

Component Title:

CONNECTORS, ELECTRICAL, RECTANGULAR, NON REMOVABLE SOLDER BUCKET, PCB AND WIRE-WRAP CONTACTS AND REMOVABLE COAXIAL AND POWER CONTACTS, BASED ON TYPE

Appl. No.

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Executive Member: CNES Date: 13/03/2018 71R-rev1 1 Components (including series and families) submitted for Extension of Qualification Approval: ESCC COMPONENT BASED COMPONENT TEST VARIANTS RANGE OF COMPONENTS VEHICLE / S ON SIMILAR NO. 3401/001 01 & 02 Shell size : E. A. B. C. D. F D*M D*MA See test report 3401/004 01 to 25 Standard density layout: 9, 15, 25, 37, 50 size 20 contacts 3401/022 3401/040 High density layout : 15, 26, 44, 62, 78, 104 size 22 contacts 01 to 95 01 to 17 3401/080 Combined contact arrangements : 3W3 to 8W8, 5W1 to 47W1 01 05 to 14, 25 to 39, 46 to 55, 61 to 65, Mounting Type: standard mounting holes; floating mount; captive nuts 3401/072 72, 73, 76 to 80 Termination contacts: solder bucket, straigth PCB, 90° PCB, wire Gold-plated non-magnetic coating Coaxial contact arrangements: 3401/004 variants 01 to 25 Power contact arrangements: 3401/040 variants 01 to 17 Operating Temperature Range (°C): -55 to +125 2 Location of Manufacturing Plant(s) Component Manufacturer 3 4 **C&K Components SAS** Rue Bertholet B.P. 359 Date of original qualification approval: 39105 DOLE Cedex - France 12/02/1981 Date: Certificate Ref No. 5 6 7 ESCC Specifications used for Qualification Extension Report Deviations to LVT testing and Detail Specification Maintenance of qualification testing: reference and date: Generic: 3401 PV 161-17C 17/02/2017 (contact test report) No (supply details in Box \boxtimes PV 162-17C 17/02/2017 (connector test report) PV 835-17C 1/09/2017 (qualif LCP insulator) Detail(s): 3401/001 10 Deviation from current Specifications: 3401/004 4 11 3401/022 3401/040 6 3401/072 3401/080 4 No \boxtimes Yes (Supply details) 8 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 Quantity Delivered Date code See appendix PID changes since start of qualification 9 Current PID Verified by: Sauveplane Jean-baptiste 10 Name of Excutive Representative None Minor* \boxtimes Ref No: CS-FR030 Major* Issue: 2 rev M Date: 13/03/2018 *Provide details in box: Rev Date: 13/03/2018 11 Current Manufacturing facilities surveyed by: CNES on 14/12/2016

APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL Page 2 Component title: CONNECTORS, ELECTRICAL, RECTANGULAR, NON REMOVABLE SOLDER BUCKET, PCB AND WIRE-WRAP CONTACTS AND REMOVABLE COAXIAL AND POWER CONTACTS, BASED ON TYPE Appl. No. Executive Member: CNES Date: 13/03/2018 71R-revv1 12 Failure Analysis, DPA, NCCS available: Yes × (Supply data) No Ref. No's and purposes: 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 CNES as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein. Date: 13/03/2018 JP. BUSSENOT (Signature of the Executive Coordinator) Continuation of Boxes above: 14 Box 7 - Report PV 835-17C 1/09/2017 (qualif LCP insulator) is based on Chart IV testing - Only tests pertinent to the insulating material were performed as reflected in the Chart below 16 Mated Connector Sets (1) 11 Ш IV 4 Mated 4 Mated 4 Mated 4 Mated (4) Connector Sets Connector Sets Connector Sets Connector Sets Wiring Wiring Wiring Wiring Para. 9.10 Para. 9.10 Para. 9.10 Para. 9.10 Mating/ Rapid Change Vibration High Temp. Unmating of Temp. Measurement Forces Para. 9.11 Para. 9.16 Para. 9.25 Para. 9.20 Contact Shock or Overload High Temp. Bump Retention Storage Test Para. 9.12 Para. 9.26 Para. 9.17 Para. 9.21

Insert

Retention

Para. 9.23

1

Maintenance

Aging (4)

Para. 9.27

1

Total number of failures: 1

Endurance

Para. 9.18

1

Climatic

Sequence

Para. 9.13

1

Component title:

CONNECTORS, ELECTRICAL, RECTANGULAR, NON REMOVABLE SOLDER BUCKET, PCB AND WIRE-WRAP CONTACTS AND REMOVABLE COAXIAL AND POWER CONTACTS, BASED ON TYPE D*M

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		Executive Member:	CNES	Date:	13/03/2018	71R-rev1
Non compliance to ESCC requirements:						
No.:	Specification		Paragraph		Non compliance	
Additiona	I asks required to achieve full co	mpliance for ESCC qua	alification or rationale for accepta	ability of		
noncomp	liance:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,		16
						44
	(0.00					
Executive	e Manager Disposition					17
Application	on Approval: Yes	No 🗆				
Action / F	Remarks:					
					3. D	7
				/	D. W	/
Date:					ature. ESA Representative	

				(Name of Executive Representative)	(Date)
Satisfactory:	Yes	\boxtimes	No		Explain	
Report Reference:		CRIM_10	013659		-	



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

Tests conducted in compliance with:

ESCC 3401 generic specification; Chart V (for ESCC/QPL parts); Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

DBMA25 FO, DBM25 F179A, DEMA15 FO	DDMA78 FO, DDM78 OL3, DFMA104 FO FR172,
DEBM15 DEM15 OL3,	DFM104 OL3-FR172
DAMA15 FO, DABMA15, DAM15 1A7N	DBM5W5

Detail Specification reference:

3401001

Chart V	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed Comments on Rejection
	Wiring	⊠	ESCC 3401 Para. 9.10	1650	3	0	
dno	Climatic Sequence	⊠	ESCC 3401 Para. 9.13	1650	3	0	
Environmental and Mechanical Subgroup	Permanence of Marking	⋈	ESCC 24800	1650	3	0	
vironm	Corrosion	⊠	IEC Publication No. 68-2-11	1650	3	0	
Med	Seal Test		ESCC 3401 Para. 9.9				Not applicable
	Plating Thickness	⊠	ESCC 3401 Para, 5,2,3	1650	3	0	
	Wiring	⋈	ESCC 3401 Para. 9.10	1650	3	0	
	Rapid change of Temperature	⊠	ESCC 3401 Para. 9.16	1650	3	0	
	Contact Retention	⋈	ESCC 3401 Para. 9.17	1650	3	0	
Endurance Subgroups	Maintenance Ageing	×	ESCC 3401 Para. 9.27	1650	10		Only applicable for 5W5 connectors
gqng	Endurance	⊠	ESCC 3401 Para. 9.18	1650	3	0	
nce (Seal Test		ESCC 3401 Para. 9.9				Not applicable
dura	Joint Stength	×	ESCC 3401 Para. 9.15	1650	6	0	
<u></u>	Engage/Separ. Forces	×	ESCC 3401 Para. 9.28	1650	110	0	
	Oversize Pin Exclusion	×	ESCC 3401 Para. 9.29	1650	40	0	
	Probe Damage	\boxtimes	IEC Publication No. 512-8	1650	40	0	
E .							
Additional Tests							
Ad							



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NOT	ES 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'.

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.

Box 21