

**APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL**

Component Title: Connectors and Savers Electrical Rectangular Non-Removable PCB Contacts, based on type MHD

Executive Member: CNES

Date: 27/01/2022

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Components (including series and families) submitted for Extension of Qualification Approval:

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ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
3401 065	01	Contact: 52, 100, 152, 200, 252, 300, 352 and 400 Contact Codes: 10, 11, 12, 30, 31, 43, 45, 47 and 91	MHD	3401 065 01B 152 46 30 121	HE801, KMC
		Guiding and Locking Devices Codes: 110, 111, 121, 124, 134 and 201		3401 065 01B 152 55 45 110	
		Operating Temperature Range (°C): -55 to +125			

Component Manufacturer Smiths interconnect	2	Location of Manufacturing Plant(s) 31 rue Isidore Maille 76410 Saint-Aubin les Elbeuf	3	Date of original qualification approval: Date: 15/08/1998  Certificate Ref No. 250	4
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ESCC Specifications used for Maintenance of qualification testing: Generic: 3401 Issue: 5  Detail(s): 3401/065 Issue: 6	5	Deviations to LVT testing and Detail Specification used: No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> (supply details in Box 15)  Deviation from current Specifications: No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> (Supply details)	6	Qualification Extension Report reference and date: PV n°334904, 23th July 2021	7
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Summary of procurement or equivalent test results during current validity period in support of this application (those to ESCC listed first)

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Project Name	Testing Level	LAT	Date code	Quantity Delivered
See Excel file				

PID changes since start of qualification None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box:	9	Current PID Verified by: <u>F. Nouals</u> Name of Executive Representative Ref No: P.I.D CDC N° 43 Issue: T Date: 27/01/2022 Rev Date: 01/10/2021	10
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Current Manufacturing facilities surveyed by: <u>F. Nouals</u> on <u>18/09/2021</u> (Name of Executive Representative) (Date)	11
Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain  No new visit since last maintenance due to sanitary situation Report Reference: <u>CRIM 1040193</u>	



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Failure Analysis, DPA, NCCS available:    Yes        No        (Supply data)

Ref. No's and purposes:

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The undersigned hereby certifies on behalf of the ESCC Executive - that the above information is correct; - that the appropriate documentation has been evaluated; - that full compliance to all ESCC requirements is evidence (except as stated in box 15;) - that the reports and data are available at the ESCC Executive and therefore applies on behalf of CNES as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein.

Date: 28/01/2022

JP. BUSSENOT

(Signature of the Executive Coordinator)

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Continuation of Boxes above:



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Non compliance to ESCC requirements:

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No.:	Specification	Paragraph	Non compliance

Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance:

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Executive Manager Disposition

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Application Approval: Yes  No

Action / Remarks:

Date:

**Britta Schade** Digitally signed  
by Britta Schade  
Date: 2022.03.01  
10:17:44 +01'00'  
B.Schade: Head of the Product Assurance  
and Safety Department

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## ANNEX 1: LIST OF TESTS DONE TO SUPPORT EXTENSION OF QUALIFICATION

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Tests conducted in compliance with:

- ESCC 3401 generic specification; Chart V (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:  
See pages 5 to 7 document n° 334904

PART NUMBER	DATE CODE	LOT	SERIAL NUMBER	Qty	SIMILAR TO STYLE
3401 065 01B 052 55 30 111	2112	A	/	5	MHD 052 55 30 111
3401 065 01B 052 44 30 121	2111	A	/	5	MHD 052 44 30 121
0051472-30-J9	1951	A	/	10	0050-147
058558#000F	1945	A	/	10	67-0050

**SAMPLING : CONNECTORS**

PART NUMBER	DATE CODE	LOT	Qty	SIMILAR TO STYLE	LEVEL	
					I	II
					Env/Mec	
3401 065 01B 052 55 30 111	2112	A	1	MHD 052 55 30 111	1	
3401 065 01B 052 44 30 121	2111	A	1	MHD 052 44 30 121	1	
3401 065 01B 052 55 30 111	2112	A	1	MHD 052 55 30 111	2	
3401 065 01B 052 44 30 121	2111	A	1	MHD 052 44 30 121	2	
3401 065 01B 052 55 30 111	2112	A	1	MHD 052 55 30 111	3	
3401 065 01B 052 44 30 121	2111	A	1	MHD 052 44 30 121	3	End/Rét
3401 065 01B 052 55 30 111	2112	A	1	MHD 052 55 30 111		4
3401 065 01B 052 44 30 121	2111	A	1	MHD 052 44 30 121		4
3401 065 01B 052 55 30 111	2112	A	1	MHD 052 55 30 111		5
3401 065 01B 052 44 30 121	2111	A	1	MHD 052 44 30 121		5

**SAMPLING : CONTACTS**

PART NUMBER	DATE CODE	LOT	SIMILAR TO STYLE	DESCRIPTION	HYPERTAC LOT	LEVEL
						II
0051472-30-J9	1951	A	0050-147	Solder straight-through female contact for PCB	HC21065	10
058558#000F	1945	A	67-0050	Solder straight-through male contact for PCB	TS18836	10

