



APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: Relays, latching, Type EL415

Executive Member: CNES

Date: 07/11/2023

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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
3602 004	04,06, 09, 14, 16 and 19	Coil Voltage : 12 and 28 V	Type EL415	3602 004 09 28V x2	All variants

Component Manufacturer REL-STPI	2	Location of Manufacturing Plant(s) 22, rue des chaises 45140 St Jean de la Ruelle - France	3	Date of original qualification approval: Date: 01/11/1982 Certificate Ref No. 98	4
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ESCC Specifications used for Maintenance of qualification testing: Generic: 3602 Issue: 4 Detail(s): 3602 004 Issue: 5	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: 3811.02.23 Rapport Essais VOQ EL415, 01/02/2023 3812.02.23 Essai Périodique EL415, 14/02/2023 DC 86-22, 22/07/2022 Dossier de Contrôle LVT 3 DC 259-22, 24/01/2023 Dossier de Contrôle LVT 3	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 File : Etat des ventes _ EL 415 d'avril 2021 à septembre 2023				338

PID changes since start of qualification None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box: 19	9	Current PID Verified by: L. Fontaine, CNES Name of Executive Representative Ref No: PID EL415 Issue: S Rev Date: 28/09/2023	10	Date: 30/10/1984
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Current Manufacturing facilities surveyed by: Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain	L. Fontaine, CNES (Name of Executive Representative)	on 22/11/2022 (Date)	11
Report Reference: 2022.0017036-CR-Fontaine-Visite -REL-STPI-Novembre-2022			



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

Ref. No's and purposes: 2CREL303: delay of qualification renewal CLOSED

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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.

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

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Tests conducted in compliance with:

- ESCC 3602 generic specification; Chart F4 (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

3602 004 09 28V (EL 415 143 A F70) DC 2251	
3602 004 09 28V (EL 415 143 A F70) DC 2225	

Detail Specification reference: 3602/004

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	2251	6	0	
	Low Level Sine Vibration	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 204	2251	6	0	
	Random Vibration	<input type="checkbox"/>	MIL-STD-202, Test Method 214				Only applicable to relays with rated resistive load contact current less than 5A.
	Low Level Mechanical Shock	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 213	2251	6	0	
	Resistance to Soldering Heat	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 210	2251	6	0	
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2251	6	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2251	6	0	
Environmental / Mechanical Subgroup (Column 2)	High Level Sine Vibration	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 204	2251	6	0	
	High Level Mechanical Shock	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 213	2251	6	0	
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2251	6	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2251	6	0	
Endurance Subgroup 1 (Column 1)	Low Level Life	<input type="checkbox"/>	ESCC 3602 Para. 8.11.1				Only applicable to relays with rated resistive load contact current less than 5A.
	Inductive Life	<input checked="" type="checkbox"/>	ESCC 3602 Para. 8.11.2	2251	3	0	
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2251	3	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2251	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				NA as per agreed deviation in detail specification
	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	2251	3	0	
	Mechanical Life	<input checked="" type="checkbox"/>	ESCC 3602 Para. 8.14	2251	3	0	
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2251	3	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2251	3	0	
Endurance Subgroup 2	Resistive Life	<input checked="" type="checkbox"/>	ESCC 3602 Para. 8.11.3	2251 2225	6 6	0	
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2251 2225	6 6	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2251 2225	6 6	0	
Assembly Capability Subgroup	Solderability	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 208	2251 2225	3 3	0	
	Overload	<input checked="" type="checkbox"/>	ESCC 3602 Para. 8.16	2251 2225	3 3	0	
	Permanence of Marking	<input type="checkbox"/>	ESCC Basic Specification No. 24800				NA
	Terminal Strength	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 211	2251 2225	3 3	0	
	Seal (Fine and Gross Leak)	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 112	2251 2225	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.