models)</b>
Pin contacts	311P409-1P-B-12	340100201BDEMA9PNMBFO	<b>8630 09P NMBL</b>
	311P409-2P-B-12	340100201BDAMA15PNMBFO	<b>8630 15P NMBL</b>
	311P409-3P-B-12	340100201BDBMA25PNMBFO	<b>8630 25P NMBL</b>
	311P409-4P-B-12	340100201BDCMA37PNMBFO	<b>8630 37P NMBL</b>
	311P409-5P-B-12	340100201BDDMA50PNMBFO	<b>8630 50P NMBL</b>
Socket contacts	311P409-1S-B-12	340100201BDEMA9SNMBFO	<b>8630 09S NMBL</b>
	311P409-2S-B-12	340100201BDAMA15SNMBFO	<b>8630 15S NMBL</b>
	311P409-3S-B-12	340100201BDBMA25SNMBFO	<b>8630 25S NMBL</b>
	311P409-4S-B-12	340100201BDCMA37SNMBFO	<b>8630 37S NMBL</b>
	311P409-5S-B-12	340100201BDDMA50SNMBFO	<b>8630 50S NMBL</b>

		<b>Military part number for ordering</b>	<b>Eaton Souriau part number for ordering</b>
Pin contacts	Delivered with contacts	M24308/8-335	<b>8630 09P 011 NMB</b>
		M24308/8-336	<b>8630 15P 011 NMB</b>
		M24308/8-337	<b>8630 25P 011 NMB</b>
		M24308/8-338	<b>8630 37P 011 NMB</b>
		M24308/8-339	<b>8630 50P 011 NMB</b>
	Delivered without contacts	M24308/8-357	<b>8630 09P NMBL</b>
		M24308/8-358	<b>8630 15P NMBL</b>
		M24308/8-359	<b>8630 25P NMBL</b>
		M24308/8-360	<b>8630 37P NMBL</b>
		M24308/8-361	<b>8630 50P NMBL</b>
Socket contacts	Delivered with contacts	M24308/6-502	<b>8630 09S 011 NMB</b>
		M24308/6-503	<b>8630 15S 011 NMB</b>
		M24308/6-504	<b>8630 25S 011 NMB</b>
		M24308/6-505	<b>8630 37S 011 NMB</b>
		M24308/6-506	<b>8630 50S 011 NMB</b>
	Delivered without contacts	M24308/6-540	<b>8630 09S NMBL</b>
		M24308/6-541	<b>8630 15S NMBL</b>
		M24308/6-542	<b>8630 25S NMBL</b>
		M24308/6-543	<b>8630 37S NMBL</b>
		M24308/6-544	<b>8630 50S NMBL</b>

## Connectors

High density D-Sub connector with removable crimp contacts



### High density with removable crimp contacts

#### Standards

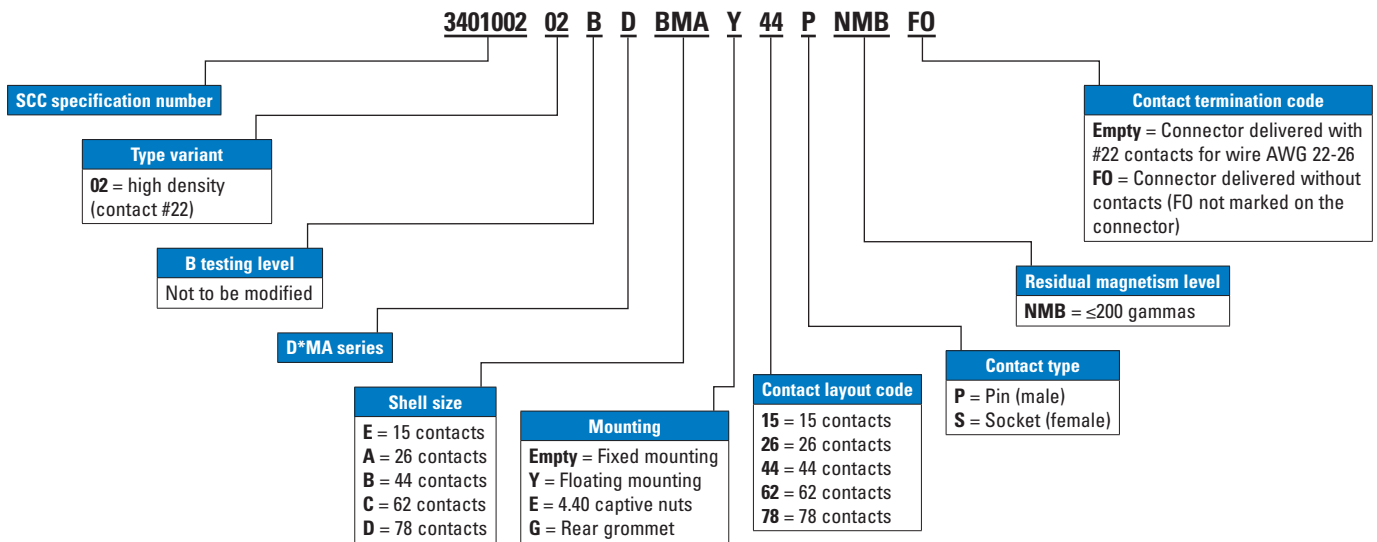
ESA/SCC 3401/002 / GSFC / MIL-DTL-24308 class M (QPL)

ESA/SCC 3401/002 non-magnetic connectors.

are used with ESA/SCC 3401/005 removable crimp contacts.

High density (# 22 contacts) layouts are flight qualified parts.

### Flight models ordering information



High density D-Sub connector with removable crimp contacts



## High density with removable crimp contacts

2

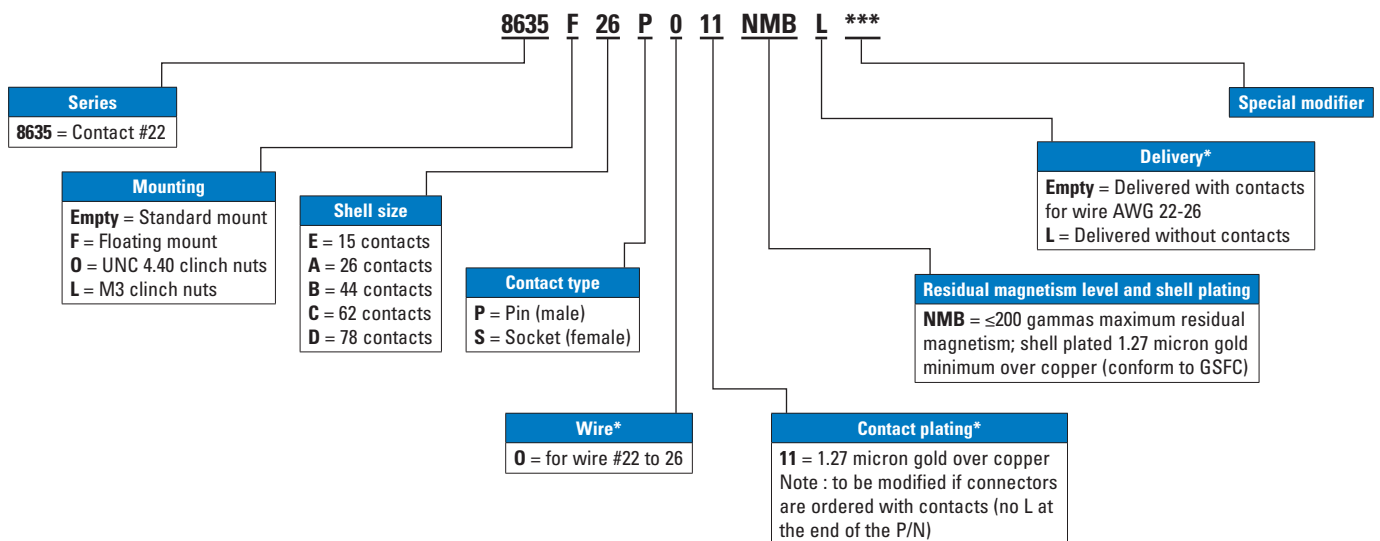
### Standards

8635-NMB with crimp contacts

These 8635-NMB non-magnetic connectors use the same components as the ESCC 3401 002 02B and S311-P-4/07 GSFC connectors. However they are manufactured in accordance with ESA and NASA specification. Consequently no traceability information can be delivered for these items.

This version is suitable for engineering models as well as flight models.

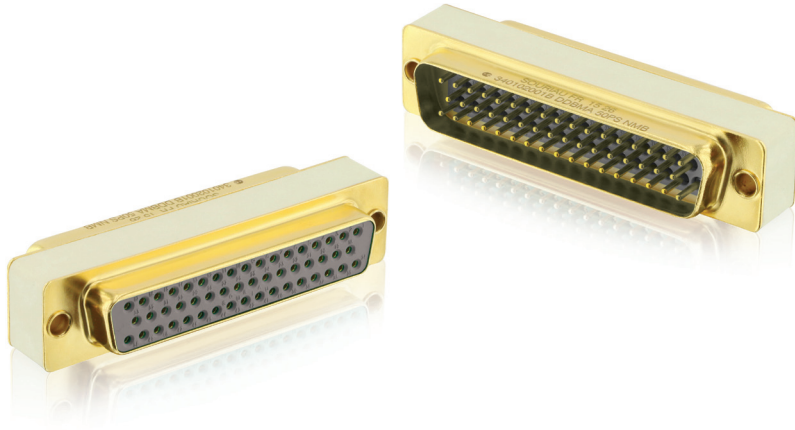
## Engineering models ordering information



\* The codes 0, 11 and L are not marked on the connector. They are only used for the P/N.

## Special modifier

Code	Characteristics
601	Grommet and compound, non outgassing
604	Grommet without compound, non outgassing



**Standard and high density savers with removable contacts**

**Standards**

ESA/SCC 3401/020

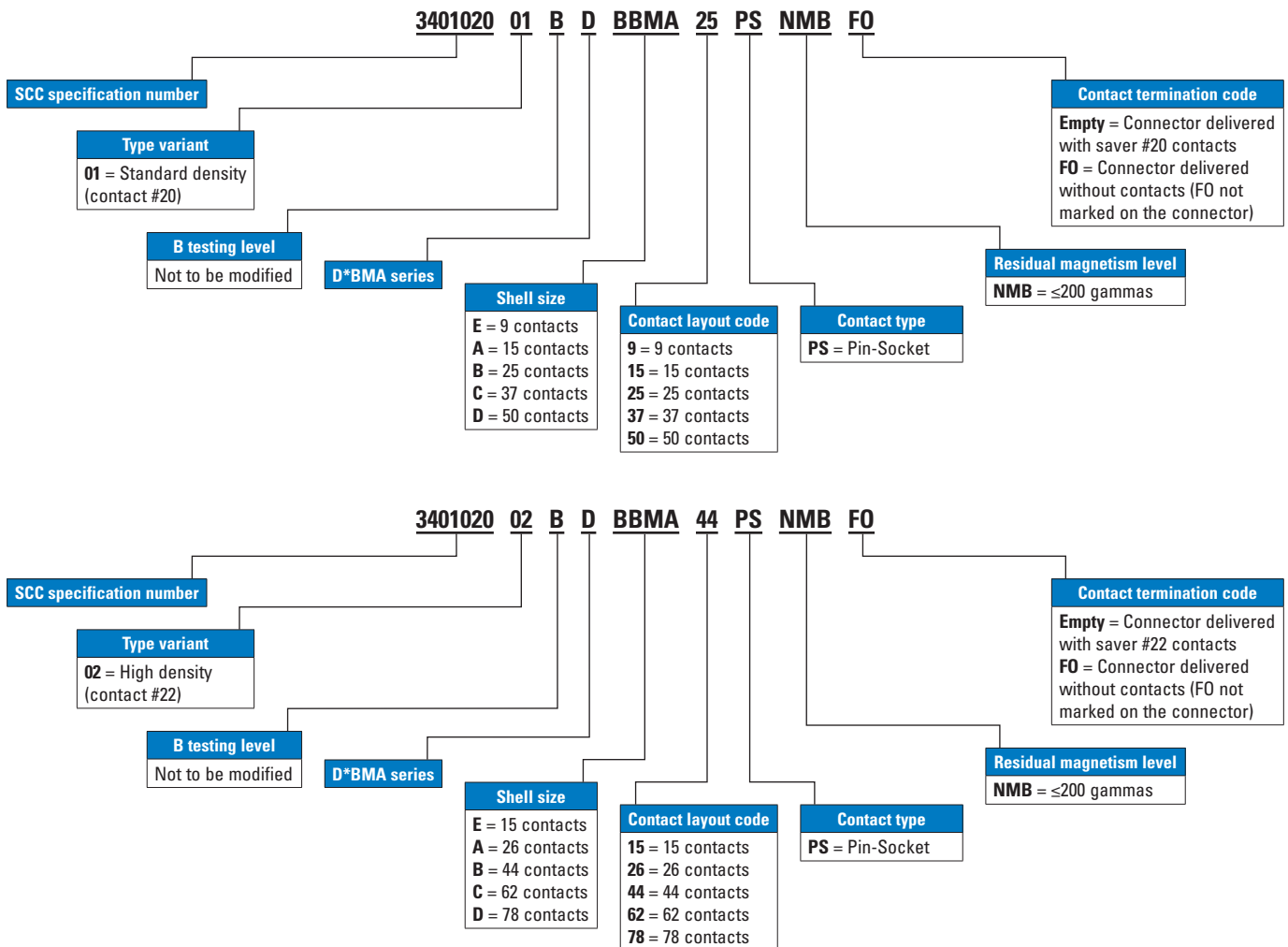
ESA/SCC 3401/020 savers are used to protect flight equipment connectors from multiple matings, during tests.

