NICOMATIC

CREATIVE
INTERCONNECT
SOLUTIONS

SPACE GRADE

Self-Declaration of Conformity

Rev. b

SPACE APPLICATION

According to ESCC 3401

The CMM connectors tested are measured under ESCC 3401 standard and IEC test procedures

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- We declare the products involved :

- 221V10F26 mated with 222S10M16
- 222Y26M16 mated with 221T26F21

- Have been tested according to the following items of the ESCC3401 standard

See Auto Declaration Annex

- And comply with the level of performance required, provided that the product is applied for its intended use and conforms to the specifications of the manufacturer, and that the installation conforms to the relevant standards.

Please refer to the Annex herewith: List of QUALIFICATION TESTS "ESCC3401" for Reports numbers, titles and test results (specification data).

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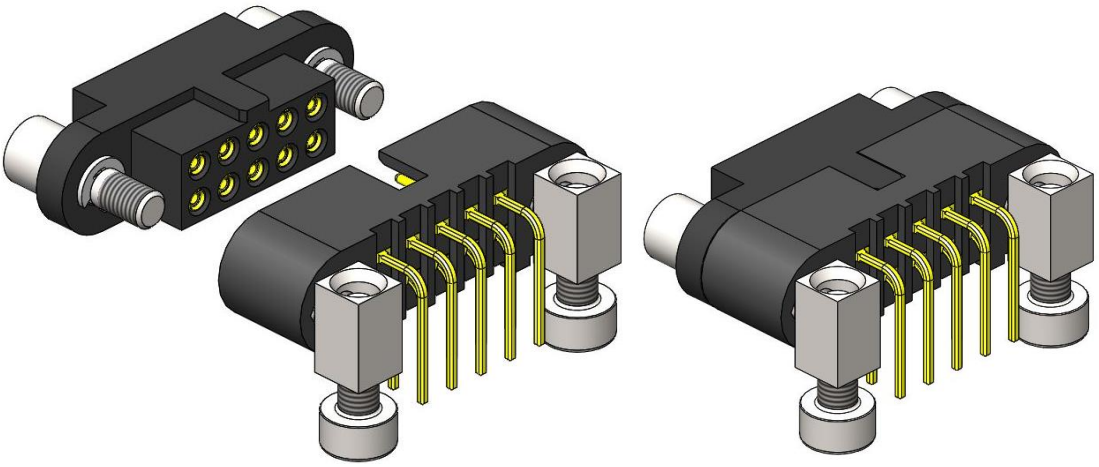
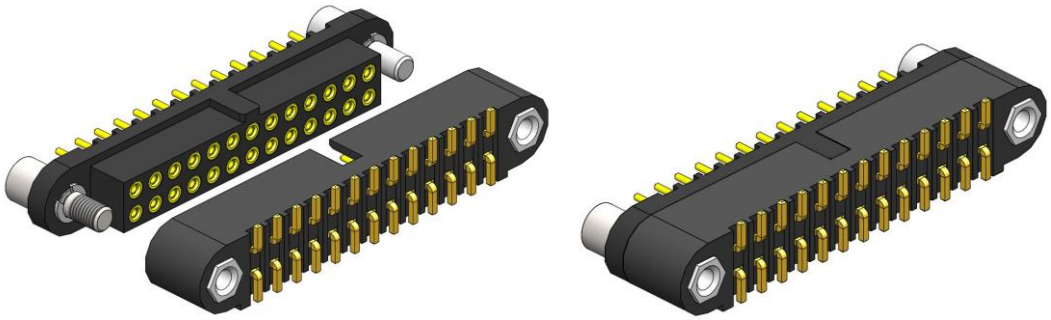
SAMPLE TESTED



