



# Mining And Surface Certification (Pty) Ltd

CC 2008/202081/23



Certificate Number:

MASC M/15-1811

Issue:

16 March 2017

Expire:

05 January 2026

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## IA – CERTIFICATE

(Supplementary one – To include new flamepath dimensions)

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 M/15-1811**

Equipment:

E-Stop Station

Serial No:

(See “Conditions of Certification”)

Applicant:

Electroflame CC.

Address:

83 Brand Street,  
President Park,  
Midrand  
South Africa

Manufacturer:

Electroflame CC.

Address:

83 Brand Street,  
President Park,  
Midrand  
South Africa

### DESCRIPTION:

The Stop Start enclosure is manufactured from electroplate steel billet. The unit has approximate dimensions of (130mm diameter) x 85mm.

The cover is fixed with **six** M6 (grade A2-70) fasteners.

The unit consist of the enclosure with E- stop switch.

### The equipment has various threaded entries on the enclosure:

The unit has **two** x **M25** entries.

**Note:** The exact entry combination by the certification drawings. All threaded entries has a pitch of 1.5 and the holes are tapped 6H.

### MARKING:

**Manufacturer:** Electroflame CC.

**Type:** E-Stop Station

**Serial No:** (See “Conditions of Certification”)

**Ex Rating:** Ex d I Mb

**I.A. No:** MASC M/15-1811

### **/ . WARNING...**

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Mining And Surface Certification (Pty) Ltd Reg No: 2015/021934/07

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**WARNING:** “ISOLATE ELSEWHERE BEFORE OPENING THIS COVER” and  
“DO NOT OPEN WHEN ENERGIZED OR AN EXPLOSIVE ATMOSPHERE IS PRESENT”.

## COMPLIANCE:

The equipment as described above and in MASC report 15-1811 is hereby certified Explosion Protected Ex d I Mb 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 : 2009 “General Requirements”
- ii) SANS (IEC) 60079-1 : 2009 “Flameproof enclosures ‘d’”
- iii) ARP 0108 (Edition 1.1) “Regulatory requirements for explosion protected apparatus”.

Location	Zone 1 & 2	Mining
Hazard Frequency	---	Intermittent as could occur under normal operating conditions in hazardous area
Environment	Group I	Methane (coal dust)
Limiting Temperature		150°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:

### SPECIAL CONDITIONS (X):

- None

### CONDITIONS OF MANUFACTURE:

- A routine overpressure test of 600kPa must be conducted on each compartment of all production enclosures, according to the requirements of SANS 60079-1.
- 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.
- No cells or batteries may be used/ housed in the equipment.
- The flamepath lengths shall not be less than (L. 19.5mm, l. 9.4mm) and the flamepath gap shall not exceed 0.4mm.

**/ . The equipment...**

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- The equipment shall comply with the safety requirements of the applicable industrial standards.
- Earth studs are provided for the connection of earthing / bonding conductors. The earthing or equipotential bonding connection facilities shall allow for the effective connection of at least one conductor with a cross sectional area (minimum of  $4\text{mm}^2$ ) given in the table below;

Cross sectional area of phase conductors of the installation, S ( $\text{mm}^2$ )	Minimum cross-sectional area of corresponding protective conductor ( $S_p$ )
$S \leq 16$	S
$16 < S \leq 35$	16
$S > 35$	0.5S

- Switchgear installed in the enclosure shall not have contacts immersed in flammable dielectric and must meet the supplementary requirements for switchgear as detailed in Clauses 18 of SANS 60079-0 and Clauses 12.6 & 17 of SANS 60079-1.
- Liquids used in the enclosure shall comply with clause 12.5 of SANS 60079-1.
- 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.

## 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



**M Erasmus**  
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.*

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*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).*

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