They are used also on a bulkhead as feed-thru connectors.

They are used with ESA/SCC 3401 021 pinsocket contacts.

These products are also suitable for flight.

**Flight models ordering information**



Standard and high density D-Sub connector savers with removable crimp contacts



## Standard and high density savers with removable contacts

2

### Standards

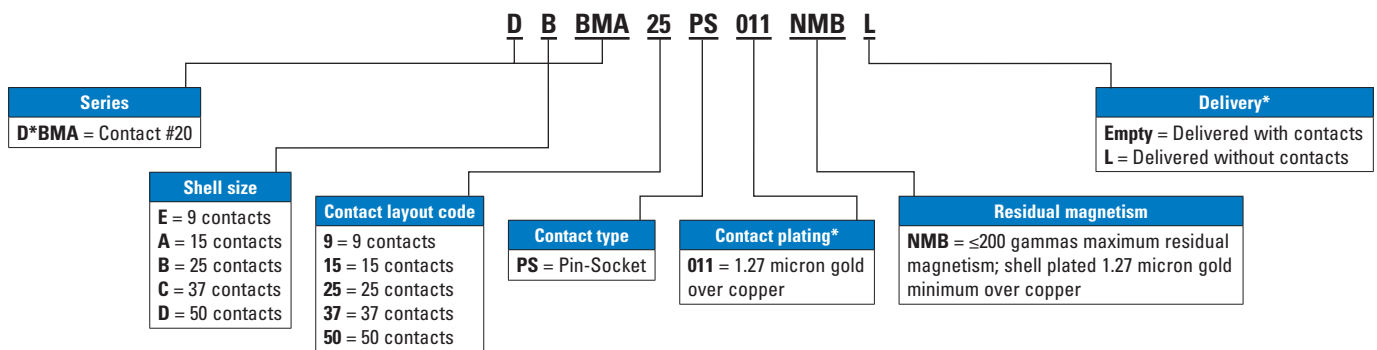
D\*BMA-NMB

D\*BMA-NMB savers connectors are derived from ESCC 3401 020 savers.

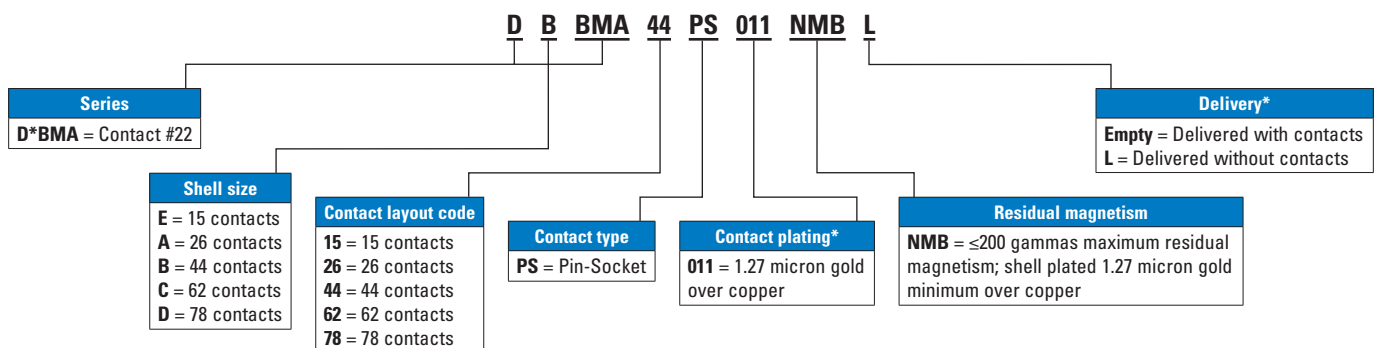
However they are manufactured in accordance with ESA. Consequently no traceability information can be delivered for these items.

This version is suitable for engineering models as well as flight models.

## Engineering models ordering information



\* Codes 011 and L are not marked on the connector. They are only used for the P/N.

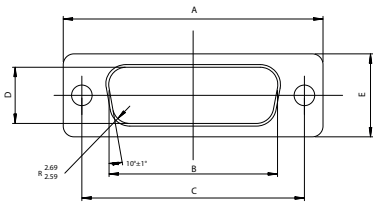


\* Codes 011 and L are not marked on the connector. They are only used for the P/N.

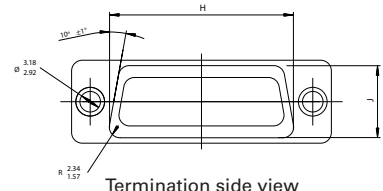
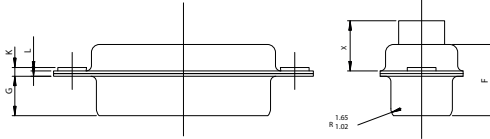
## Dimensions

### 2

#### Male connector



Mating side view



Termination side view

For the dimension X: 6,38 mm MAXI for 3401 001 01B & D\*M  
9,53 mm MAXI for 3401 001 02B, 3401 002, 8630 & 8635

Shell size	A min		A max		B min		B max		C min		C max		D min		D max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	1.198	30.43	1.228	31.19	.661	16.79	.671	17.04	.979	24.87	.989	25.12	.324	8.23	.334	8.48
A	1.526	38.76	1.556	39.52	.989	25.12	.999	25.37	1.307	33.2	1.317	33.45	.324	8.23	.334	8.48
B	2.073	52.65	2.103	53.42	1.529	38.84	1.539	39.09	1.847	46.91	1.857	47.17	.324	8.23	.334	8.48
C	2.714	68.94	2.744	69.7	2.177	55.3	2.187	55.55	2.495	63.37	2.505	63.63	.324	8.23	.334	8.48
D	2.620	66.55	2.650	67.31	2.074	52.68	2.084	52.93	2.401	60.99	2.411	61.24	.431	10.95	.441	11.2

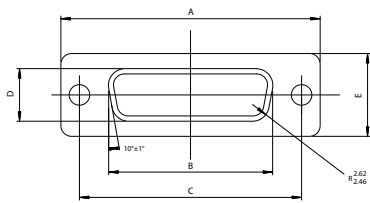
Shell size	E min		E max		F min		F max		G min		G max		H min		H max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	.479	12.17	.509	12.93	.412	10.46	.432	10.97	.229	5.82	.241	6.12	.749	19.02	.769	19.53
A	.479	12.17	.509	12.93	.412	10.46	.432	10.97	.229	5.82	.241	6.12	1.073	27.25	1.093	27.76
B	.479	12.17	.509	12.93	.416	10.57	.436	11.07	.224	5.69	.236	5.99	1.615	41.02	1.635	41.53
C	.479	12.17	.509	12.93	.416	10.57	.436	11.07	.224	5.69	.236	5.99	2.262	57.45	2.282	57.96
D	.590	14.99	.620	15.75	.416	10.57	.436	11.07	.224	5.69	.236	5.99	2.168	55.07	2.188	55.58

Shell size	J min		J max		K min		K max		L min		L max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	.412	10.46	.432	10.97	.035	0.89	.060	1.52	.020	0.51	.040	1.02
A	.412	10.46	.432	10.97	.035	0.89	.060	1.52	.020	0.51	.040	1.02
B	.412	10.46	.432	10.97	.050	1.27	.070	1.78	.029	0.74	.049	1.24
C	.412	10.46	.432	10.97	.050	1.27	.070	1.78	.029	0.74	.049	1.24
D	.524	13.31	.544	13.82	.050	1.27	.070	1.78	.029	0.74	.049	1.24

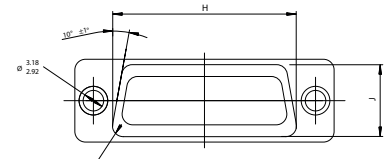
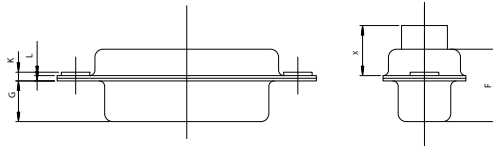
## Dimensions

## Female connector

2



Mating side view



Termination side view

For the dimension X: 6,38 mm MAXI for 3401 001 01B & D\*M  
9,53 mm MAXI for 3401 001 02B, 3401 002, 8630 & 8635

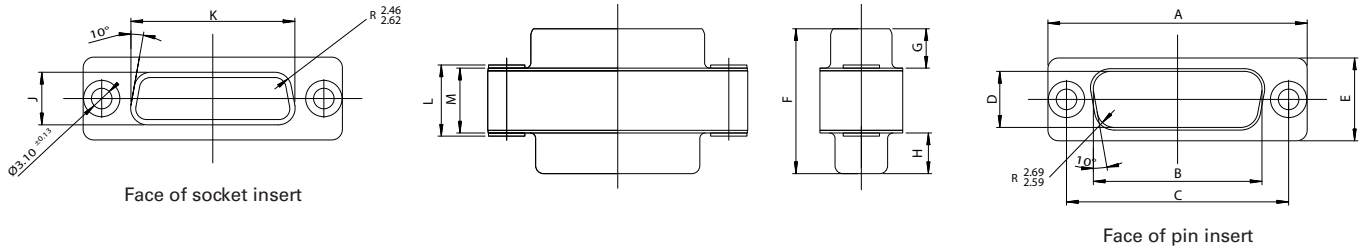
Shell size	A min		A max		B min		B max		C min		C max		D min		D max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	1.198	30.43	1.228	31.19	.638	16.21	0.648	16.46	.979	24.87	.989	25.12	.306	7.77	.316	8.03
A	1.526	38.76	1.556	39.52	.966	24.54	.976	24.79	1.307	33.2	1.317	33.45	.306	7.77	.316	8.03
B	2.073	52.65	2.103	53.42	1.506	38.25	1.516	38.51	1.847	46.91	1.857	47.17	.306	7.77	.316	8.03
C	2.714	68.94	2.744	69.69	2.154	54.71	2.164	54.97	2.495	63.37	2.505	63.63	.306	7.77	.316	8.03
D	2.620	66.55	2.650	67.31	2.059	52.3	2.069	52.55	2.401	60.99	2.411	61.24	.418	10.62	.428	10.87

