



Mining And Surface Certification (Pty) Ltd

(Pty) Ltd: 2015/021934/07

IN TERMS OF REGULATION 21.17.2 OF THE MINERALS ACT (INCORPORATION THE MINE HEALTH AND SAFETY ACT) AND REGULATION 9 (1) OF THE ELECTRICAL MACHINERY REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT

| | | | |
|---|--|-------------------------------------|---|
| IA CERTIFICATE | MASC M/20-2218X | Issue | 0 |
| Issue Date | 12 August 2020 | Expiry Date | 12 August 2030 |
| Applicant | Hytronic (Pty) Ltd, Cnr Stanley & Max Street, Knights, Germiston, South Africa | | |
| Manufacturer | Hytronic (Pty) Ltd, Cnr Stanley & Max Street, Knights, Germiston, South Africa | | |
| Description (See "Annex A" below) | | | |
| Equipment | OPS/DM3 | Type | OPS/DM3 |
| | | | |
| MARKING: | Applicant / Manufacturer | Hytronic Pty (Ltd) | |
| | Type | OPS/DM3 | |
| | Ex Marking | Ex db I Mb | |
| | IA Number | MASC M/20-2218X | |
| | Serial Number | (See "Conditions of Certification") | |
| | Safety Parameters | See "Annex A" below | |
| WARNING(S) | DO NOT OPEN IN HAZARDOUS AREA OR WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT. | | |
| Compliance: | | | |
| The equipment as described above and in MASC report 20-2218 has been allocated the rating <u>Explosion Protected Ex db I Mb</u> utilizing the SANS/IEC Standards: | | | |
| <ul style="list-style-type: none"> SANS (IEC) 60079-0:2019 General requirements SANS (IEC) 60079-1:2015 Flameproof enclosures d ARP 0108:2014 Regulatory requirements for explosion protected apparatus | | | |
| Special conditions of safe use X: | | | |
| <ul style="list-style-type: none"> See "Annex A" below | | | |
| Conditions of manufacture: | | | |
| <ul style="list-style-type: none"> See "Annex A" below | | | |
| W Haywood TECHNICAL SPECIALIST | | | F du Toit TECHNICAL SPECIALIST |
| <p>This certificate only covers the sample submitted and does not cover production units.</p> <p>According to the relevant requirements of the MHS Act and the OHS Act, production units of explosion protected equipment are required to comply with third party quality assurance (an approved mark scheme or batch testing by an accredited test laboratory).</p> | | | |



Apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:

- SANS 10086 requirements;
- Any conditions mentioned in the above certificate;
- Any relevant requirements of the MHS Act and code of practice enforced in terms of regulations 21.17.2 of the minerals act;
- Any restrictions and conditions enforced by the chief inspector of mines, principal inspector (Group I equipment) or chief inspector of factories (Group II equipment).



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Mining And Surface Certification (Pty) Ltd
Unit 5 Lelyta Park, 45 Jurg Ave. Hennospark Ext 87
Centurion, 0157

IA CERTIFICATE: MASC M/20-2218X

Equipment: OPS/DM3

ANNEX A

| Description | Enclosure | Populated | Unpopulated |
|---|--|--|--|
| | | General | <ul style="list-style-type: none"> The OPS/DM3 was manufactured by Hytronic (PTY) LTD. The unit was manufactured from a machined steel billet with approximate dimensions of 113mm cylindrical x 125mm. The lid is secured with 4 x M6 x 1.0p x 16mm (Grade A2-70) Socket head cap screws. <p><u>The OPS/DM3 has various entries on the enclosure:</u></p> <ul style="list-style-type: none"> Cap – Three x M20 x 1.5p Threaded Entries Body - Three x ¼" BSP Threaded Entries <p><u>Population</u></p> <ul style="list-style-type: none"> Pressure Switch x 3 |
| | Dimensions | <ul style="list-style-type: none"> See Above | |
| | Material | The unit consisted out of a mild steel cylindrical enclosure and was machined from a solid billet. | |
| Safety Parameters | Vm = 42V Max | | |
| Standard compliance | See "certificate" above | | |
| Warnings | See "certificate" above | | |
| Conditions of Certification | | | |
| Special Conditions of safe use (X) | <ul style="list-style-type: none"> Only suitably certified glands may be used. All unused entries must be sealed using suitably certified blanking elements. The special fasteners used may only be grade A2-70 or higher. Corrosion inhibiting grease in accordance with clause 5.2.1 of SANS60079-1 should be used on flamepaths. The rating(s) of the unit(s) may not be exceeded. Supply to the unit must be done in an Ex manner | | |
| Conditions of manufacture | <ul style="list-style-type: none"> The equipment must be provided with internal and external earthing / bonding facilities e.g. stud, spring washer and nut (Stainless steel) Non-corrosive. The hole under the fastener must comply with a tolerance of H13. A copy of the type MASC certificate must be issued with each enclosure. A copy of the instruction / parts manual and the type certificate must be provided with each enclosure The Cap flamepath length shall be L= 15mm with a Gap of 0.2mm. The Adaptor flamepath length shall be L=12.5mm with a Gap of 0.4mm | | |

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While every endeavour is made to ensure that a test / assessment / inspection is representative and accurately performed, and that a report / certificate is accurate in the quoted results and conclusions drawn from the test / assessment / inspection, MASC or its directors/employees shall in no way be liable for any error made in carrying out the test / assessment or for any erroneous statement, whether in fact or in opinion, contained in a report / certificate issued pursuant to a test / assessment / inspection.

MASC takes no responsibility for any non-conformances, exclusions or any results / assessments / inspections not in compliance with the standards. By marking the equipment in accordance with the documentation / standard, the manufacturer / applicant attests on his own responsibility that the equipment / installation has been designed and constructed in accordance with the applicable requirements of the relevant standards and documentation, that the routine verifications / routine tests have been correctly completed and the equipment / installation complies with the documentation and standard(s).

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