200	ESC	C
100	Control of	

Component Title:

Relays, electromagnetic, latching, type TL

Page 1

	300								Appl. N	10.
	Executive M	ember:	CNES			Date:	26/07/2023	88M		
Components (include	ling series and families) submitted fo	r Extension	of Qualification	n Approval:					1
ESCC COMPONENT NO.	VARIANTS	RAN	GE OF COI	MPONENTS	В	ASED ON		TEST /EHICLE / S	COMPONEN SIMILAR	
3602 002	01 to 06	Rated co	il Voltage		TL rela	ys	ESCO 12V	C 3602 002 01	All variants	
					İ			C 3602 002 01		
Component M REL-STPI	22 Rue d	5-17 (3-19)-000-000-000-000-000-000-000-000-000-0			Date of origin Date:					
							Octanicate IX			
ESCC Specification: Maintenance of qua			is to LVT te	sting and Detai	il Specificati	6 on	Qualification reference an	Extension Report d date:		7
Generic: 3602 Detail(s): 3602/00	Issue: 4	No ⊠ Deviation No ⊠	from curre	15) nt Specification	y details in B ns: ny details)	οx	See also Re new base su	.12.21, 26/08/2022, port 01.03.22, 19/10 pplier, .03.21, 29/03/2021		tion of
Summary of procure	ement or equivalent tes	t results durin	a current va	alidity period in	support of ti	nis an	nlication (those	e to ESCC listed firs	st)	8
Project Name	Testing Leve		LAT	andity period in	Date code		phodien (most	Quantity D		
Data livraisons T & SCC - MAJ 19092022.xlsx	TL						2020 : 2 2021 : 4 2022 : 4	4989		
PID changes since s	start of qualification		9	Current PID	Verified by			L. Fontaine CNES	 S	10
None							Name of	Excutive Represent	ative	
Minor* □				Ref No:	PID TL - I	ND Z				
Major* ⊠	*Provide details in bo	x:		Issue:	Z			Date:	01/06/1985	
	19			Rev Date:	20/03/2023	3				
Current Manufacturing facilities surveyed by:				L. Fontaine, CNES			on	1/2022	11	
			(Name	e of Executive F	Representati	ve)		(D	Date)	
Satisfactory:	Yes ⊠	No	□ Exp	olain						
Report Reference:	2022.0017036-0 -REL-STPI-Nove		isite							

ESCC

APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component title:

Relays, electromagnetic, latching, type TL

Page 2

Appl. No.

Executive Member:

CNES

No

 \boxtimes

Date: 26/07/2023

M8

12

Failure Analysis, DPA, NCCS available: Yes

NCCS 2CREL202 :

Breaking of a coil's wire during a customer's thermal vacuum test. Investigations finished at ESA laboratory

(Supply data)

(see report FA0005812_Test-Repport). CLOSED.

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.

Date:

26/07/2020

Gianandrsa Quadri
(Signature of the Executive Coordinator)

Continuation of Boxes above:

Ref. No's and purposes:

14

	EG	CC
230	ES	
1	15	

Component title:

Relays, electromagnetic, latching, type TL

Page 3 Appl. No.

	Executive Me	ember: CNES	Date:	26/07/2023	88M	j
Non compliance to ESCC requi	irements:					15
No.: Spec	ification	Paragraph		Non complian	ce	
	-					
dditional tasks required to set		00				
noncompliance:	eve full compliance for ES	CC qualification or rationale for accep	tability of			16
xecutive Manager Disposition						47
pplication Approval: Yes	⊠ No □				L	17
ction / Remarks:						
				2 0		
			4	1/1		
ate:				. 00/		
			B. Scha	de, Head of the Produc nd Safety Department	ct Assurance	



Component Title:

Relays, electromagnetic, latching, type TL

Page 4 Appl. No.