221V10F26 Mated with 222S10M16



222Y26M16 Mated with 221T26F21

N°	ESCC Generic Spec N° 3401		Measurements		Symbol	Limits		Unit
	Electrical, Environmental an	Test Method and Conditions	Identification	Conditions		Min	Max	
01	Insulation Resistance	Para. 9.1.1.1 and IEC 512-2, Test 3a, Method 8	Insulation Resistance	Under 500 V DC	R_I	**400 000**	-	MΩ
02	Voltage Proof	Para. 9.1.1.2 and IEC 512-2, Test 4a, Method 8 *@ Sea Level*	Voltage Proof	**1200 V RMS**	I_L	-	0.5	mA
03	Contact Resistance	Para. 9.1.1.3	Gauge 22 Signal Contacts	-	R_{CR}	-	**8.7**	mΩ
04	Magnetism Level	Para. 9.5	Magnetism	-			2	gamma
05	Sinusoidal Vibration	Para. 9.11.2 and IEC 512-4, test 6d *20g / 10 Hz – 2000 Hz - 10 Hz / 4h per axe*	Full Engagement Visual Examination	Screwing Torque 0.2 N.m	-	No Discontinuity greater than 1 µs		-
06	Random Vibration	Para. 9.11.3 and IEC 68-2-35, test Fda *f1= 20Hz / f2= 2000 Hz / ASD = 0.2g²/Hz in 30 min*	**Final Measurements** Full Engagement Visual Examination	Screwing Torque 0.2 N.m	- -	No Discontinuity greater than 1 µs		- -
07	Shock	Para. 9.12.1 and IEC 512-4, test 6c *50g / 11 ms / Half-Sine*	Full Engagement Visual Examination	Screwing Torque 0.2 N.m	-	No Discontinuity greater than 1 µs		-
08	Bump	Para. 9.12.2 and IEC 512-4, test 6b *Peak acceleration: 390m/s²* *Number of bumps: 4000±10*	Full Engagement Visual Examination	Screwing Torque 0.2 N.m	- -	No Discontinuity greater than 1 µs		- -
09	Dry Heat	Para. 9.13.2 and IEC 68-2-2 *2 hours / 125°C*	Insulation Resistance	Under 500 V DC	R_I	**1000**	-	MΩ
10	Damp Heat, Accelerated, First Cycle	Para. 9.13.3 and IEC 68-2-30 *T°C = +25°C to 55°C / HR = 50% to 95% / Duration 24h*	Mated Connectors	-	-	-	-	-
11	Cold Test	Para. 9.13.4 and IEC 68-2-1 *2h / -65°C*	Mated Connectors	-	-	-	-	-
12	Low Air Pressure	Para. 9.13.5 and IEC 68-2-13 *100 000 ft (33 000m alt / 10 mbars) / 10 minutes / Temperature ambient +15°C to +35°C*	Voltage Proof	**250 V RMS**	I_L	-	0.5	mA
13	Damp Heat, Accelerated, Remaining Cycles	Para. 9.13.6 and IEC 68-2-30 *T°C = +25°C to 55°C / HR = 50% to 95% / Duration 120h*	Insulation Resistance	Under 500 V DC	R_I	**100**	-	MΩ
14	Joint Strength / Crimp Contacts	Para. 9.15.3 and ESA PSS-01-726	Gauge 22 Signal Contacts with MIL-W-22759/11 cable	Number of strands : 19 Min = 65 N	F	**90**	-	N
15	Rapid Change Of Temperature	Para. 9.16 and IEC 512-6, test 11d *Except Minus = -65°C / Max = +260°C*	Visual Examination Insulation Resistance Voltage Proof	 Under 500 V DC **1200 V RMS**	- R_I I_L	- 100 0.5	- - -	- MΩ mA
16	Contact Retention (In Insert)	Para. 9.17	Contact Displacement	**Force applied = 10 N**	-	-	0.127	mm
17	Endurance	Para. 9.18 *500 Cycles*	**Initial Measurements** Mating/Unmating Forces Low Level Contact Resistance **Final Measurements** Visual Examination Mating/Unmating Forces Low Level Contact Resistance Insulation Resistance Voltage Proof Leakage Current	 - - - - - Under 500 V DC **1200 V RMS**	 F R_{CL} - F ΔR_{CL} R_I I_L	 **0.2** - - **0.2** - 100 -	 **2.7** **10** - **2.7** **10** - 0.5	 N mΩ - N mΩ MΩ mA
18	Mating And Unmating Forces	Para. 9.20	Force	-	F	**0.2**	**2.7**	N
19	Corrosion	Para. 9.22 and IEC 68-2-11, test Ka *48h / 35°C / Salt solution concentration: 5%*	Visual Examination	-	-	No presence of Corrosion		-
20	Overload Test	Para. 9.26 *Rated Current = 3 A* *Current test = 4.5 A / 30s / 5 times / 90s between cycles*	Internal Temperature Rated Current Contact Resistance Insulation Resistance Voltage Proof Leakage Current	- - Under 500 V DC **1200 V RMS**	T R_{CR} R_I I_L	- - 100 -	35 **10** - 0.5	°C mΩ MΩ mA
21	Engagement And Separation Forces	Para. 9.28 *Separation Force Prob Ø = 0.452 mm* *Engagement Force Probe Ø = 0.488 mm* *Insertion Depth = 2.31 mm* *Test Displacement = 1 mm/second*	Force		F	**0.2**	**2**	N
22	Oversize Pin Exclusion	Para. 9.29 *Probe Ø = 0.617 mm / Force applied = 2.22 N*	-		-	No mating allowed with oversized pins		-
23	Solderability	Para. 9.31 and 512-6, Test 12 a and b *Solder Iron / T°C = +350°C ± 10°C / Duration = 4~5s* *Solder bath / T°C= +245°C ± 5°C / Duration = 5s ± 0.3s*	Surface of contact wetted	-	-	95	-	%

N°	Other Tests than ESCC Generic Spec N° 3401		Measurements		Symbol	Limits		Unit
	Materials Tests	Test Method and Conditions	Identification	Conditions		Min	Max	
01	Radiation	ESCC 22900 Issue 5 *Total Dose = **10 Mrad***	Insulation Resistance	Under 500 V DC	R_I	2 Millions	-	MΩ
02	Outgassing	ECSS-Q-ST-70-02C	Total mass loss Maximum volatile condensable material		T_{ML} M_{VCM}		**0.06** **0.00**	%