



# Mining And Surface Certification CC

CC 2008/202081/23



Certificate Number: MASC MS/14-0407X  
Issue: 30 April 2014  
Expire: 30 April 2024  
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## IA – CERTIFICATE

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:

**MASC MS/14-0407X**

Equipment:

Rotating Flasher Unit

Serial No:

(See “Conditions of Certification”)

Requested By:

HYTRONIC PTY LTD

Address:

Cnr Stanley & Max Street,  
Knights,  
Germiston,  
South Africa

Certificate Holder:

HYTRONIC PTY LTD

Address:

Cnr Stanley & Max Street,  
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## DESCRIPTION:

The flasher unit consists of two parts:

- A cylindrical flameproof steel base with a round power supply PCB at the bottom of the enclosure, powered from voltages up to 220V ( $U_m = 250V_{rms}$ ) and a round barrier board on top of the power supply board supplying intrinsically safe power via a flameproof cemented bushing. Up to three equally spaced M20 x 1.5 or M25 x 1.5 gland entries may exist on the side of the enclosure to allow cable entry for connection of power to the internal terminal block.
- A separate compartment, made up for a cylindrical polycarbonate section with a round steel top, is located on the top of the flameproof enclosure. The flasher PCB and LED's, powered from the intrinsically safe output of the barrier board, are located in the top compartment. The LED's are visible via the polycarbonate cylindrical section.

## MARKING

Manufacturer:

Hytronic (Pty) Ltd

Type:

HFRL

Ex Rating:

Ex d ib I/IIB T4

I.A. No.

MASC MS/14-0407X

Serial No.:

(See “conditions of certifications”)

## / . COMPLIANCE...

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Rotating Flasher Unit

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## COMPLIANCE:

The unit / system as described above and in MASC letter **14-0407** is hereby certified "Explosion Protected" Ex d ib 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 enclosure 'd'"
- iii) SANS (IEC) 60079-11 : 2007 "Equipment protection by intrinsic safety 'i'"

Location	Zone 1 & 2	Mining (Gas and coal dust) / 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:***

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

## SPECIAL CONDITIONS OF SAFE USE (X):

- Only suitably certified glands may be used for cable entries. All unused entries must be sealed using suitably certified blanking elements.
- The IP54 rating of the flasher compartment must be maintained. Replacement of the incorrect o-ring may have a bearing on the flameproof as well as the intrinsic safety.
- 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...**

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**CONDITIONS OF MANUFACTURE**

- The copy of the type certificate and the instructions must be provided with each unit. (The entry threads for cable entrie(s) are specified on this certificate).

**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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