



APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

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Component Title: Connectors Miniature Electrical Circular Push-Pull Coupling
Removable Crimp Contacts, based on type DBAS

Appl. No.

Executive Member: CNES

Date: 11/05/2015

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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 |
|--------------------|----------|---|----------|----------------------------|-------------------|
| 3401/008 | 01 | Circular Multicontacts connectors. | DBAS | DBAS 74-12-0 SN IA 090 | |
| 3401/009 | 01 to 20 | Standard contact arrangements with 3, 7, 12, 19, 27, 37 or 61 contacts in wire size AWG # 20. | | DBAS 78G 12-0 PN IA 090 | |
| 3401/012 | 01 to 04 | Special contact arrangements with contacts size AWG 22, 20, 16, 12 and 8. | | DBAS 70-27-2 SN IA 090 | |
| 3401/064 | 01 to 41 | Operating Temperature Range (°C): -65 to +200 | | DBAS 78G 27-2 PN IA 090 | |

| | | | | | |
|-----------------------------------|---|---|---|--|---|
| Component Manufacturer Deutsch | 2 | Location of Manufacturing Plant(s) 17, rue Lavoisier 27000 Evreux France | 3 | Date of original qualification approval: Date: 03/07/1979 Certificate Ref No. 25 | 4 |
|-----------------------------------|---|---|---|--|---|

| | | | | | |
|---|---|--|---|--|---|
| ESCC Specifications used for Maintenance of qualification testing: Generic: 3401 Issue: 3 Detail(s): 3401008 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: PVE 025-169 VA, 05/07/2015 | 7 |
|---|---|--|---|--|---|

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 appendix | | | | |
| | | | | |
| | | | | |
| | | | | |

| | | | | |
|---|---|--|------------------|----|
| PID changes since start of qualification None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box: | 9 | Current PID Verified by: CNES Name of Executive Representative Ref No: PID-025 Issue: n Rev Date: 27/04/2015 | Date: 11/05/2015 | 10 |
|---|---|--|------------------|----|

| | |
|---|----|
| Current Manufacturing facilities surveyed by: CNES on 19/03/2015 (Name of Executive Representative) (Date) | 11 |
| Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain | |
| Report Reference: CRIM_996719_le 19-03-2015-Deutsch.docx | |



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

Ref. No's and purposes: Level 1 NCCS to be raised for traceability of problem found during the Joint Strength test. Failures are due to the non qualified AWG 28 cable selected for this test and not to the crimping itself. Considered as minor and not holding the maintenance.

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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.

Date: 18/05/2015

(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:

16

- Level 1 NCCS 1CDEU501 was raised and closed-out with no impact on scope of qualification as the joint-strength tests with wire AWG26 were passed.

Executive Manager Disposition

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Application Approval: Yes No

Action / Remarks:

Date:

Signature, ESA Representative



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

Tests vehicle identification/description:

| | |
|---------------------------------|----------------------------------|
| DBAS 74-12-0 SN 1A 090 (DC1510) | DBAS 78G 12-0 PN 1A 090 (DC1510) |
| DBAS 70-27-2 SN 1A 090 (DC1447) | DBAS 78G 27-2 PN 1A 090 (DC1447) |

Detail Specification reference:

| Chart V | Test | Tick when done | Conditions | Date Code | Tested Qty | No. of Rejects | Comments if not performed. Comments on Rejection |
|---------------------------------------|-----------------------------|-------------------------------------|-----------------------------|-----------|------------|----------------|---|
| Environmental and Mechanical Subgroup | Wiring | <input checked="" type="checkbox"/> | ESCC 3401 Para. 9.10 | 1447 | 3 | 0 | |
| | Climatic Sequence | <input checked="" type="checkbox"/> | ESCC 3401 Para. 9.13 | 1447 | 3 | 0 | |
| | Permanence of Marking | <input checked="" type="checkbox"/> | ESCC 24800 | 1447 | 3 | 0 | |
| | Corrosion | <input checked="" type="checkbox"/> | IEC Publication No. 68-2-11 | 1447 | 3 | 0 | |
| | Seal Test | <input type="checkbox"/> | ESCC 3401 Para. 9.9 | | | | NA |
| | Plating Thickness | <input checked="" type="checkbox"/> | ESCC 3401 Para. 5.2.3 | 1447 | 10 | 0 | |
| Endurance Subgroups | Wiring | <input checked="" type="checkbox"/> | ESCC 3401 Para. 9.10 | 1510 | 2 | 0 | |
| | Rapid change of Temperature | <input checked="" type="checkbox"/> | ESCC 3401 Para. 9.16 | 1510 | 2 | 0 | |
| | Contact Retention | <input checked="" type="checkbox"/> | ESCC 3401 Para. 9.17 | 1510 | 2 | 0 | |
| | Maintenance Ageing | <input checked="" type="checkbox"/> | ESCC 3401 Para. 9.27 | 1510 | 2 | 0 | |
| | Endurance | <input checked="" type="checkbox"/> | ESCC 3401 Para. 9.18 | 1510 | 2 | 0 | |
| | Seal Test | <input type="checkbox"/> | ESCC 3401 Para. 9.9 | | | | NA |
| | Joint Strength | <input checked="" type="checkbox"/> | ESCC 3401 Para. 9.15 | 1504 | 10 | 2 | AWG 28 cable used for crimping cannot sustain the requirement of 30N. |
| | Engage/Separ. Forces | <input checked="" type="checkbox"/> | ESCC 3401 Para. 9.28 | 1451 | 10 | 0 | |
| | Oversize Pin Exclusion | <input checked="" type="checkbox"/> | ESCC 3401 Para. 9.29 | 1506 | 10 | 0 | |
| | Probe Damage | <input checked="" type="checkbox"/> | IEC Publication No. 512-8 | 1506 | 10 | 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. |