Shell size	E min		E max		F min		F max		G min		G max		H min		H max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	.479	12.17	.509	12.93	.419	10.64	.439	11.15	.238	6.05	.248	6.3	.749	19.02	.769	19.53
A	.479	12.17	.509	12.93	.419	10.64	.439	11.15	.238	6.05	.248	6.3	1.073	27.25	1.093	27.76
B	.479	12.17	.509	12.93	.419	10.64	.439	11.15	.238	6.05	.248	6.3	1.615	41.02	1.635	41.53
C	.479	12.17	.509	12.93	.419	10.64	.439	11.15	.238	6.05	.248	6.3	2.262	57.45	2.282	57.96
D	.590	14.99	.620	15.75	.419	10.64	.439	11.15	.238	6.05	.248	6.3	2.168	55.07	2.188	55.58

Shell size	J min		J max		K min		K max		L min		L max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	.412	10.46	.320	10.97	.035	0.89	.060	1.52	.020	0.51	.040	1.02
A	.412	10.46	.432	10.97	.035	0.89	.060	1.52	.020	0.51	.040	1.02
B	.412	10.46	.432	10.97	.035	0.89	.060	1.52	.020	0.51	.040	1.02
C	.412	10.46	.432	10.97	.035	0.89	.060	1.52	.020	0.51	.040	1.02
D	.524	13.31	.544	13.82	.035	0.89	.060	1.52	.020	0.51	.040	1.02

## Dimensions

#### Saver connector



Shell size	A min		A max		B min		B max		C min		C max		D min		D max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	2.62	66.55	2.65	67.31	2.074	52.68	2.084	52.93	2.401	60.99	2.411	61.24	.431	10.95	.441	11.20
A	2.714	68.94	2.744	69.70	2.177	55.30	2.187	55.55	2.495	63.37	2.505	63.63	.324	8.23	.334	8.48
B	2.073	52.65	2.103	53.42	1.529	38.84	1.539	39.09	1.847	46.91	1.857	47.17	.324	8.23	.334	8.48
C	1.526	38.76	1.556	39.52	.989	25.12	.999	25.37	1.307	33.20	1.317	33.45	.324	8.23	.334	8.48
D	1.198	30.43	1.228	31.19	.661	16.79	.671	17.04	.979	24.87	.989	25.12	.324	8.23	.334	8.48

Shell size	E min		E max		F min		F max		G min		G max		H min		H max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	.590	14.99	.620	15.75	.855	21.72	.875	22.22	.224	5.69	.236	5.99	.238	6.05	.248	6.30
A	.479	12.17	.509	12.93	.855	21.72	.875	22.22	.224	5.69	.236	5.99	.238	6.05	.248	6.30
B	.479	12.17	.509	12.93	.855	21.72	.875	22.22	.224	5.69	.236	5.99	.238	6.05	.248	6.3
C	.479	12.17	.509	12.93	.831	21.12	.851	21.62	.229	5.82	.241	6.12	.238	6.05	.248	6.30
D	.479	12.17	.509	12.93	.831	21.12	.851	21.62	.229	5.82	.241	6.12	.238	6.05	.248	6.30

Shell size	J min		J max		K min		K max		L min		L max		M min		M max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	.418	10.62	.428	10.87	2.059	52.30	2.069	52.55	.402	10.21	.432	10.97	.378	9.61	.398	10.11
A	.306	7.77	.316	8.03	2.154	54.71	2.164	54.97	.402	10.21	.432	10.97	.378	9.61	.398	10.11
B	.306	7.77	.316	8.03	1.506	38.25	1.516	38.51	.402	10.21	.432	10.97	.378	9.61	.398	10.11
C	.306	7.77	.316	8.03	.966	24.54	.976	24.79	.402	10.21	.432	10.97	.378	9.61	.398	10.11
D	.306	7.77	.316	8.03	.638	16.21	.648	16.46	.402	10.21	.432	10.97	.378	9.61	.398	10.11

## Crimp contacts

**3401 005:** crimp contacts for **3401 002** connectors (flight models)

**8949 Series:** crimp contacts for **8630/8635** connectors (engineering models).

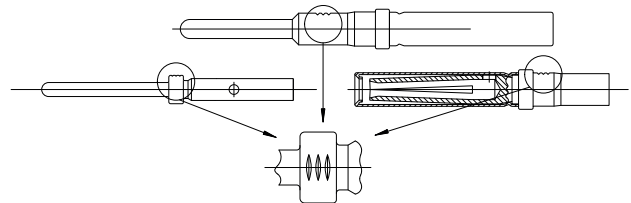
Contact size	Wire type	Contact type	ESA/SCC	Eaton Souriau	NMB / 038
				NMB / 011 1.27 microns gold	2.54 microns gold
#20	#20/24	Pin	3401 005 01B	8949 1196 Y7 EL	8949 1196 UE EL
		Socket	3401 005 02B	8949 1198 EL	8949 407 EL
	#26/28	Pin	3401 005 03B	8949 1520 Y7 EL	8949 1520 UE EL
		Socket	3401 005 04B	8949 1523 EL	8949 1521 EL
	#18	Pin	3401 005 06B	8949 3227 Y7 EL	8949 3227 UE EL
		Socket	3401 005 06B	8949 3352 EL	8949 3229 EL
#22	#22/26	Pin	3401 005 07B	8949 1524 Y7 EL	8949 1524 UE EL
		Socket	3401 005 08B	8949 1525 EL	8949 1526 EL

Note : the code EL is not marked on the packaging.

### Insertion & extraction tool

	Part number
#20	8630-06A
#22	M 81969-14-01

### Removable contact identification



## Cross reference crimp contacts

Contact size	GSFC part number	ESA/SCC part number (flight models)	Eaton Souriau part number (engineering models)
#20	G10P1	340100501B	<b>8949 1196 Y7 EL</b>
	G10S1	340100502B	<b>8949 1198 EL</b>
	-	340100503B	<b>8949 1520 Y7 EL</b>
	-	340100504B	<b>8949 1523 EL</b>
	-	340100505B	<b>8949 3227 Y7 EL</b>
	-	340100506B	<b>8949 3352 EL</b>
#22	G08P1	340100507B	<b>8949 1524 Y7 EL</b>
	G08S1	340100508B	<b>8949 1525 EL</b>

## Saver crimp contacts

**3401 021:** crimp contacts for **3401 020** connectors (flight models)

**8949 Series:** crimp contacts for **D\*BMA** connectors (engineering models).

Contact size	Contact type	ESA/SCC	Eaton Souriau	NMB / 038
			NMB / 011 1.27 microns gold	2.54 microns gold
#20	Pin/Socket	3401 021 01B	8949 975 EL	8949 3030 EL
#22	Pin/Socket	3401 021 02B	8949 3362 EL	8949 3373 EL

## Coaxial contacts

Contact termination	Wire type	Contact type	Contact style	ESA part number (flight models)	Eaton Souriau part number (engineering models)
Solder buckets	RG 178 BU RG 196 AU KX 21 A	Male	straight	3401 004 01B	8949 004 01NMB
		Female	straight	3402 004 02B	8949 004 02NMB
		Male	90°	3403 004 03B	8949 004 03NMB
		Female	90°	3404 004 04B	8949 004 04NMB
	KX 22 A RG 179 BU RG 316 U RG 188 AU & 50 CIS	Male	straight	3405 004 05B	8949 004 05NMB
		Female	straight	3406 004 06B	8949 004 06NMB
		Male	90°	3407 004 07B	8949 004 07NMB
		Female	90°	3408 004 08B	8949 004 08NMB
	RG 180 BU	Male	straight	3409 004 09B	8949 004 09NMB
		Female	straight	3410 004 10B	8949 004 10NMB
Crimp contacts	RG 178 BU RG 196 AU KX 21 A	Male	straight	3411 004 11B	8949 004 11NMB
		Female	straight	3412 004 12B	8949 004 12NMB
		Male	90°	3412 004 13B	8949 004 13NMB
		Female	90°	3412 004 14B	8949 004 14NMB
	KX 22 A RG 179 BU RG 316 U RG 188 AU & 50 CIS	Male	straight	3412 004 15B	8949 004 15NMB
		Female	straight	3412 004 16B	8949 004 16NMB
		Male	90°	3412 004 17B	8949 004 17NMB
		Female	90°	3412 004 18B	8949 004 18NMB
	RG 180 BU	Male	straight	3412 004 19B	8949 004 19NMB
		Female	straight	3412 004 20B	8949 004 20NMB

50 CIS

according to ESA/SCC 3902 001

RG 176 B/U, RG 178 B/U, RG 179 B/U, RG 180 B/U, RG 196 A/U, RG 316 U, RG 188 A/U

according to MIL-C-17

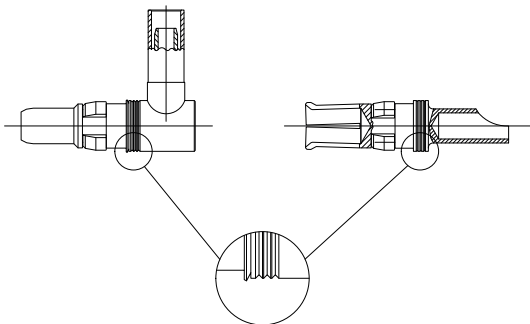
KX 21 A / 22 A

according to NFC 93550

## Extraction tool

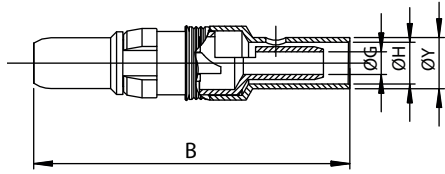
	Part number
#8	8630-07A

## 3401 004/8949-004 &amp; 3401 040/8949-040 contact identification

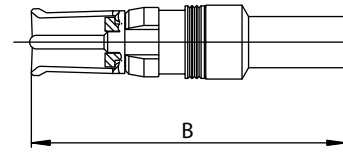


Eaton Souriau's contacts are identified by 3 engraved stripes.

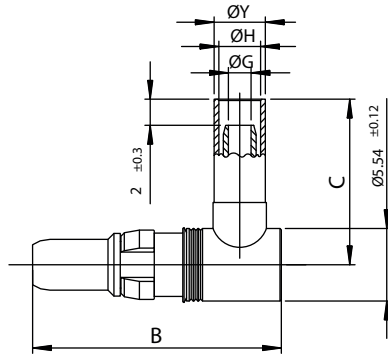
Pin coaxial contact - 01, 05, 11 & 15 variants



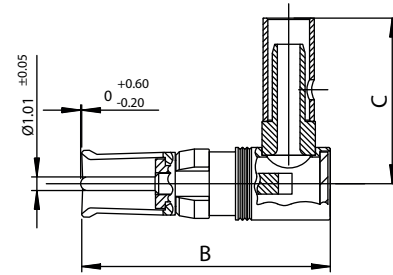
Socket coaxial contact - 02, 06, 12 & 16 variants



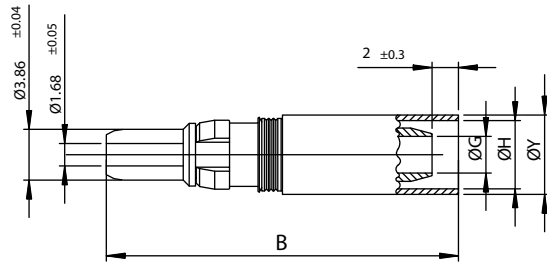
Pin coaxial contact - 03, 07, 13 & 17 variants



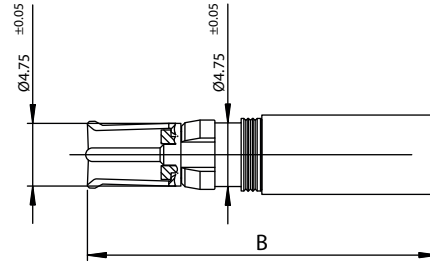
Socket coaxial contact - 04, 08, 14 & 18 variants



