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| **IECEx TEST REPORT**  **IEC 60079-31**  **Explosive atmospheres – Part 31:**  **Equipment dust ignition protection by enclosure “t”** | | |
| ExTR Reference Number : |  | |
| ExTR Free Reference Number : |  | |
| Compiled by + signature (ExTL) : | (enter typed name here) | (enter signature here) |
| Reviewed by + signature (ExTL) : | (enter typed name here) | (enter signature here) |
| Date of issue : |  | |
| Ex Testing Laboratory (ExTL) : |  | |
| Address : |  | |
| Applicant’s name : |  | |
| Address : |  | |
| Standard : | IEC 60079-31:2022, Edition 3.0 | |
| Test Report Form Number : | ExTR60079-31\_3A\_DS (released 2022-04) | |
| Related Amendments, Corrigenda or ISHs : |  | |
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| Possible test case verdicts: |  |
| - test case does not apply to the test item : | N / A |
| - test item does meet the requirement : | Pass |
| General remarks:  The test results presented in this Ex Test Report relate only to the item or product tested.   * "(see Attachment #)" refers to additional information appended to this document. * "(see appended table)" refers to a table appended to this document. * Throughout this document, a point is used as the decimal separator.   The technical content of this Ex Test Report shall not be reproduced except in full without the written approval of the Issuing ExCB and ExTL. | |

| **IEC 60079-31** | | | | | | |
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| **Clause** | | **Requirement – Test** | | **Result – Remark** | | **Verdict** |
|  | | | | | | |
| 1 | | Scope | | | | |
|  | | | | | | |
| 2 | | Normative references | | | | |
|  | | | | | | |
| 3 | | Terms and definitions | | | | |
|  | | | | | | |
| 4 | | General | | | | |
| 4.1 | | Levels of protection | |  | |  |
| 4.2 | | Equipment groups and ingress protection | |  | |  |
| 4.3 | | Requirements for Ex Equipment with Level of Protection “ta” | | | | |
| 4.3.1 | | Fault current | |  | |  |
| 4.3.2 | | Maximum surface temperature | |  | |  |
| 4.3.3 | | Dust exclusion | |  | |  |
| 4.3.4 | | Protective devices | | | | |
| 4.3.4.1 | | General | |  | |  |
| 4.3.4.2 | | Thermal protective devices | |  | |  |
| 4.3.4.3 | | Overcurrent protective devices | |  | |  |
| 4.3.5 | | Supplementary internal enclosure | |  | |  |
| 4.3.6 | | Cells and batteries | |  | |  |
| 4.4 | | Requirements for Ex Equipment with Level of Protection “tb” and “tc” | | | | |
| 4.4.1 | | Fault current | |  | |  |
| 4.4.2 | | Maximum surface temperature | |  | |  |
| 4.4.3 | | Dust exclusion | |  | |  |
| 4.4.4 | | Thermal protection | | | | |
| 4.4.4.1 | | General | |  | |  |
| 4.4.4.2 | | Thermal protective devices | |  | |  |
| 4.4.4.3 | | Overcurrent protective devices | |  | |  |
| 4.4.5 | | Cells and batteries | |  | |  |
| 4.4.6 | | External plug and socket connections for field wiring connection | |  | |  |
|  | | | | | | |
| 5 | | Construction | | | | |
| 5.1 | | Joints | | | | |
| 5.1.1 | | General | |  | |  |
| 5.1.2 | | Threaded joints | |  | |  |
| 5.1.3 | | Gaskets and seals | |  | |  |
| 5.1.4 | | Cemented joints | |  | |  |
| 5.1.5 | | Operating rods, spindles and shafts | |  | |  |
| 5.1.6 | | Windows | | | | |
| 5.1.6.1 | | Windows employing a cemented joint | |  | |  |
| 5.1.6.2 | | Windows employing a gasket joint | |  | |  |
| 5.2 | | Cable glands, cable transit devices and conduit sealing devices | |  | |  |
| 5.3 | | Entries | | | | |
| 5.3.1 | | Plain entries | |  | |  |
| 5.3.2 | | Threaded entries | |  | |  |
|  | |  | |  | |  |
| 6  See also  [**DS 2020/004**](https://www.iecex.com/dmsdocument/3329) | | Verification and tests | | | | |
| 6.1 | | Type tests | | | | |
| 6.1.1 | | Type tests for dust exclusion by enclosures | | | | |
| 6.1.1.1 | | General | |  | |  |
| 6.1.1.2 | | Impact test on supplementary internal enclosures | |  | |  |
| 6.1.1.3 | | Pressure test | |  | |  |
| 6.1.1.4 | | IP test | |  | |  |
| 6.1.2 | | Tests to determine maximum surface temperature | |  | |  |
| 6.2 | | Routine tests | | | | |
|  | | | | | | |
| 7  See also  [**DS 2015/004**](http://iecex.com/dmsdocument/62)  [**DS 2015/010**](https://www.iecex.com/publications/extag-decision-sheets/downloaddocument/56)  [**DS 2020/004**](https://www.iecex.com/dmsdocument/3329) | | Marking | |  | |  |
|  | | | | | | |
| Annex A (Normative) | | Supplementary requirements for entry devices | | | | |
| A.1  [**DS 2009/002**](https://www.iecex.com/publications/extag-decision-sheets/downloaddocument/97) | | General |  | |  | |
| A.2 | | Construction requirements | | | | |
| A.2.1 | | Cable glands, cable transit devices and conduit sealing devices | |  | |  |
| A.2.2 | | Blanking elements and thread adapters | |  | |  |
| A.3 | | Type tests | | | | |
| A.3.1 | | Cable glands, cable transit devices and conduit sealing devices | |  | |  |
| A.3.2 | | Blanking elements and thread adapters | |  | |  |
| A.4 | | Marking | |  | |  |

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| Measurement Section, including Additional Narrative Remarks (as deemed applicable) |