



APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: Connectors Electrical for Printed Circuit Boards Removable Contacts Crimp Wire-Wrap Solder and Saver, based on type HE801
 Executive Member: CNES Date: 12/12/2023

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

ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
Parts used for the reconduction test (manufactured at SHYF)					
3401 016	62 and 63	Shell specifications and sizes: 3401/016	HE801	340101601B62MC34 0034 et 340101601B63FD36 0036	Connectors series K
3401 017	MC = 01 to 03 (for the 340101601B62MC3400 34) FD = 18 (for the 340101601B63FD3600 36)	Contact:specification 3401/017 solder contacts are used – New Wire from FISK ALLOY		3401 017 18 B	

Parts cover by the certificate					
3401 016	2 rows: 17, 29, 41, 53, 65, 72, 84, 96, 120 contacts	Shell specifications and sizes: 3401/016	HE801		
3401 016	3 rows: 62, 80, 98, 160 contacts	Shell specifications and sizes: 3401/016	HE801		
3401 016	Guiding and Locking : 26 to 55 – 71 to 81	Shell specifications and sizes: 3401/016	HE801		
3401 017	Solder : 01 to 03 – 06 to 08 – 12 to 14 – 17 to 19 - 64 to 66 - 68 to 70	Contact:specification 3401/017			
3401 017	Crimp : 04 – 15	Contact:specification 3401/017			
3401 017	Wrap : 10 – 11 – 21 - 22	Contact:specification 3401/017			
3401 017	Saver : 67	Contact:specification 3401/017			
		Contact Ratings: 5 A			
		Operating Temperature Range (°C): -55 to +125			

Component Manufacturer Smiths Interconnect	2	Location of Manufacturing Plant(s)	3	Date of original qualification approval: Date: 15/11/1982	4
		31 rue Isidore Maille 76410 Saint-Aubin les Elbeuf Via Pier Domenico da Bissone, 7A 16153 Genova GE Italy		Certificate Ref No. 99	

ESCC Specifications used for Maintenance of qualification testing: Generic: 3401 Issue: 5 Detail(s): 3401016 Issue: 6 3401017 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° 335400, 25 th September 2023	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)

Project Name	Testing Level	LAT	Date code	Quantity Delivered
See appendix				

PID changes since start of qualification

None

Minor*

Major*

*Provide details in box:

Current PID Verified by:

F. Nouals, CNES

Name of Executive Representative

Ref No: P.I.D CDC N° 43

Issue: V

Date: 16/11/2023

Rev Date: 24/10/2023

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Current Manufacturing facilities surveyed by:

S. Hernandez, ESA

on

27/01/2022

(Name of Executive Representative)

(Date)

Satisfactory: Yes No Explain

Report Reference: SMI-AUD-2022



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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:

B. Schade, Head of the Product Assurance and Safety Department



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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: 12/12/2023

Gianandrea Quadri
G. QUADRI, CNES
(Signature of the Executive Coordinator)

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Continuation of Boxes above:



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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); LAT 1 – With Wire FISK ALLOY
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

See page 5/7 document N° 335400

LIST OF COMPONENTS SUBJECT TO THE LOT ACCEPTANCE

PART NUMBER	DATE CODE	LOT	SERIAL NUMBER	Qty	SIMILAR TO STYLE
340101601B62MC340034	2323	A	/	5	KNC 098 55 10 110
340101601B63FD360036	2318	A	/	5	KNC 098 44 30 121
3401 017 18 B	2325	A	/	10	0060-43

SAMPLING : CONNECTORS

PART NUMBER	DATE CODE	LOT	Qty	SIMILAR TO STYLE	LEVEL	
					I	II
340101601B62MC340034	2323	A	1	KNC 098 55 10 110	N° 1	
340101601B63FD360036	2318	A	1	KNC 098 44 30 121	N° 1	
3340101601B62MC340034	2323	A	1	KNC 098 55 10 110	N° 2	
340101601B63FD360036	2318	A	1	KNC 098 44 30 121	N° 2	
3340101601B62MC340034	2323	A	1	KNC 098 55 10 110	N° 3	
340101601B63FD360036	2318	A	1	KNC 098 44 30 121	N° 3	
340101601B62MC340034	2323	A	1	KNC 098 55 10 110		N° 4
340101601B63FD360036	2318	A	1	KNC 098 44 30 121		N° 4
340101601B62MC340034	2323	A	1	KNC 098 55 10 110		N° 5
340101601B63FD360036	2318	A	1	KNC 098 44 30 121		N° 5

SAMPLING : CONTACTS

PART NUMBER	DATE CODE	LOT	SIMILAR TO STYLE	DESCRIPTION	HYPERTAC LOT	LEVEL
						II
3401 017 18 B	2325	A	0060-43	Solder straight-through female contact	EHC5469	10

Detail Specification reference:

3401

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° 3401/016	PASS	15 & 16
	Damp heat accelerated, 1 st cycle		PASS	18
	Cold test		PASS	19
	Low air pressure		PASS	20
	Damp heat accelerated, remaining cycles		PASS	23
	Final measurements		PASS	25 & 26
Rapid change of temperature	Insulation resistance	Specification n° 3401, Specification n° 3401/039	PASS	37
	Voltage proof		PASS	38
Retention	Contact retention	Specification n° 3401, Specification n° 3401/039	PASS	41
Maintenance aging	Insertion force (initial measurement)	ESCC Generic Specification n° 3401, ESCC Detail Specification n° 3401/016 & 17	PASS	40
	Contact retention		PASS	42
	Insertion force (final measurement)		PASS	43
Endurance	Contact resistance (initial measurement)	ESCC Generic Specification n° 3401, ESCC Detail Specification n° 3401/039	PASS	44
	Mating/unmating forces (initial measurement)		PASS	45
	Mating/unmating forces (final measurement)		PASS	47
	Contact resistance (final measurement)		PASS	48
	Insulation resistance		PASS	49
	Voltage proof		PASS	50
Contact sets	Engagement & separation forces	Specification n° 3401, Specification n° 3401/039	PASS	54 & 55
	Probe damage test		PASS	57



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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.