Pin coaxial contact - 09 & 19 variants



Socket coaxial contact - 10 & 20 variants



Variant	B réf.		C réf.		ØG min		ØH min		X max		ØY max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
01 - 11	.929	23.60			.035	0.90	.091	2.30	.740	18.80	.128	3.25
02 - 12	.929	23.60			.035	0.90	.091	2.30	.740	18.80	.128	3.25
03 - 13	.734	18.64	.492	12.50	.035	0.90	.091	2.30	.530	13.46	.128	3.25
04 - 14	.734	18.64	.492	12.50	.035	0.90	.091	2.30	.530	13.46	.128	3.25
05 - 15	.929	23.60			.061	1.55	.122	3.10	.740	18.80	.161	4.10
06 - 16	.929	23.60			.061	1.55	.122	3.10	.740	18.80	.161	4.10
07 - 17	.734	18.64	.492	12.50	.061	1.55	.122	3.10	.530	13.46	.161	4.10
08 - 18	.734	18.64	.492	12.50	.061	1.55	.122	3.10	.530	13.46	.161	4.10
09 - 19	1.035	26.30			.100	2.55	.201	5.10	.846	21.50	.244	6.20
10 - 20	1.035	26.30			.100	2.55	.201	5.10	.846	21.50	.244	6.20

## Power solder contacts

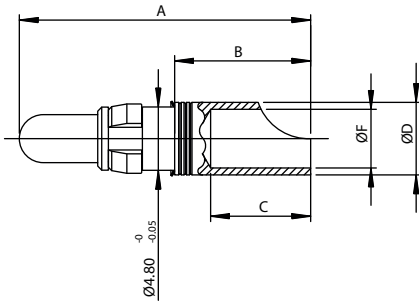
Wire type	Contact type	ESA part number (flight models)	Eaton Souriau part number (engineering models)
#8	Pin	3401 040 01B	8949 040 01NMB
	Socket	3401 040 02B	8949 040 02NMB

3

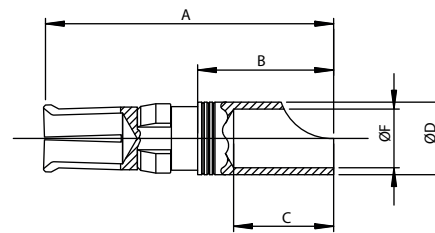
### Extraction tool

	Part number
#8	8630-07

### Pin power solder contact - 01 variant



### Socket power solder contact - 02 variant

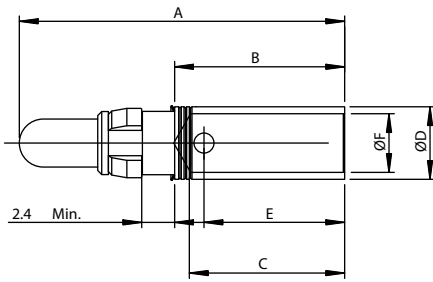


Variant	Contact type	A max		B max		C max		ØD max		ØE max		ØF max	
		inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
01	Pin	.870	22.1	.425	10.80	.320	8.13	.223	5.66			.193	4.90
02	Socket	.858	21.8	.425	10.80	.320	8.13	.223	5.66			.193	4.90

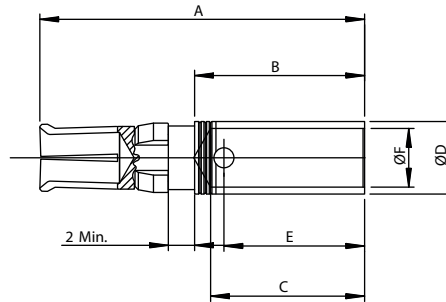
### Power crimp contacts

Wire type	Contact type	ESA part number (flight models)	Eaton Souriau part number (engineering models)
#8	Pin	3401 040 07B	8949 040 07NMB
	Socket	3401 040 08B	8949 040 08NMB

#### Pin power crimp contact - 07 variant



#### Socket power crimp contact - 08 variant



Variant	Contact type	A max		B max		C min		ØD max		E réf.		ØF min		ØG réf.	
		inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
07	Pin	.972	24.7	.508	12.9	.433	11	.228	5.8	.394	10	.165	4.2	.067	1.7
08	Socket	.969	24.6	.508	12.9	.433	11	.228	5.8	.394	10	.165	4.2	.067	1.7

#### Wiring tool

	DMC Part number	Eaton Souriau Part number
Crimping tool	M300BT	8476-200
Locator	TH558	8949-1745

#### Extraction tool

	Part number
#8	8630-07

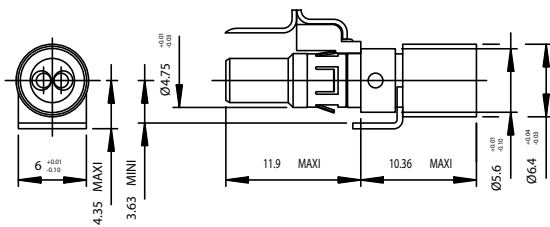
## Twinax contacts

These D-Sub Twinax contact size #8 compatible and designed for GORE Ref. GSC-05-80583-00 A or AXON Ref. P5 12806 double braiding cable and for AXON P5 12296 single braiding cable are crimping or soldering type contacts straight or 90°, male and female.

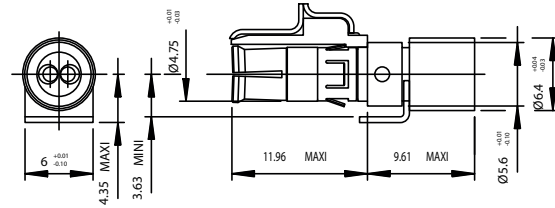
3

Contact type	Part number for double braiding cable		Part number for double braiding cable	
	ESA/SCC	Eaton Souriau	ESA/SCC	Eaton Souriau
Female straight termination	3401 069 02B	8949 004 51 NMB	3401 069 06B	8949 0045 55 NMB
Male straight termination	3401 069 01B	8949 004 50 NMB	3401 069 05B	8949 0045 54 NMB
Female 90° termination	3401 069 04B	8949 004 53 NMB	3401 069 08B	8949 0045 57 NMB
Male 90° termination	3401 069 03B	8949 004 51 NMB	3401 069 07B	8949 0045 56 NMB

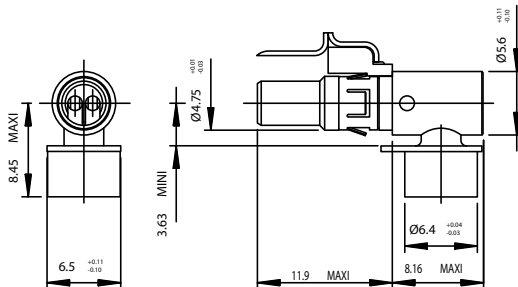
### Pin straight termination



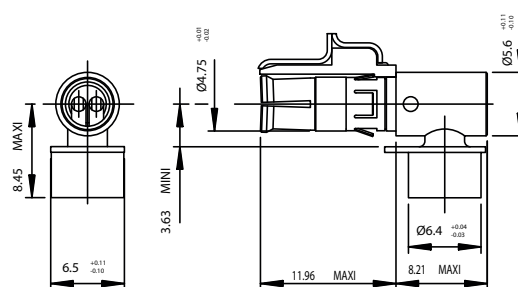
### Socket straight termination



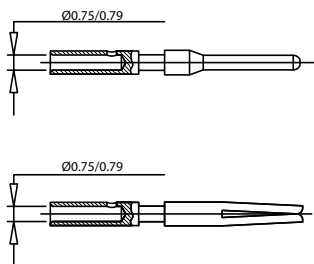
### Pin 90° termination



### Socket 90° termination



### Inner pin and socket contact - Straight termination



For more wiring explanations Eaton Souriau document NC 8949-A-068 is available upon request to our customer service.

Wiring tool

	Inner pin and socket Straight termination	External pin and socket	Inner socket 90° termination
<b>Crimping tool</b>	M 22520/2-01	M 22520/5-01	Solder
<b>Locator</b>	SN 1908 K 101	M 22520/5-45 Hex. B	Solder

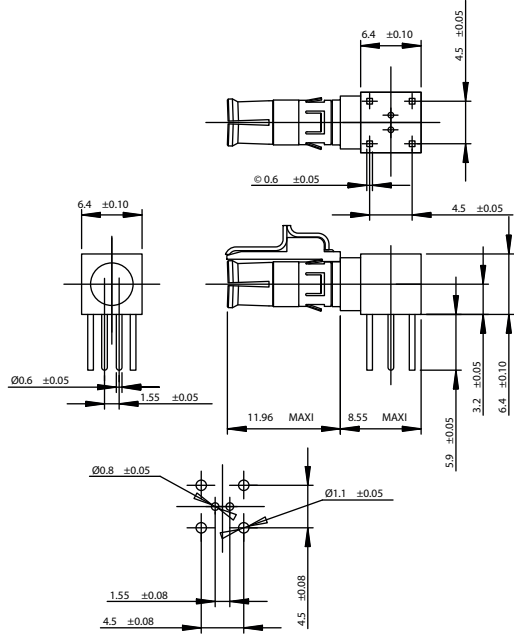
Extraction tool

#8	Part number
	8630-07A

Twinax PC tail contacts

Contact type	Eaton Souriau Part number
Socket	8949 00458 NMB

Twinax contact, 90° PC tail mount



Recommended PC tail configuration

## Male screw lock

	Material	Backshell	Shell size	ESA/SCC part number	Eaton Souriau part number
Hex hole head	Brass	Without backshell	B, C: S E, A: P or S	<b>3401 022 65BNMB</b>	<b>D8949 P165 NM</b>
			B, C: P	<b>3401 022 66BNMB</b>	<b>D8949 P166 NM</b>
			D: S	<b>3401 022 67BNMB</b>	<b>D8949 P167 NM</b>
			D: P	<b>3401 022 68BNMB</b>	<b>D8949 P168 NM</b>
		With backshell	B, C: S E, A: P or S	<b>3401 022 69BNMB</b>	<b>D8949 P265 NM</b>
			B, C: P	<b>3401 022 70BNMB</b>	<b>D8949 P266 NM</b>
	Stainless steel	Without backshell	B, C: S E, A: P or S	<b>3401 022 73B</b>	<b>D8949 P349 NM</b>
			B, C: P	<b>3401 022 74B</b>	<b>D8949 P350 NM</b>
			D: S	<b>3401 022 75B</b>	<b>D8949 P351 NM</b>
			D: P	<b>3401 022 76B</b>	<b>D8949 P352 NM</b>
		With backshell	B, C: S E, A: P or S	<b>3401 022 77B</b>	<b>D8949 P354 NM</b>
			B, C: P	<b>3401 022 78B</b>	<b>D8949 P355 NM</b>
Slotted head	Brass	Without backshell	B, C: S E, A: P or S	<b>3401 022 02BNMB</b>	<b>D8949 P102 NM</b>
			B, C: P	<b>3401 022 03BNMB</b>	<b>D8949 P103 NM</b>
			D: S	<b>3401 022 04BNMB</b>	<b>D8949 P104 NM</b>
			D: P	<b>3401 022 05BNMB</b>	<b>D8949 P105 NM</b>
		With backshell	B, C: S E, A: P or S	<b>3401 022 44BNMB</b>	<b>D8949 P144 NM</b>
			B, C: P	<b>3401 022 45BNMB</b>	<b>D8949 P145 NM</b>
	Stainless steel	Without backshell	B, C: S E, A: P or S	<b>3401 022 49B</b>	<b>D8949 P149 NM</b>
			B, C: P	<b>3401 022 50B</b>	<b>D8949 P150 NM</b>
			D: S	<b>3401 022 51B</b>	<b>D8949 P151 NM</b>
			D: P	<b>3401 022 52B</b>	<b>D8949 P152 NM</b>
		With backshell	B, C: S E, A: P or S	<b>3401 022 54B</b>	<b>D8949 P154 NM</b>
			B, C: P	<b>3401 022 55B</b>	<b>D8949 P155 NM</b>
		D: S	<b>3401 022 56B</b>	<b>D8949 P156 NM</b>	
		D: P	<b>3401 022 57B</b>	<b>D8949 P157 NM</b>	

