



Mining And Surface Certification CC

CC 2008/202081/23



Certificate Number: MASC MS/13-838X

Issue: 20 February 2015

Expire: 03 February 2024

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IA – CERTIFICATE

Revision 1: Alternative enclosure arrangements included

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

Ex – Type Examination

Certificate number:

Equipment:

Serial No:

MASC MS/13-838X (R1)

Switch / push button enclosures

HSSS / HSTART / HSTOP / HMHES / HROT / HJCB / HBAC

(See “Conditions of Certification”)

Applicant:

Address:

HYTRONIC (PTY) LTD.

P.O Box 2667

Primrose

1416

South Africa

Manufacturer:

Address:

HYTRONIC (PTY) LTD.

P.O Box 2667

Primrose

1416

South Africa

DESCRIPTION:

The units are manufactured by Hytronic (PTY) LTD consisting of two main components, namely: enclosure complete with lid, the lid can comprise of several different arrangements for push buttons and switch assemblies. The enclosure was manufactured from EN8 steel. The dimensions of the enclosure range from 105mm diameter 71mm high to 105mm diameter to 96mm high. The enclosure lid fitted through a 15.5mm (min) long tapered spigotted joint (flame path) into the enclosure. The lid is held down by 3 x M6 cap screws. The enclosure and lid was zinc plated.

The switch and push button assemblies are manufactured from brass. The assembly fitted in a flameproof manner into the enclosure top lid. The switch and push button assemblies are locked into position by means of a Lock-Tite. The enclosure body may be provided with zero to three M20 or M25 tapped holes in any combination spaced equally or orthogonally on the circumference of the body. The enclosure lid may be provided with one to two M20, M25 or M32 tapped hole. The cover that has two threaded entries can only be manufactured with M20 threaded entries.

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Mining And Surface Certification CC Reg No: 2008/202081/23

Members: Roelof Viljoen & Francois du Toit

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**IA CERTIFICATE NUMBER: MASC MS/13-838
SWITCH & PUSH BUTTON ENCLOSURES – FLAMEPROOF
HSSS / HSTART / HSTOP / HMHES / HROT / HJCB / HBAC**

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MARKING

Manufacturer: Hytronic (Pty) Ltd
Type: HSSS / HSTART / HSTOP / HMHES / HROT / HJCB / HBAC
Ex Rating: Ex d I/IIB T4
I.A. No. MASC MS/13-838X
Serial No.: (See "conditions of certifications")

COMPLIANCE:

The equipment as described above and in MASC letter 13-838 is hereby certified Explosion Protected Ex d I/IIB T4 and is suitable for use in hazardous locations as stated below and as tested, assessed and inspected in accordance with the relevant requirements of SANS/IEC Standards:

The evaluation was conducted according to the requirements of:

- i) SANS (IEC) 60079-0 : 2005 "General Requirements"**
- ii) SANS (IEC) 60079-1 : 2004 "Flameproof enclosures 'd'"**
- iii) ARP 0108 (Edition 1.1) "Regulatory requirements for explosion protected apparatus".**

Location	Zone 1 & 2	Mining / Gas (Surface)
Hazard Frequency	---	Intermittent as could occur under normal operating conditions in hazardous area
Environment	Group I / IIB	Methane (coal dust) / Propane to Ethylene
Limiting Temperature	T4	135°C
Ambient Temperature	-20°C to +40°C	

The use of apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:

- i. SANS 10086 requirements;
- ii. Any conditions mentioned in the above report;
- iii. Codes of Practice enforced in terms of Regulations 21.17.2 of Minerals Act, by Chief Inspector of Mines;
- iv. Any restrictions and conditions enforced by Chief Inspectors of Mines, Principal Inspector (Group I equipment) of Chief Inspector of Factories (Group II equipment);
- v. Any relevant requirements of the MHS Act or the OHS Act.

CONDITIONS OF CERTIFICATION:

None

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SWITCH & PUSH BUTTON ENCLOSURES – FLAMEPROOF
HSSS / HSTART / HSTOP / HMHES / HROT / HJCB / HBAC**

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SPECIAL CONDITIONS OF USE (“X”):

- Only suitably certified glands may be used for cable entries. All unused entries may be sealed using suitably certified blanking elements.
- The external earth or bonding facility shall be provided by the mounting arrangements of the enclosure. A washer securing the connection shall be incorporated (e.g. a spring washer)

CONDITIONS OF CERTIFICATION:

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.)

Approved on behalf of MASC



**F du Toit
TECHNICAL SPECIALIST**

Mining And Surface Certification

This document is issued based on Mining And Surface Certification’s Standard Contract terms and conditions available on request.

While every endeavour is made to ensure that a test / assessment is representative and accurately performed, and that a report is accurate in the quoted results and conclusions drawn from the test / assessment, MASC or its members/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 issued pursuant to a test / assessment.

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

This document is only for use and application in South Africa. It is issued based on National interpretations and accepted practises.

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