



Ontploffingvoorkomingstechnologie  
Explosion Prevention Technologies



# MTEEx Laboratories

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## TYPE ASSESSMENT AND TEST REPORT

|   |  |
|---|--|
| Report Reference number:  | MTEEx 1997/22.0542B  |
| Revision:   | 0  |
| Reason for Review:  | N/A  |
| Date of issue:  | 2022-11-08   |
| Sampling Date:  | 2022-11-07   |
| Date Tested:  | 2022-11-07   |
| Ex Testing Laboratory (ExTL):   | Megaton Systems (Pty) Ltd T/A MTEEx Laboratories.  |
| Ex Certification Body (ExCB):   | Unit 1 Weirda Place, 17 Hilda AV, Hennospark, Centurion, South Africa, 0157.   |
| Manufacturer's name:  | Digital Matter Embedded (South Africa)   |
| Address:  | NO.7 Pinetree Business Park<br>63 Brahman Crescent<br>Westfield<br>1610  |
| Trademark:  | N/A  |
| Standard associated with this ExTR:   | <b>IEC 62262: 2002-02 First edition</b><br>Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code) |
| Clauses considered:   | All clauses.   |
| Test procedure(s):  | All the ExTL's Test Procedures associated with the Clauses above.  |
| Test Item description:  | Enclosure  |
| Model/Type reference:   | Hawk Housing   |
| IK Code:  | IK   |
| Electrical Ratings:   | Empty enclosure tested   |
| Rated Ambient temp range:   | -20 to 40 °C   |
| Sample/Serial Number:   | N/A  |
| Additional Marking (e.g. IP):   | N/A  |
| <b>All testing fully performed by ExTL staff at ExTL address above:</b><br>Yes. |  |

|   |           |   |
|---|-----------|---|
| Reviewed by + signature (ExTL):   | D. Young  |  |
| Approved by + signature (ExCB):<br>(MTEEx Laboratories Technical Signatory) | H. de Wet |  |

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mineral resources  
Department:  
Mineral Resources  
REPUBLIC OF SOUTH AFRICA  
AIA Number: E1



employment & labour  
Department:  
Employment and Labour  
REPUBLIC OF SOUTH AFRICA  
AIA Number: CL016

**TYPE ASSESSMENT AND TEST REPORT**

**Testing not fully performed by ExTL staff at the above ExTL address:**

N/A

**Possible test clause verdicts:**

- test clause does not apply to the test item: ..... N / A
- test item does meet the requirement ..... Pass
- test item does NOT meet the requirement ..... Fail

**General remarks:**

The test results presented in this Ex Test Report relate only to the item or product tested.

- "(see appended table)" refers to a table appended to this document.
- Throughout this document, a point "." is used as the decimal separator.
- Test results are listed in ANNEX 1 of this document.

The technical content of this ExTR package shall not be reproduced except in full without the written approval of the Issuing ExCB and ExTL.

Random samples of records at the ExTL and ExCB may be drawn for auditing purposes. Information in such records may be subject to sharing with external auditors. Sharing of information is done in accordance to the Quality Management System Requirements.

**General product information:**

The enclosure was manufactured from PA6/GF15 Nylon Glass Compound. The enclosure had the following overall dimensions: 39.19mm x 182.63mm x 118.5mm (Assembled). The enclosure consisted of two main parts, held together by means of eight Philips head self-tapping screws. A sealing element was fitted to one part of the enclosure on the inside of the fasteners. A gland formed part of the moulded construction.



**Special Conditions of use ("X"):**

 None.


**Routine tests and quality verification note(s), if any:**

Visually inspect for: all the fasteners to be present, sealing o-ring present and not pinched.

**Manufacturer's Documents:** N/A

## ANNEX 1

## SANS 62262: IK Code

| Clause      | Requirement – Test   | Result – Remark                       | Verdict                        |
|-------------|--|---------------------------------------|--------------------------------|
| 1           | <p><b>Scope of Work:</b><br/>Sample conditioning using the IK Code. After sample conditioning the sample integrity was tested by:</p> <p>IP68 Testing in report: MTEEx-1997/22.0542A</p> <p>Visually inspected to assign an IK code of: IK08</p>   |                                       |                                |
| 2           | <b>Normative references - Informative</b>  |                                       |                                |
| 3           | <b>Definitions and abbreviations - Informative</b>   |                                       |                                |
| 4           | <b>Requirements</b>  |                                       | Informative                    |
| 5           | <b>General requirements for tests.</b>   |                                       |                                |
| 5.1         | <p><b>Atmospheric conditions were verified to be in the range:</b></p> <p>☠ Temperature range: 15 °C to 35 °C, instrument: 18.6°C<br/>T#0023 Next calibration date: 2023/08/10.</p> <p>☠ Air pressure: 868 kPa (860 mbar to 1 060 mbar).</p>   |                                       |                                |
| 5.2         | <b>Enclosure under test</b>  | The enclosure was complete and clean. | <b>Comply.</b>                 |
| 5.3         | <b>Specifications to be given in the relevant product standard</b>   | Refer to Clause 6.                    | <b>Informative</b>             |
| 6           | <b>Test to verify the protection against mechanical impacts</b>  |                                       |                                |
| 6.1         | The test specified in this standard is a type test.  |                                       | <b>Informative</b>             |
| 6.2         | The devices to be used for this test are described in clause 7.  |                                       | <b>Informative</b>             |
| 6.3 and 6.4 | <p>One sample was mounted on the concrete floor and impacted five times on all sides until visual damage was observed that will impair the ingress protection, the maximum impact observed that caused this damage was 1kg from a height of 0.5m with an impact energy of 5J.</p>  |                                       | <b>IK Code assigned: IK08.</b> |
| 6.5         | <p>Test to be performed to verify the safety and reliability of the equipment:</p> <ul style="list-style-type: none"> <li>IP68 Testing (refer to MTEEx/1997/22.0542A).</li> </ul>  |                                       | <b>Comply</b>                  |
| 7           | <b>Test apparatus</b>  |                                       |                                |
|             | The sample was mounted on the concrete floor and the impact was done using the vertical hammer as per SANS 60079-0, and test procedure MTEExTP004. Refer to Clause 6 for more details.   |                                       |                                |