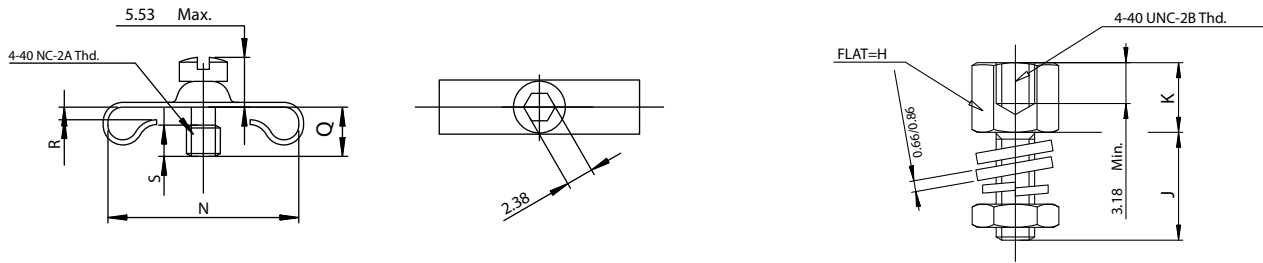


## Female screw lock

	Material	ESA/SCC part number (flight models)	Eaton Souriau part number (engineering models)
Standard	Brass	<b>3401 022 01BNMB</b>	<b>D8949 S60 NM</b>
	Stainless steel	<b>3401 022 48B</b>	<b>D8949 S70 NM</b>
For savers	Brass	<b>3401 022 06BNMB</b>	<b>D8949 S61 NM</b>
	Stainless steel	<b>3401 022 53B</b>	<b>D8949 S71 NM</b>



Screw lock dimensions



Male screw lock

	Use with shell size	N min		N max		Q min		Q max		R min		R max		S min	
		inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
Without backshell	A, E: P or S B, C: S	.510	12.96	.540	13.72	.127	3.22	.157	3.98	.030	0.75	.037	0.95	.079	2,80
	B, C: P	.510	12.96	.540	13.72	.127	3.22	.157	3.98	.037	0.95	.045	1.15	.079	2,80
	D: S	.620	15.75	.640	16.26	.127	3.22	.157	3.98	.037	0.95	.045	0.95	.079	2,80
	D: P	.620	15.75	.640	16.26	.127	3.22	.157	3.98	.037	0.95	.045	1.15	.079	2,80
With backshell	A, E: P or S B, C: S	.510	12.96	.540	13.72	.166	4.22	.196	4.98	.030	0.75	.077	1.95	.079	2,80
	B, C: P	.510	12.96	.540	13.72	.166	4.22	.196	4.98	.037	0.95	.087	2.20	.079	2,80
	D: S	.620	15.75	.640	16.26	.166	4.22	.196	4.98	.037	0.95	.077	1.95	.079	2,80
	D: P	.620	15.75	.640	16.26	.166	4.22	.196	4.98	.037	0.95	.087	2.20	.079	2,80

Female screw lock

Variant	H min		H max		J min		J max		K min		K max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
01 & 48	.172	4.37	.202	5.13	.297	7.54	.327	8.3	.181	4.6	.201	5.1
06 & 53	.172	4.37	.202	5.13	.565	14.35	.577	14.65	.181	4.6	.201	5.1

Male screw lock assemblies for lightweight backshell

Use with shell size with lightweight back shell	Materials	ESA/SCC part number	Eaton Souriau part number
E to C: P or S	Brass	3401 072	D8949 P112 NM
	Stainless steel	3401 072 03B	D8949 P114 NM
D: P or S	Brass	3401 072	D8949 P113 NM
	Stainless steel	3401 072 04B	D8949 P115 NM

Dimensions

Use with shell size with lightweight back shell	N min		N max		P		Q min		Q max		R min		R max	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E to C: P or S	.510	12.96	.540	13.72	.094	2.38	.173	4.4	.203	5.16	.089	2.25	.096	2.45
D: P or S	.620	15.75	.640	16.26	.094	2.38	.173	4.4	.203	5.16	.089	2.25	.096	2.45

Use with shell size with lightweight back shell	S min		T max	
	inches	mm	inches	mm
E to C: P or S	.110	2.80	.218	5.53
D: P or S	.110	2.80	.218	5.53

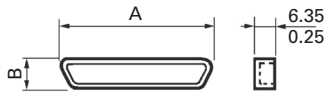
## Dust caps

Shell size	ESA/SCC part number (flight models)		Eaton Souriau part number (engineering models)	
	For male connector	For female connector	For male connector	For female connector
E	3401 022 08B	3401 022 07B	70508	70513
A	3401 022 10B	3401 022 09B	70509	70514
B	3401 022 12B	3401 022 11B	70510	70515
C	3401 022 14B	3401 022 13B	70511	70516
D	3401 022 16B	3401 022 15B	70512	70517



4

### Dimensions



#### Male connector

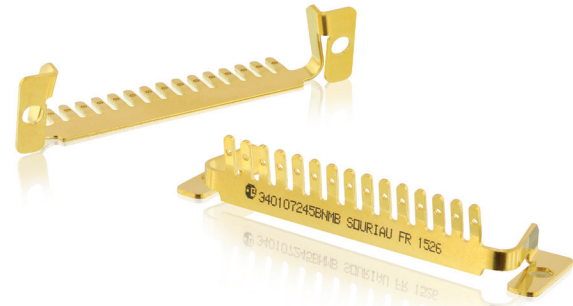
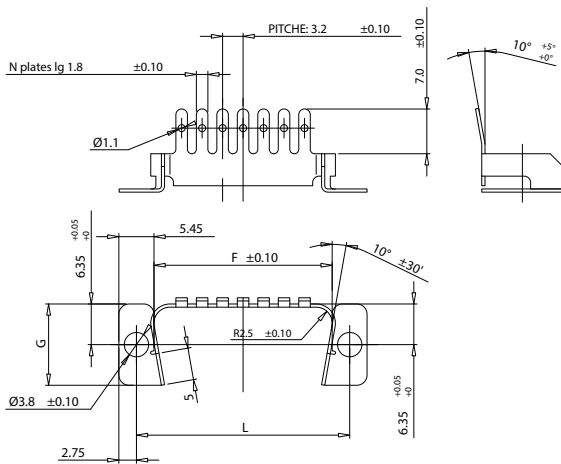
Shell size	A		B	
	inches	mm	inches	mm
E	.756	19.20	.406	10.30
A	1.083	27.50	.406	10.30
B	1.642	41.70	.421	10.70
C	2.287	58.10	.421	10.70
D	2.185	55.50	.528	13.40

#### Female connector

Shell size	A		B	
	inches	mm	inches	mm
E	.701	17.80	.354	9.00
A	1.028	26.10	.354	9.00
B	1.567	39.80	.354	9.00
C	2.217	56.30	.354	9.00
D	2.122	53.90	.469	11.90

## Backshells

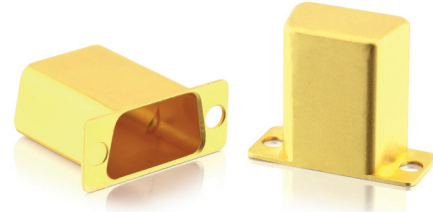
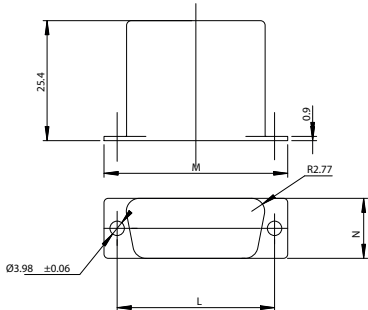
### Castellated backshell



Shell size	F		G		L		N		Eaton Souriau part number	
	inches	mm	inches	mm	inches	mm	inches	mm	Silver plating	Gold plating
E	.771	19.60	.500	12.70	.984	24.99	.197	5.00	DE 8949 XH NMS	DE 8949 XH NMB
A	1.096	27.85	.500	12.70	1.311	33.32	.276	7.00	DA 8949 XH NMS	DA 8949 XH NMB
B	1.634	41.50	.500	12.70	1.852	47.04	.433	11.00	DB 8949 XH NMS	DB 8949 XH NMB
C	2.287	58.10	.500	12.70	2.500	63.50	.630	16.00	DC 8949 XH NMS	DC 8949 XH NMB
D	2.195	55.75	.606	15.40	2.406	61.11	.591	15.00	DD 8949 XH NMS	DD 8949 XH NMB

## Backshells

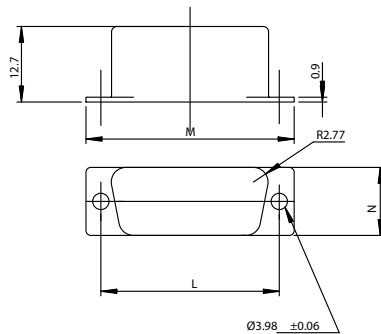
### Lightweight shorting can



4

Shell size	M		N		L		ESA/SCC part number	Eaton Souriau part number
	inches $\pm 0.015$	mm $\pm 0.38$	inches $\pm 0.004$	mm $\pm 0.14$	inches $\pm 0.009$	mm $\pm 0.25$		
<b>E</b>	1.203	30.56	.500	12.70	.983	24.99	<b>3401 072 10B NMB</b>	<b>DE 8949 301 NMB</b>
<b>A</b>	1.531	38.89	.500	12.70	1.311	33.32	<b>3401 072 11B NMB</b>	<b>DA 8949 301 NMB</b>
<b>B</b>	2.078	52.78	.500	12.70	1.852	47.04	<b>3401 072 12B NMB</b>	<b>DB 8949 301 NMB</b>
<b>C</b>	2.718	69.04	.500	12.70	2.500	63.50	<b>3401 072 13B NMB</b>	<b>DC 8949 301 NMB</b>
<b>D</b>	2.625	66.67	.609	15.47	2.406	61.11	<b>3401 072 14B NMB</b>	<b>DD 8949 301 NMB</b>

### Lightweight extra-shortening can

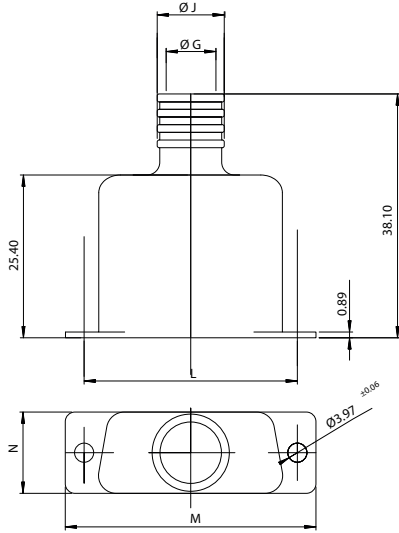


Shell size	M		N		L		ESA/SCC part number	Eaton Souriau part number
	inches $\pm 0.015$	mm $\pm 0.38$	inches $\pm 0.015$	mm $\pm 0.38$	inches $\pm 0.009$	mm $\pm 0.25$		
<b>E</b>	1.203	30.56	.500	12.70	.984	24.99	<b>3401 072 61B NMB</b>	<b>DE 8949 305 NMB</b>
<b>A</b>	.1531	38.89	.500	12.70	1.312	33.32	<b>3401 072 62B NMB</b>	<b>DA 8949 305 NMB</b>
<b>B</b>	2.078	52.78	.500	12.70	1.852	47.04	<b>3401 072 63B NMB</b>	<b>DB 8949 305 NMB</b>
<b>C</b>	2.718	69.04	.500	12.70	2.500	63.50	<b>3401 072 64B NMB</b>	<b>DC 8949 305 NMB</b>
<b>D</b>	2.625	66.67	.609	15.46	2.406	61.11	<b>3401 072 65B NMB</b>	<b>DD 8949 305 NMB</b>