Detail Specification reference: 3401/065

## SUMMARY OF RESULTS

Type of test	Details	Specification	PASS or FAIL	Page
Climatic sequence	Dry heat	ESCC Generic Specification n° 3401, ESCC Detail Specification n° 3401/065	PASS	15 & 16
	Damp heat accelerated, 1 <sup>st</sup> cycle		PASS	18
	Cold test		PASS	19
	Low air pressure		PASS	20
	Damp heat accelerated, remaining cycles		PASS	23
	Final measurements		PASS	26 & 27
Rapid change of temperature	Insulation resistance	Specification n° 3401, Specification n° 3401/065	PASS	38
	Voltage proof		PASS	39
Retention	Contact retention	Specification n° 3401, Specification n° 3401/065	PASS	42
Endurance	Contact resistance (initial measurement)	ESCC Generic Specification n° 3401, ESCC Detail Specification n° 3401/065	PASS	43
	Mating/unmating forces (initial measurement)		PASS	44
	Mating/unmating forces (final measurement)		PASS	46
	Contact resistance (final measurement)		PASS	47
	Insulation resistance		PASS	48
	Voltage proof		PASS	49
Contact sets	Engagement & separation forces	Specification n° 3401, Specification n° 3401/065	PASS	54
	Oversize pin exclusion		PASS	55

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**NOTES ON THE COMPLETION OF THE APPLICATION FORM FOR ESCC QUALIFICATION EXTENSION APPROVAL****ENTRIES**

Form heading	shall indicate: - the title of the component as given in its detail specification or the name of the series, family; - the Executive Member; - the entering date; - the certificate number and its sequential suffix.
Box 1	shall provide details given in the table; in particular there shall be listed: - the variants or range of variants; - the range of components (the ESCC code is recommended to indicate the values or values range, the tolerance, the voltage, etc); the designation given in the detail specification as 'base on'; - under Test Vehicle enter either an ESCC code or the specific characteristic capable of identifying the component tested (e.g., voltage of coil for a relay); - under component similar enter a cross if relevant.
Box 2; 3 and 4	As per QPL entry; otherwise, an explanation of the changes must be supplied.
Box 5	Will show the ESCC Generic and Detail specifications, including issue number and revision letter, current at the time the tests reported were performed. If the specifications are different from those current on the date of the application, see Box 6.
Box 6	Will show the deviations from the Generic and Detail Specifications listed in Box 5, in particular deviations from testing. In case of deviations this must be listed in Box 15. In case the referenced specification in Box 5 have currently a different issue and/or revision indicate also whether the test data deviates or not from such current documents.
Box 7	Must reference the report(s) supplied in support of the application.
Box 8	Should provide the details of procurement to the full ESCC System, documentation of all of which should already have been delivered to the ESCC Executive under the terms of the relevant Generic Specification. An appropriate table has been drawn in this box.
Box 9	If the PID evolved after the Original Qualification or after the last Extension of Qualification, adequate details of such evolution shall be provided together with the reasons for the changes. Major changes shall be clearly marked.
Box 10	Identify the current PID issue status, date and actual date of verification. The date of verification of the current PID should be arranged as close as possible to the required date of extension.
Box 11	This box can be completed only after a physical visit to the plant to confirm that no unexplained changes occurred and that the practices, procedures, material, etc. used in manufacturing the components are as described in the PID. This survey shall be carried out in accordance with the requirements of ESCC Basic Specification No. 20200 and its findings shall be recorded.
Box 12	Provide details of, or reference to, any Destructive Physical Analysis (DPA) and Failure Analysis reports as well as any Nonconformance(s) (NCCS) occurred during the qualification validity period, stating if established corrective action have produced satisfactory results.
Box 13	Enter only the name of the Executive Member (i.e., CNES, DLR, ESTEC, etc.) and the signature of the responsible Executive Coordinator.
Box 14	To be used when there is a need to expand any of the boxes from 1 through 12. Identify box affected and reference the Box 14 in the relevant Box. Box 14 can be broken into 14a, 14b, etc. if several boxes have to be expanded.
Box 15	Fill in Table as requested.
Box 16	Any additional action deemed necessary by the Executive Member to bring the submitted data to a standard likely to be accepted by the ESCC Executive should be listed herein or the reason(s) to accept the noncompliance.
Box 17	All Executive Manager recommendations on the application itself, special conditions or restrictions, modifications of the QPL or QML entry, letters to the manufacturer, etc. shall be entered clearly in Box 19, signed by the representative for ESA, and dated.
Box 18	Fill in Table as requested.
Box 19	Confidential Details of PID changes including those of a confidential nature, shall be provided.
Box 20	State noncompliance with reference to specification(s) and paragraph(s). To simplify reference in Box 16 each nonconformance shall be sequentially numbered. If relevant state 'None'.
Box 21	Any additional action deemed necessary by the Executive Member to bring the submitted data to a standard likely to be accepted by the ESCC Executive should be listed herein or the reason(s) to accept the noncompliance.
Box 22	Additional Comments.