

**APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL**

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Component Title: Relays, latching, Types GP 250 and GP2

Appl. No.

Executive Member: CNES

Date: 04/10/2023

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Components (including series and families) submitted for Extension of Qualification Approval:						1
ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR	
3602 003	01 to 06	Coil Voltages : 12 and 26.5V	Type GP2	-		
3602 010	01 to 06	Coil Voltages : 12 and 26.5V	Type GP250	36020100226V (x2) 36020100126V (x2)	Other variants	
Component Manufacturer LEACH International Europe		Location of Manufacturing Plant(s) 2 rue Goethe 57430 Sarralbe		Date of original qualification approval: Date: 09/2019 Certificate Ref No. 362		2, 3, 4
ESCC Specifications used for Maintenance of qualification testing: Generic: 3602 Issue: 5 Detail(s): 3602 003 Issue: 10 3702 010 Issue: 8		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)		Qualification Extension Report reference and date: RT_1404154 EC 20/06/2023		5, 6, 7
Summary of procurement or equivalent test results during current validity period in support of this application (those to ESCC listed first)						8
Project Name	Testing Level	LAT	Date code	Quantity Delivered		
Visu GP2 et GP250 Historique transactions.xls				GP2: 60 GP250: 4786		
PID changes since start of qualification None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box: 19		Current PID Verified by: <u>L. Fontaine, CNES</u> Name of Executive Representative Ref No: DR_1173363 (GP2) DR_1163959 (GP250) Issue: 5 7 Rev Date: 21/07/2023 23/08/2023				9, 10
Current Manufacturing facilities surveyed by: <u>L. Fontaine, CNES</u> on <u>18/10/2022</u> (Name of Executive Representative) (Date)						11
Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain						
Report Reference: <u>2022.0014775-CR-Fontaine-Qualifications -LEACH-Septembre-2022</u>						



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Failure Analysis, DPA, NCCS available:

Yes No

(Supply data)

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Ref. No's and purposes:

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: 04/10/2023

Gianandrea Quadri
G. QUADRI, CNES

(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 Non-compliance:

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

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Tests conducted in compliance with:

- ESCC 3702 generic specification; Chart F4 (for ESCC/QPL parts);
- or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

36020100226V DC 2140
 36020100126V DC 2202
 36020100226V DC 2303
 36020100126V DC 2303

Detail Specification reference: 3602/003 issue 10 & 3602/010 issue 8

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental / Mechanical Subgroup (Column 1)	Thermal Shock	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 107	2303	6	0	
	Low Level Sine Vibration	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 204	2303	6	0	
	Random Vibration	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 214	2303	6	0	
	Low Level Mechanical Shock	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 213	2303	6	0	
	Resistance to Soldering Heat	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 210	2303	6	0	
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2303	6	0	
Environmental / Mechanical Subgroup (Column 2)	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2303	6	0	
	High Level Sine Vibration	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 204	2303	6	0	
	High Level Mechanical Shock	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 213	2303	6	0	
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2303	6	0	
Endurance Subgroup 1 (Column 1)	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2303	6	0	
	Low Level Life	<input checked="" type="checkbox"/>	ESCC 3602 Para. 8.11.1	2303	3	0	
	Inductive Life	<input type="checkbox"/>	ESCC 3602 Para. 8.11.2				Only applicable to relays with Rated Resistive Load Contact Current greater than or equal to 5A.
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2303	3	0	



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Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Endurance Subgroup 1 (Column 2)	Coil Life	<input type="checkbox"/>	ESCC 3602 Para. 8.12				In accordance with detail specification the coil life was not carried out because there is no significant change in design since the relay qualification.
	Seal (Fine and Gross Leak)	<input type="checkbox"/>	MIL-STD-202, Test Method 112				
	External Visual Inspection	<input type="checkbox"/>	ESCC Basic Specification No. 20500				
Endurance Subgroup 1 (Column 3)	Intermediate Current	<input checked="" type="checkbox"/>	ESCC 3602 Para. 8.13	2303	3	0	
	Mechanical Life	<input type="checkbox"/>	ESCC 3602 Para. 8.14				Only applicable to relays with Rated Resistive Load Contact Current greater than or equal to 5A.
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2303	3	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2303	3	0	
Endurance Subgroup 2	Resistive Life	<input checked="" type="checkbox"/>	ESCC 3602 Para. 8.11.3	2140 2303	6 3	0	
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2140 2303	6 3	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2140 2303	6 3	0	
Assembly Capability Subgroup	Solderability	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 208	2202 2303	3 3	0	
	Overload	<input checked="" type="checkbox"/>	ESCC 3602 Para. 8.16	2202 2303	3 3	0	
	Permanence of Marking	<input type="checkbox"/>	ESCC Basic Specification No. 24800				Not applicable for laser marking
	Terminal Strength	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 211	2202 2303	3 3	0	
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2202 2303	3 3	0	
Additional Tests		<input type="checkbox"/>					
		<input type="checkbox"/>					
		<input type="checkbox"/>					



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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.