## Backshells

### Lightweight shielded backshell - straight cable outlet

4

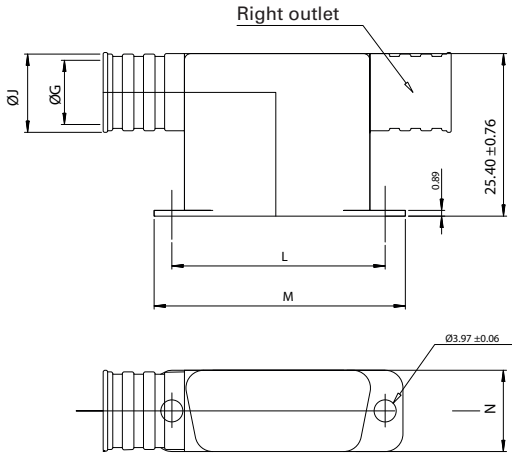


Shell size	ØG		J		M		N		L	
	inches ±0,009	mm ±0,25	inches ±0,015	mm ±0,38	inches ±0,012	mm ±0,36	inches ±0,015	mm ±0,38	inches ±0,004	mm ±0,13
E	.270	6.85	.350	8.89	1.203	30.56	.500	12.70	.984	24.99
A	.395	10.03	.475	12.06	1.531	38.89	.500	12.70	.1312	33.32
B	.420	10.66	.500	12.70	2.078	52.78	.500	12.70	1.852	47.04
C	.420	10.66	.500	12.70	2.718	69.04	.500	12.70	2.500	63.50
D	.529	13.43	.609	15.46	2.625	66.67	.609	15.47	2.406	61.11

Shell size	ESA/SCC part number	Eaton Souriau part number
E	3401 072 35B NMB	DE 8949 001 NMB
A	3401 072 36B NMB	DA 8949 001 NMB
B	3401 072 37B NMB	DB 8949 001 NMB
C	3401 072 38B NMB	DC 8949 001 NMB
D	3401 072 39B NMB	DD 8949 001 NMB

## Backshells

### Light shielded backshell - 90° longitudinal cable outlet



4

Shell size	ØG		J		M		N		L	
	inches ±0.009	mm ±0.25	inches ±0.015	mm ±0.38	inches ±0.012	mm ±0.36	inches ±0.015	mm ±0.38	inches ±0.004	mm ±0.13
E	.270	6.85	.350	8.89	1.203	30.56	.500	12.70	.984	24.99
A	.395	10.03	.475	12.06	1.531	38.89	.500	12.70	.1312	33.32
B	.420	10.66	.500	12.70	2.078	52.78	.500	12.70	1.852	47.04
C	.420	10.66	.500	12.70	2.718	69.04	.500	12.70	2.500	63.50
D	.529	13.43	.609	15.46	2.625	66.67	.609	15.47	2.406	61.11

#### Right outlet

Shell size	ESA/SCC part number	Eaton Souriau part number
E	3401 072 25B NMB	DE 8949 102K NMB
A	3401 072 26B NMB	DA 8949 102E NMB
B	3401 072 27B NMB	DB 8949 102F NMB
C	3401 072 28B NMB	DC 8949 102F NMB
D	3401 072 29B NMB	DD 8949 102H NMB

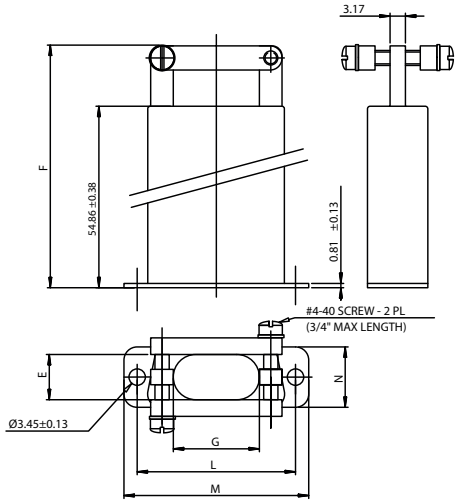
#### Left outlet

Shell size	ESA/SCC part number	Eaton Souriau part number
E	3401 072 30B NMB	DE 8949 101K NMB
A	3401 072 31B NMB	DA 8949 101E NMB
B	3401 072 32B NMB	DB 8949 101F NMB
C	3401 072 33B NMB	DC 8949 101F NMB
D	3401 072 34B NMB	DD 8949 101H NMB

## Backshells

Lightweight design with saddle clamps for strain relief

4

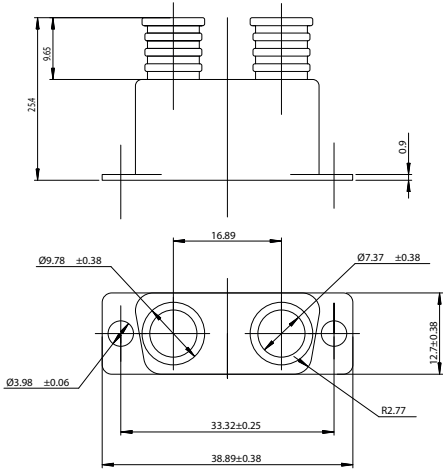


Shell size	E		F		G		M		N		L	
	inches ±0.015	mm ±0.38	inches ±0.024	mm ±0.60	inches ±0.015	mm ±0.38	inches ±0.015	mm ±0.38	inches ±0.004	mm ±0.14	inches ±0.009	mm ±0.25
<b>E</b>	.375	9.52	2.660	67.56	.350	8.89	1.203	30.56	.514	13.05	.984	24.99
<b>A</b>	.375	9.52	2.660	67.56	.475	12.06	1.531	38.89	.514	13.05	1.312	33.32
<b>B</b>	.375	9.52	2.723	69.16	.500	12.7	2.078	52.78	.514	13.05	1.852	47.04
<b>C</b>	.375	9.52	2.723	69.16	.500	12.7	2.718	69.04	.514	13.05	2.500	63.5
<b>D</b>	.468	11.88	2.723	69.16	.609	15.46	2.625	66.67	.623	15.82	2.406	61.11

Shell size	ESA/SCC part number	Eaton Souriau part number
<b>E</b>	<b>3401 072 05B NMB</b>	<b>DE 8949 014 NMB</b>
<b>A</b>	<b>3401 072 06B NMB</b>	<b>DE 8949 014 NMB</b>
<b>B</b>	<b>3401 072 07B NMB</b>	<b>DE 8949 014 NMB</b>
<b>C</b>	<b>3401 072 08B NMB</b>	<b>DE 8949 014 NMB</b>
<b>D</b>	<b>3401 072 09B NMB</b>	<b>DE 8949 014 NMB</b>

## Backshells

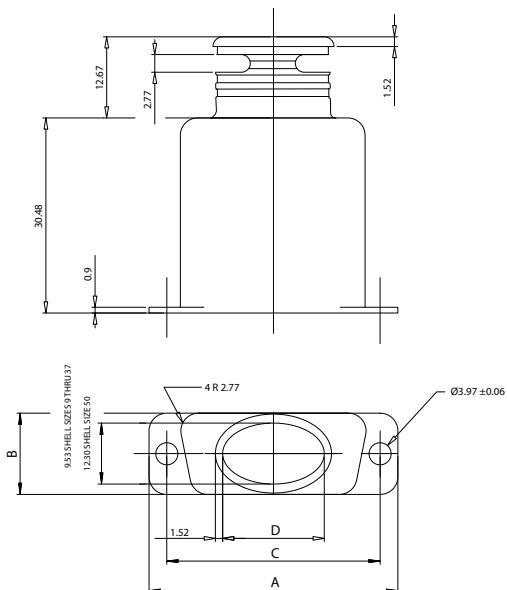
### Lightweight backshell dual entry band termination - 15 pin



4

Shell size	ESA/SCC part number	Eaton Souriau part number
A	3401 072 40B NMB	DA 8949 020 NMB

### Straight lightweight backshell ultra elliptical band-termination

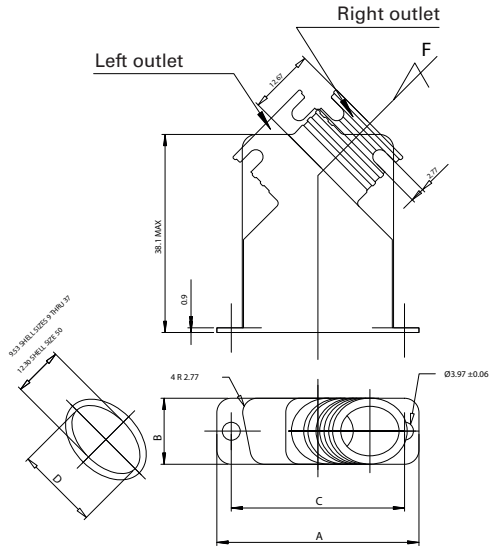


Shell size	A		B		C		D		ESA/SCC part number	Eaton Souriau part number
	inches ±0.015	mm ±0.38	inches ±0.015	mm ±0.38	inches ±0.004	mm ±0.13	inches ±0.015	mm ±0.38		
E	1.203	30.56	.500	12.70	.984	24.99	.500	12.70	3401 072 46B NMB	DE 8949 009A-1 NMB
A	.1531	38.89	.500	12.70	1.312	33.32	.625	15.87	3401 072 47B NMB	DA 8949 009B-1 NMB
B	2.078	52.78	.500	12.70	1.852	47.04	.750	19.05	3401 072 48B NMB	DB 8949 009C-1 NMB
C	2.718	69.04	.500	12.70	2.500	63.50	1.000	25.40	3401 072 49B NMB	DC 8949 009E-1 NMB
D	2.625	66.67	.609	15.46	2.406	61.11	.875	22.22	3401 072 50B NMB	DD 8949 009D-1 NMB

## Backshells

### 45° lightweight backshell ultra elliptical band-termination

4



Shell size	A		B		C		D	
	inches ±0,015	mm ±0,38	inches ±0,015	mm ±0,38	inches ±0,004	mm ±0,13	inches ±0,015	mm ±0,38
E	1.203	30.56	.500	12.7	.984	24.99	.500	12.70
A	1.531	38.89	.500	12.7	1.312	33.32	.625	15.87
B	2.078	52.78	.500	12.70	1.852	47.04	.750	19.05
C	2.718	69.04	.500	12.70	2.500	63.5	1.000	25.40
D	2.625	66.67	.609	15.46	2.406	61.11	.875	22.22

#### Right outlet

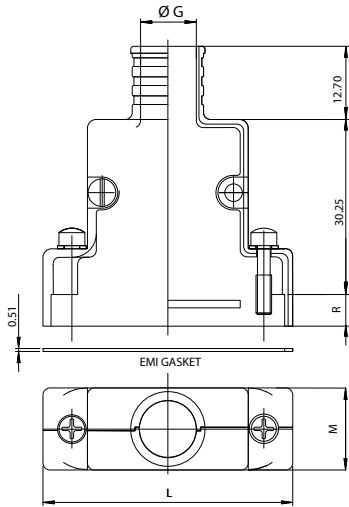
Shell size	ESA/SCC part number	Eaton Souriau part number
E	3401 072 51B NMB	DE 8949 107A-1 NMB
A	3401 072 52B NMB	DA 8949 107B-1 NMB
B	3401 072 53B NMB	DB 8949 107C-1 NMB
C	3401 072 54B NMB	DC 8949 107E-1 NMB
D	3401 072 55B NMB	DD 8949 107D-1 NMB

#### Left outlet

Shell size	ESA/SCC part number	Eaton Souriau part number
E	3401 072 56B NMB	DE 8949 108A-1 NMB
A	3401 072 57B NMB	DA 8949 108B-1 NMB
B	3401 072 58B NMB	DB 8949 108C-1 NMB
C	3401 072 59B NMB	DC 8949 108E-1 NMB
D	3401 072 60B NMB	DD 8949 108D-1 NMB

