Executive Member:

CNES

## APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title:

Switches, Thermostatic, Bimetallic, SPST, Opening contact

Date:

20/02/2019

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Components (includ	ing series and families) s	ubmitted for Extension	of Qualification	Approval:				1_	
ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS		BASE	D	TEST VEHICLE / S	COMPONENT SIMILAR	Т	
3702 001 01B	01	Grade Z and Grade Y TH-47					All other varian Grade Z and Gr	(22)	
3702 001 02B	02	Grade Z and Grad	e Y	TH-47		370200102B0100000 BY	All other varian Grade Z and Gr Y		
3702 001 03B	03	Grade Z and Grade Y TH-47					All other varian Grade Z and Gr Y	100.00	
3702 002 01B	01	Grade Z and Grade Y TH-47 pot version				370200202B0100000 BH	All other varian Grade Z and Gr Y	X 32-34	
Component M	fanufacturer 2	Location of Mar	nufacturing Plan	t(s) 3		39	***************************************	4	
Comepa		88 Avenue du Général de Gaulle 93170 BAGNOLET Cedex				Date of original qualification approval: Date: 24/03/2004			
						Certificate Ref No. 275			
ESCC Specifications Maintenance of qua		Deviations to LVT testing and Detail Specification used:				Qualification Extension Report reference and date:			
Generic: 3702	Issue: 05	No ⊠ Yes ☐ (supply details in Box			RF1	RF1820-18000334-Naked, 10/2018			
D-4-1/-). 070000		15)				RF1820-18000334-Potted, 10/2018			
Detail(s): 370200 37020		Deviation from current Specifications:				uation potting: PRD-ENR-			
		No ⊠ Yes □ (Supply details)				d'exeprtise-ESA-EVAL Potting, 02/2019			
Summary of procure	ement or equivalent test r	esults during current va	lidity period in s	upport of this a	pplication	on (those to ESCC listed fi	rst)	8	
Project Name	Testing Level	LAT Date code				Quantity Delivered			
9.Thermostats delivered	ж								
				1000					
			İ		Ì				
PID changes since s	start of qualification	9	Current PID	Verified by:		B. Marty (CNES	3)	10	
None 🗆						Name of Excutive Represe			
Minor* □			Ref No:	10.PID47-L-V4	1.pdf				
Major* ⊠	*Provide details in box:	Issue: L				Date:	01/10/2018		
			Rev Date:	01/10/2018				1 20 3	
Current Manufacturi	ng facilities surveyed by:	B. Marty (CNES) and S. Hernandez (ESA)				n 24	/10/2018	11	
		(Name	e of Executive R	epresentative)			(Date)		
Satisfactory:	Yes ⊠	No □ Exp	olain						
Report Reference:	ESCC-AUD	-COM-2018-1							
,			A SAME AND A						

# APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL Page 2 Component title: Switches, Thermostatic, Bimetallic, SPST, Opening contact Appl. No. Executive Member: CNES 20/12/2018 Date: 275G rev1 12 Failure Analysis, DPA, NCCS available: Yes $\boxtimes$ No (Supply data) Ref. No's and purposes: NCCS 2CCOM701, 2CCOM801 and 2CCOM802 have been closed out. 13 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. 20/02/2019 JP. BUSSENOT (Signature of the Executive Coordinator) Continuation of Boxes above: 14 Updated of several process files: PID Introduction of Chief inspector and deputy roles in PID Introduction of Potting In PID document + Detail specification Introduction of new production software TTM New definition of part number with introduction of potting Update of test F2, F3? F4 with introduction of potting Update of marking operations



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Non compliance to ESCC requirements:

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No.:	Specification	Paragraph	Non compliance	
			n n	
Additional task	re required to achieve full compliance for	ESCO qualification or estimate for accordate like		T
noncompliance	e:	ESCC qualification or rationale for acceptability	v or	16
Executive Man	ager Disposition			T
				17
Application Ap				
Action / Remai	rks:			
			7/1/	
			, 3(///	
Date:			-100/	
			B. Schade, Head of ESA Product Assurance	



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

Tests conducted in compliance with:

ESCC 3702 generic specification; Chart V (for ESCC/QPL parts);

or PID-TFD

(for ESCC/QML parts)

Tests vehicle identification/description:

TH4702BHY010000 -	TH4702BHY010000 Potted -
370200102B0100000HY DC 1820	370200102B0100000HY DC 1820 Potted

Detail Specification reference:

3702/001, 3702/002

Chart V	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
dnoub	Rapid Change of Temperature	×	IEC Publication No. 60068-2-14	1820	6+6	0	
	Vibration	×	IEC Publication No. 60068-2-6	1820	6+6	0	
cal Su	Shock	×	IEC Publication No. 60068-2-27	1820	6+6	0	
schani	Resistance to Soldering Heat	⋈	IEC Publication No. 60068-2-20	1820	6+6	0	
Environmental / Mechanical Subgroup	Seal Test	⋈	IEC Publication No. 60068-2-17	1820	6+6	0	
	Electrical and Thermal Measurements	⊠	Table 2 of the Detail Specification	1820	6+6	0	
	External Visual Inspection	⊠	ESCC Basic Specification No. 20500	1820	6+6	o	
Endurance Subgroup	Operating Life	×	ESCC 3702 Para. 9.17	1820	4 + 4	0	
	Overload	×	ESCC 3702 Para. 9.16	1820	4 + 4	0	
	Seal Test	×	IEC Publication No. 60068-2-17	1820	4 + 4	0	
	Electrical and Thermal Measurements during Endurance Testing	⊠	Table 6 of the Detail Specification	1820	4 + 4	0	
	External Visual Inspection	⊠	ESCC Basic Specification No. 20500	1820	4+4	0	



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Chart V	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Electrical Subgroup Electrical Measurements	Creepage	×	ESCC 3702 Para. 9.6	1820	3 + 3	0	
	Response Time	×	ESCC 3702 Para. 9.8	1820	3 + 3	0	
	Electrical and Thermal Measurements	×	Table 2 of the Detail Specification	1820	3 + 3	0	***************************************
	External Visual Inspection	⊠	ESCC Basic Specification No. 20500	1820	3 + 3	0	
Electrical Subgroup Assembly Capability Tests	Solderability		IEC Publication No. 60068-2-20	1820	2+0	0	
	Permanence of Marking	⊠	ESCC Basic Specification No. 24800	1820	2+2	0	
	Robustness of Termination	×	IEC Publication No. 60068-2-21	1820	2+0	0	t descend
	Seal Test	×	IEC Publication No. 60068-2-17	1820	2+0	0	
Additional Tests	High & Low Temperature Storage	×	IEC Publication 60068-2-2 & 60068- 2-1	1820	2 + 2		
	Damp Heat	×	IEC Publication No. 60068-2-78	1820	3 + 2		



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	NOTES ON THE COMPLETION OF THE APPLICATION FORM FOR ESCC QUALIFICATION EXTENSION APPROVAL
ENTRIE Form he	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	d 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'.

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 21** 

**Box 22** Additional Comments.