Executive Member:

CNES

Date: 26/07/2023

88M

18

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

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:

	ESCC 3602 002 01 26V (TL 26	ESCC 3602 002 01 26V(TL 26 F70
	F70), DC 21-06	NN), DC 22-36
	ESCC 3602 002 01 12V (TL12	
	F70), DC 21-42	

Detail Specification reference:

3602/002

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
group	Thermal Shock	×	MIL-STD-202, Test Method 107	21-42 22-36	6 6	0	
	Low Level Sine Vibration	×	MIL-STD-202, Test Method 204	21-42 22-36	6 6	0	
ical Sul	Random Vibration	⊠	MIL-STD-202, Test Method 214	21-42 22-36	6 6	0	
I / Mechani (Column 1)	Low Level Mechanical Shock	⊠	MIL-STD-202, Test Method 213	21-42	6	0	
ental / I	Resistance to Soldering Heat	×	MIL-STD-202, Test Method 210	21-42	6	0	
Environmental / Mechanical Subgroup (Column 1)	Seal (Fine and Gross Leak)	×	MIL-STD-202, Test Method 112	21-42	6	0	
Ē	External Visual Inspection	×	ESCC Basic Specification No. 20500	21-42	6	0	
Environmental / Mechanical Subgroup (Column 2)	High Level Sine Vibration	×	MIL-STD-202, Test Method 204	21-42 22-36	6 6		
	High Level Mechanical Shock		MIL-STD-202, Test Method 213	21-42	6	0	
Environmental / chanical Subgro (Column 2)	Seal (Fine and Gross Leak)	\boxtimes	MIL-STD-202, Test Method 112	21-42	6	0	
Mech	External Visual Inspection		ESCC Basic Specification No. 20500	21-42	6	0	
Endurance Subgroup 1 (Column 1)	Low Level Life		ESCC 3602 Para. 8.11.1	21-42	3	0	
	Inductive Life		ESCC 3602 Para. 8.11.2	-		-	Only applicable to relays with rate
	Seal (Fine and Gross Leak)		MIL-STD-202, Test Method 112	-	-		resistive load contact current greater than or equal to 5A
	External Visual Inspection	0	ESCC Basic Specification No. 20500	1-	-	.=	



Page 5

Appl. No.

88M

Relays, electromagnetic, latching, type TL Component title:

CNES Date: 26/07/2023 Executive Member:

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		ESCC 3602 Para. 8.12	-	¥	-	Coil life and susbsequent tests shall only be performed for Qualification.
	Seal (Fine and Gross Leak)		MIL-STD-202, Test Method 112	-	•	-	They are not required for Periodic Testing except in the cas of any
	External Visual Inspection	0	ESCC Basic Specification No. 20500	-	-	-	significant change to the design
1	Intermediate Current	×	ESCC 3602 Para. 8.13	21-42	3	0	
Endurance Subgroup 1 (Column 3)	Mechanical Life		ESCC 3602 Para. 8.14	-	-	-	Only applicable to relays with rated resistive load contact current greater than or equal to 5A
(Colur	Seal (Fine and Gross Leak)	×	MIL-STD-202, Test Method 112	21-42	3	0	
Endur	External Visual Inspection	×	ESCC Basic Specification No. 20500	21-42	3	0	
Endurance Subgroup 2	Resistive Life	×	ESCC 3602 Para. 8.11.3	21-42 21-06	6 6	0	
	Seal (Fine and Gross Leak)	×	MIL-STD-202, Test Method 112	21-42 21-06	6 6	0	
	External Visual Inspection	⋈	ESCC Basic Specification No. 20500	21-42 21-06	6 6	0	
	Solderability	⋈	MIL-STD-202, Test Method 208	21-42 22-36	3 5	0	
ability	Overload	⋈	ESCC 3602 Para. 8.16	21-42	3	0	
Assembly Capability Subgroup	Permanence of Marking		ESCC Basic Specification No. 24800	-	-	-	Not applicable for laser marking
	Terminal Strength	⊠	MIL-STD-202, Test Method 211	21-42 22-36	3 3	0	
	Seal (Fine and Gross Leak)	⊠	MIL-STD-202, Test Method 112	21-42 22-36	3 3	0	
s		0					
Tests							
7		_	F.	1 1		I	I



Box 22

Additional Comments.

APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component title: Relays, electromagnetic, latching, type TL

Executive Member: CNES Date: 26/07/2023

Page 7 Appl. No. 88M

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

	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.