## Backshells

### EMI shielded backshell - straight cable outlet



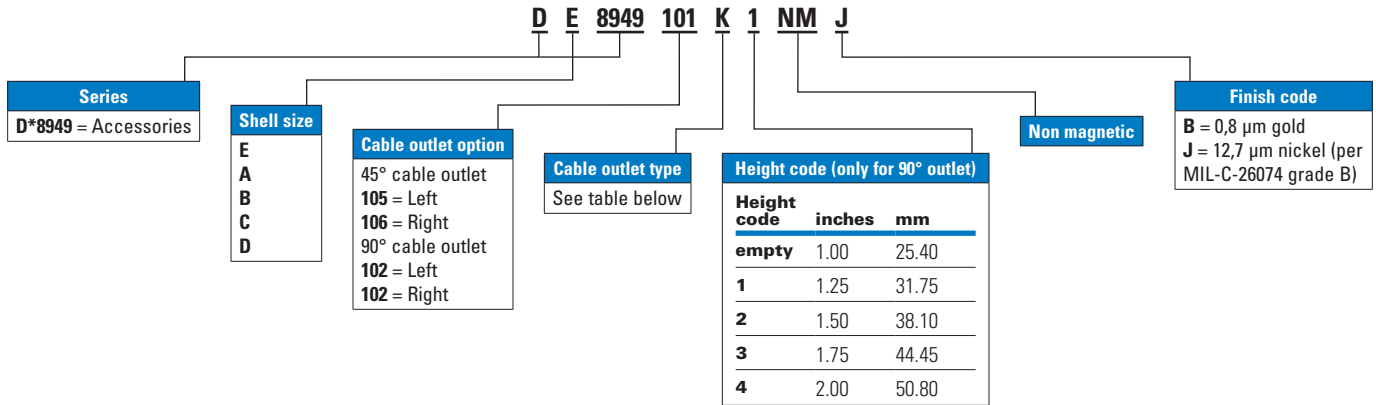
4

	Shell size	ØG		M		L		R		ESA/SCC part number	Eaton Souriau part number
		inches ±0,009	mm ±0,25	inches ±0,009	mm ±0,25	inches ±0,009	mm ±0,25	inches ±0,004	mm ±0,13		
Front mounting	<b>E</b>	.265	6.73	.629	15.98	1.379	35.03	.305	7.74	<b>3401 072 15B NMB</b>	<b>DE 8949 405 1NMB</b>
	<b>A</b>	.390	9.90	.629	15.98	1.707	43.36	.305	7.74	<b>3401 072 16B NMB</b>	<b>DA 8949 405 1NMB</b>
	<b>B</b>	.415	10.54	.629	15.98	2.254	57.25	.305	7.74	<b>3401 072 17B NMB</b>	<b>DB 8949 405 1NMB</b>
	<b>C</b>	.415	10.54	.629	15.98	2.895	73.53	.305	7.74	<b>3401 072 18B NMB</b>	<b>DC 8949 405 1NMB</b>
Rear mounting	<b>D</b>	.525	13.33	.740	18.79	2.801	71.14	.305	7.74	<b>3401 072 19B NMB</b>	<b>DD 8949 405 1NMB</b>
	<b>E</b>	.265	6.73	.629	15.98	1.379	35.03	.245	6.32	<b>3401 072 20B NMB</b>	<b>DE 8949 405 2NMB</b>
	<b>A</b>	.390	9.90	.629	15.98	1.707	43.36	.245	6.32	<b>3401 072 21B NMB</b>	<b>DA 8949 405 2NMB</b>
	<b>B</b>	.415	10.54	.629	15.98	2.254	57.25	.245	6.32	<b>3401 072 22B NMB</b>	<b>DB 8949 405 2NMB</b>
	<b>C</b>	.415	10.54	.629	15.98	2.895	73.53	.245	6.32	<b>3401 072 23B NMB</b>	<b>DC 8949 405 2NMB</b>
	<b>D</b>	.525	13.33	.740	18.79	2.801	71.14	.245	6.32	<b>3401 072 24B NMB</b>	<b>DD 8949 405 2NMB</b>

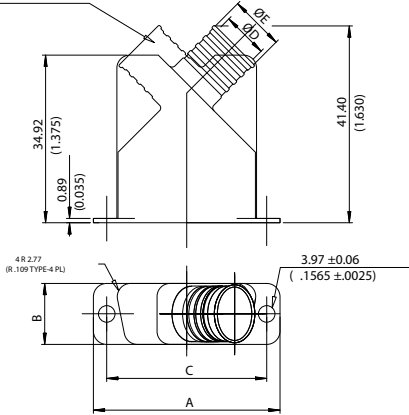
## Backshells

Lightweight shielded backshells - 45° & 90° longitudinal cable outlets

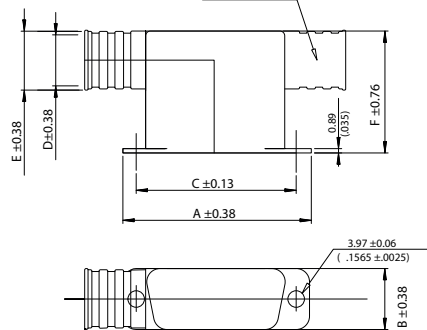
4



Left outlet (105)



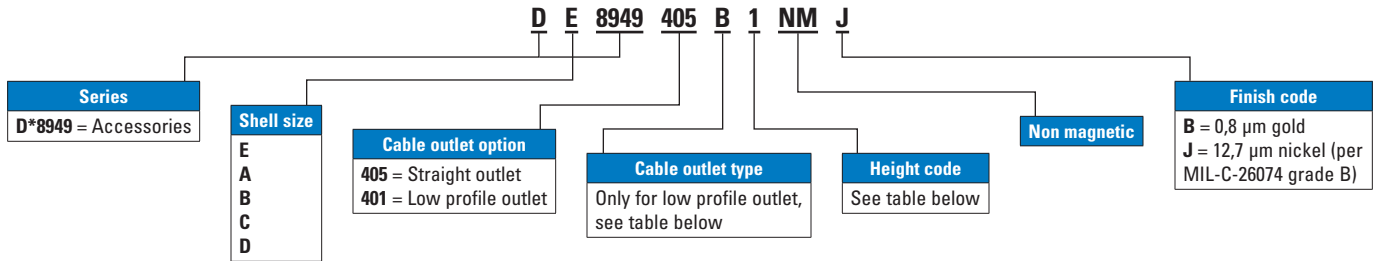
Right outlet (102)



Shell size	Standard cable outlet size				Specific cable outlet size				Outlet type	Standard cable outlet size				Specific cable outlet size				Outlet type
	A inches	A mm	B inches	B mm	C inches	C mm	ØD inches	ØD mm		ØE inches	ØE mm	Outlet type	ØD inches	ØD mm	ØE inches	ØE mm		
E	1.203	30.56	.500	12.7	.984	24.99	.270	6.86	.350	8.89	K	.125	3.17	.205	5.21	A		
A	1.531	38.89	.500	12.7	1.312	33.32	.395	10.03	.475	12.06	E	.187	4.75	.267	6.78	B		
B	2.078	52.78	.500	12.7	1.852	47.04	.420	10.66	.500	12.7	F	.312	7.92	.392	9.96	D		
C	2.718	69.04	.500	12.7	2.500	63.5	.420	10.66	.500	12.7	F	.312	7.92	.392	9.96	D		
D	2.625	66.67	.609	15.47	2.406	61.11	.529	13.43	.609	15.46	H	.395	10.03	.475	12.06	E		

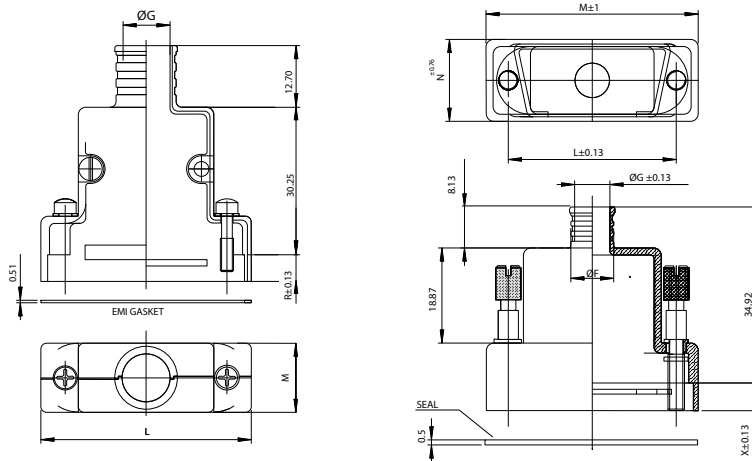
## Backshells

EMI/RFI shielded backshells - straight & low profile outlet banded clamp termination



4

Height code	Mounting style	inches	mm
1	Front	.305	7.74
2	Rear	.249	6.32
3	Rear	.218	5.53
4	Rear	.187	4.74
5	Rear	.155	3.93



Shell size	Straight cable outlet: 405				Standard cable outlet size				Specific cable outlet size			
	M inches	M mm	L inches	L mm	ØG inches	ØG mm	ØD inches	ØD mm	Cable outlet type	ØD inches	ØD mm	Cable outlet type
E	.629	15.98	1.379	35.03	.265	6.73	.190	4.83	B	.220	5.59	C
A	.629	15.98	1.707	43.36	.390	9.9	.190	4.83	B	.275	6.98	E
B	.629	15.98	2.254	57.25	.415	10.54	.260	6.6	D	.285	7.24	F
C	.629	15.98	2.895	73.53	.415	10.54	.260	6.6	D	.350	8.89	G
D	.740	18.79	2.801	71.14	.525	13.33	.350	8.89	G	.490	12.45	H

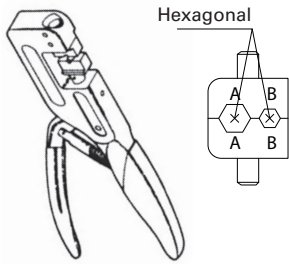
Shell size	Low profile cable outlet: 401				Standard cable outlet size				Specific cable outlet size			
	M inches	M mm	N inches	N mm	L inches	L mm	ØD inches	ØD mm	Cable outlet type	ØD inches	ØD mm	Cable outlet type
E	1.366	34.69	.640	16.25	.984	24.99	.190	4.83	B	.220	5.59	C
A	1.694	43.03	.640	16.25	1.312	33.32	.190	4.83	B	.275	6.98	E
B	2.241	56.92	.640	16.25	1.852	47.04	.260	6.6	D	.285	7.24	F
C	2.882	73.2	.640	16.25	2.500	63.5	.260	6.6	D	.350	8.89	G
D	2.778	70.56	.750	19.05	2.406	61.11	.350	8.89	G	.490	12.45	H

### Crimping tools

Crimping tool	Contact #20 Wire AWG 20/24 & 26/28*		Wire AWG 18/20		Contact #22 Wire AWG 22/26		Power contact #8	
	ESA Part number	Souriau Part number	ESA Part number	Souriau Part number	ESA Part number	Souriau Part number	DMC Part number	Souriau Part number
<b>Crimping tool</b>	M 22520/2-01	8476-01	M 22520/1-01	8365	M 22520/2-01	8476-01	M300BT	8476-200
<b>Locator</b>	M 22520/2-08 * Mark n°6	8476-08	TP 1003	8949-1808	M 22520/2-09 (pin) M 22520/2-06 (socket)	8476-09 (pin) 8476-06 (socket)	TH558 (pin)	8949-1745 (pin)

5

#### M 22520/5-01 plier

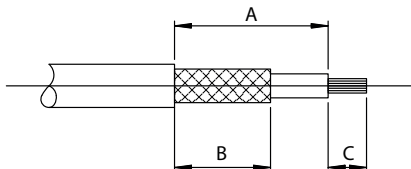


Wire	Crimp tool	Jaws	Hex
RG 178 B/U RG 196 A/U KX 21 A	M22520/5-01	M22520/5-03	B
RG 179 B/U RG 316 U RG 188 A/U KX 22 A - 50 CIS	M22520/5-01	M22520/5-03	A
RG 180 B/U	M22520/5-01	M22520/5-43	B

### Stripping

Wire type	Stripping dimensions							ESA/SCC part number				
	MIL-C-17	NFC 93550	ESA 3902 001	A <sup>±0.25</sup> inches	mm	B <sup>±0.25</sup> inches	mm	C <sup>±0.25</sup> inches	mm	Contact type	Solder coaxial contact	Crimp coaxial contact
RG 178 B/U RG 196 A/U	KX 21 A			.312	7.92	.250	6.35	.078	1.98	Male	<b>3401 004 01B</b>	<b>3401 004 11B</b>
										Female	<b>3401 004 02B</b>	<b>3401 004 12B</b>
				.375	9.52	.234	5.94	.062	1.57	Male	<b>3401 004 03B</b>	<b>3401 004 13B</b>
										Female	<b>3401 004 04B</b>	<b>3401 004 14B</b>
RG 179 B/U RG 316 U RG 188 A/U	KX 22 A	50 CIS		.312	7.92	.250	6.35	.078	1.98	Male	<b>3401 004 05B</b>	<b>3401 004 15B</b>
										Female	<b>3401 004 06B</b>	<b>3401 004 16B</b>
				.375	9.52	.234	5.94	.062	1.57	Male	<b>3401 004 07B</b>	<b>3401 004 17B</b>
										Female	<b>3401 004 08B</b>	<b>3401 004 18B</b>
RG 180 B/U				.375	9.52	.312	7.92	.076	1.92	Male	<b>3401 004 09B</b>	<b>3401 004 19B</b>
										Female	<b>3401 004 10B</b>	<b>3401 004 20B</b>

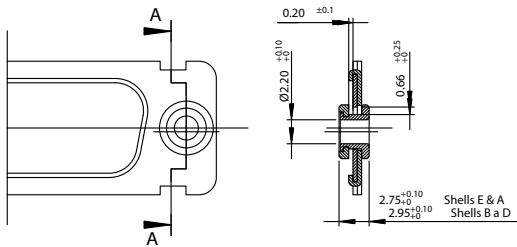
#### Stripping dimensions



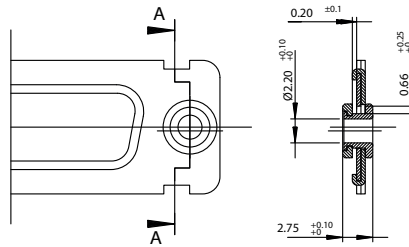
## Mounting

Float mounting 3401 001, 3401 002, D\*MF, 8631 & 8635F - not available for savers connectors

### Male connector

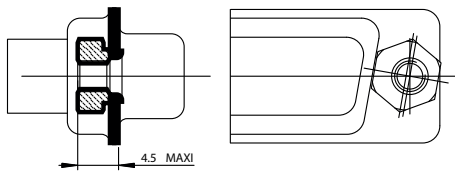


### Female connector



### Mounting with clinch nuts (O & L, D\*M, 8630 & 8635)

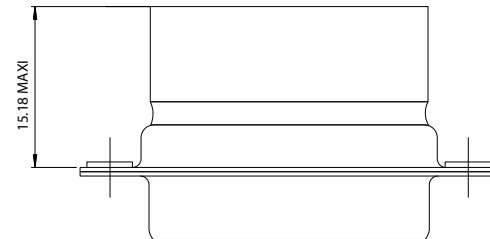
E for 3401001 and 3401002 series



### Mounting with grommet (8630 & 8635)

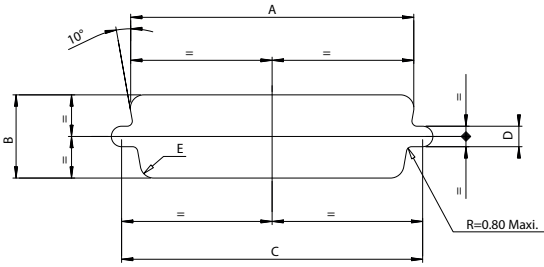
Code G for 3401002 series

Code 601, 604 for 8630 & 8635 space grade version

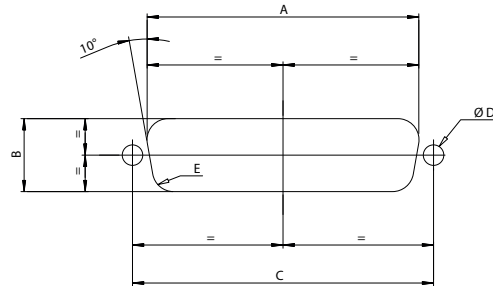


### Panel cut-outs

Cutout for mounting from front or rear of panel



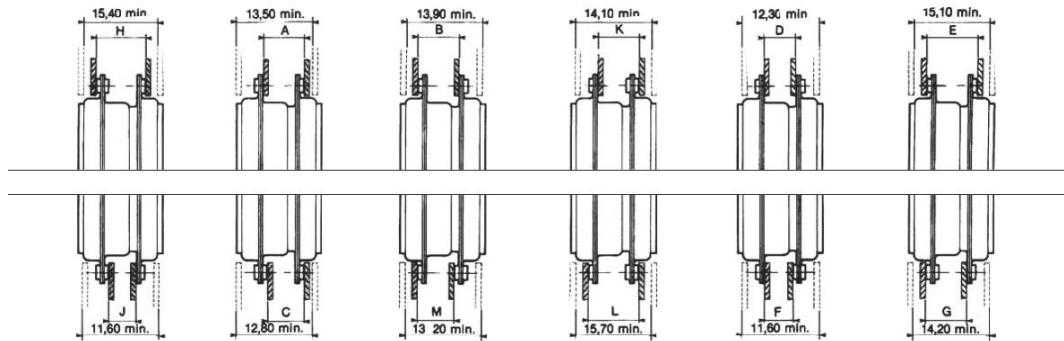
Cutout for mounting from rear of panel only



5

Shell size	Type of mounting	Mounting position	A		B		C		D		E	
			inches ±0.004	mm ±0.1	inches ±0.004	mm ±0.1	inches ±0.004	mm ±0.1	inches ±0.002	mm ±0.05	inches ±0.004	mm ±0.1
E	Rigid	Front	.874	22.20	.512	13.00	.984	24.99	.126	3.20	.083	2.10
		Rear	.807	20.50	.449	11.40	.984	24.99	.126	3.20	.130	3.30
	Float	Front	.906	23.00	.543	13.80	.984	24.99	.087	2.20	.083	2.10
		Rear	.839	21.30	.480	12.20	.984	24.99	.087	2.20	.130	3.30
A	Rigid	Front	1.201	30.50	.512	13.00	1.312	33.32	.126	3.20	.083	2.10
		Rear	1.134	28.80	.449	11.40	1.312	33.32	.126	3.20	.130	3.30
	Float	Front	1.232	31.30	.543	13.80	1.312	33.32	.087	2.20	.083	2.10
		Rear	1.165	29.60	.480	12.20	1.307	33.20	.087	2.20	.130	3.30
B	Rigid	Front	1.744	44.30	.512	13.00	1.852	47.04	.126	3.20	.083	2.10
		Rear	1.673	42.50	.449	11.40	1.852	47.04	.126	3.20	.130	3.30
	Float	Front	1.776	45.10	.543	13.80	1.852	47.04	.087	2.20	.083	2.10
		Rear	1.705	43.30	.480	12.20	1.852	47.04	.087	2.20	.130	3.30
C	Rigid	Front	2.390	60.70	.512	13.00	2.500	63.50	.126	3.20	.083	2.10
		Rear	2.327	59.10	.449	11.40	2.500	63.50	.126	3.20	.130	3.30
	Float	Front	2.421	61.50	.543	13.80	2.500	63.50	.087	2.20	.083	2.10
		Rear	2.354	59.80	.480	12.20	2.500	63.50	.087	2.20	.130	3.30
D	Rigid	Front	2.354	58.30	.480	12.20	2.500	63.50	.126	3.20	.130	3.30
		Rear	2.217	56.30	.555	14.10	2.406	61.11	.126	3.20	.130	3.30
	Float	Front	2.331	59.20	.654	16.60	2.406	61.11	.087	2.20	.083	2.10
		Rear	2.252	57.20	.567	14.40	2.406	61.11	.087	2.20	.130	3.30

Panel mounting



Shell size	A <sup>+0.6</sup> <sub>-0</sub>		B <sup>+0.6</sup> <sub>-0</sub>		C <sup>+0.6</sup> <sub>-0</sub>		D <sup>+0.6</sup> <sub>-0</sub>		E <sup>+0.6</sup> <sub>-0</sub>		F <sup>+0.6</sup> <sub>-0</sub>	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	.301	7.65	.301	7.65	.270	6.85	.254	6.45	.348	8.85	.222	5.65
A	.301	7.65	.301	7.65	.270	6.85	.254	6.45	.348	8.85	.222	5.65
B	.297	7.55	.297	7.55	.266	6.75	.250	6.35	.348	8.85	.219	5.55
C	.297	7.55	.313	7.95	.266	6.75	.250	6.35	.360	9.15	.219	5.55
D	.297	7.55	.313	7.95	.266	6.75	.250	6.35	.360	9.15	.219	5.55

Shell size	G <sup>+0.6</sup> <sub>-0</sub>		H <sup>+0.6</sup> <sub>-0</sub>		J <sup>+0.6</sup> <sub>-0</sub>		K <sup>+0.6</sup> <sub>-0</sub>		L <sup>+0.6</sup> <sub>-0</sub>		M <sup>+0.6</sup> <sub>-0</sub>	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
E	.325	8.25	.372	9.45	.222	5.65	.325	8.25	.372	9.45	.270	6.85
A	.325	8.25	.372	9.45	.222	5.65	.325	8.25	.372	9.45	.270	6.85
B	.321	8.15	.368	9.35	.219	5.55	.321	8.15	.368	9.35	.266	6.75
C	.329	8.35	.376	9.55	.219	5.55	.321	8.15	.384	9.75	.281	7.15
D	.329	8.35	.376	9.55	.219	5.55	.321	8.15	.384	9.75	.281	7.15

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### Standard density

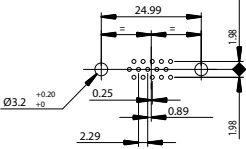
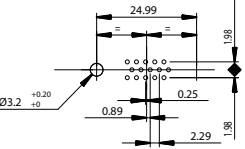
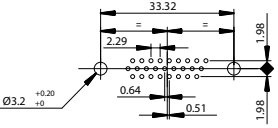
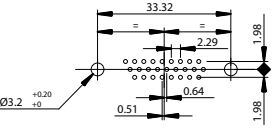
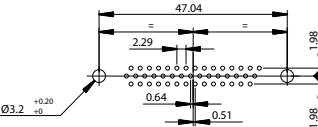
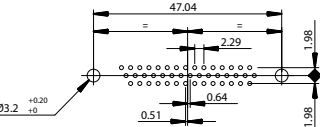
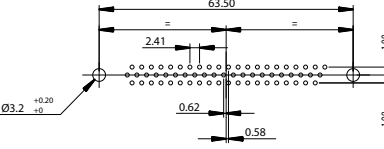
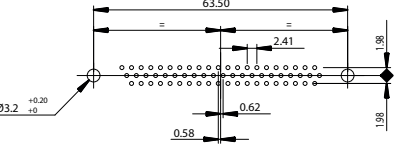
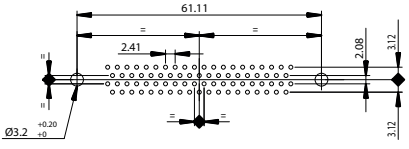
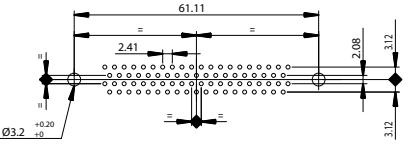
Viewed from front face of male insulator (dimensions in mm)

Layout according to	Number of contacts	Drilling dimensions
MS-18273-1	9 contacts shell size E	
MS-18274-1	15 contacts shell size A	
MS-18275-1	25 contacts shell size B	
MS-18276-1	37 contacts shell size C	
MS-18277-1	50 contacts shell size D	

Suggest 0,89 Ø hole for contact termination positions, for 0.50 / 0.65 Ø PC tail.  
Suggest 1,08 Ø hole for contact termination positions, for 0.69 / 0.84 Ø PC tail.

high density

Viewed from front face of male insulator (dimensions in mm)

Layout according to	Number of contacts	Drilling dimensions	
		Male connector	Female connector
MS-18273-1	9 contacts shell size E		
MS-18274-1	15 contacts shell size A		
MS-18275-1	25 contacts shell size B		
MS-18276-1	37 contacts shell size C		
MS-18277-1	50 contacts shell size D		

Suggest 0,89 Ø hole for contact termination positions, for 0,50 / 0,65 Ø PC tail.  
Suggest 1,08 Ø hole for contact termination positions, for 0,69 / 0,84 Ø PC tail.

5

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