

Megaton Systems (Pty) Ltd T/A

MTEx Laboratories

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Ontploffing Beskermingsdienste
Explosion Prevention Services

ACCREDITED TEST LABORATORY

IN TERMS OF THE ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

INSPECTION AUTHORITY CERTIFICATE

Brain Industries (Pty) Ltd
No 5 Zwavelsplace
Achilles Road
Zwavelpoort
0081

Issued: 2019/01/07
Expire: 2029/01/07
Reference: PO100431
Revision: 0

Equipment: LED Strip Light
Supplier: Brain Industries (Pty) Ltd
Address: No 5 Zwavelsplace, Achilles Road, Zwavelpoort, 0081
Model/Type: HALO1-Alpha-230V
Serial No.: All serial numbers of equipment produced covered by a valid batch verification report or product certification quality mark.
Ex Rating: Ex tb IIIC T100°C IP68 Db or
Ex mb IIC T5 IP68 Gb
Ex mb I T5 Mb

Applicant:

BRAIN INDUSTRIES (PTY) LTD

Inspection Authority Number: **MTEx-S/18.0384 X**

Standards used:

SANS 60079-0: 2012 Ed.5 IEC 60079-0: 2011 Ed.6	Explosive atmospheres – Part 0: General requirements.
SANS 60079-31: 2014 Ed.2 IEC 60079-31: 2013 Ed.2	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'.
SANS 60079-18: 2017 Ed.4 IEC 60079-18: 2014 Ed.4	Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

Hazardous Dust Area: Zone 21 and 22
Hazardous Gas Area: Zone 1 and 2
Occurrence: Intermittent and abnormal
Hazardous Gas Group: Group I/ IIC/ IIIC
Permitted Temperature: T5 (T100°)

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Template Ref: MTExDOC007 Rev 06 (2018/11/14)
Print Date: 2019-01-20

Equipment Protection level (EPL):

EPL		Definition
Gas	Dust	
Gb	Db	Equipment for explosive gas and dust atmospheres, having a "high" level of protection, which is not a source of ignition in normal operation or during expected malfunctions.
Gc	Dc	Equipment for explosive gas and dust atmospheres, having an "enhanced" level of protection, which is not a source of ignition in normal operation and which may have some additional protection to ensure that it remains inactive as an ignition source in the case of regular expected occurrences (for example failure of a lamp).
Mb		Equipment for installation in a mine susceptible to firedamp, having a "high" level of protection, which has sufficient security that it is unlikely to become a source of ignition in normal operation or during expected malfunctions in the time span between there being an outbreak of gas and the equipment being de-energized.

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 8(1) of the Occupational Health and Safety Act, provided that the apparatus is used as prescribed in accordance with:

- 1) Any conditions set out in this Certificate;
- 2) This certificate only covers equipment imported between the "Issued" and "Expiry" dates;
- 3) When the supporting Q.A.N. (Quality Assurance Notification) of the equipment manufacturer expires, it is the responsibility of the applicant (as mentioned above) to submit a valid Q.A.N to MTEEx Laboratories.
- 4) The test results presented in this Ex Test Report relate only to the item or product tested.

1. OVERVIEW

The LED strip consists of surface mounted LED's and resistors, connected in parallel, The components are completely encapsulated using food grade silicone. The connections are factory fitted and had male and female connectors and an end cap for interconnecting more than one strip of lights (For dust environment only).

For use in a gas environment, the interconnections will be made via Ex e terminals housed inside a previously approved Ex e junction box.



Electrical Ratings:

Supply Voltage : 12 to 240V
 Power consumption per meter : 16.8Watt per meter

2. REASON FOR REVIEW

ARP 0108: 2014 Requirement.

3. DOCUMENTATION PROVIDED

- HALO LED Strip lighting instruction manual constellation series 2nd generation edition 1- Rev 0
- Firelab report (FTC11/151)
- Firelab report (FTC16/260)
- MASC report (17-0327)
- MASC IA certificate (M/17-0327X)
- MASC report (17-0600)

4. INSTALLATION INSTRUCTIONS

- Refer to the manufacturers installation instructions.

5. CONDITIONS OF CERTIFICATE (X)

- For use in a gas environment, the interconnections will be made via Ex e terminals housed inside a previously approved Ex e junction box.
- The LED strip light must be installed in such a way that it is protected from an impact not exceeding 16 joule.

6. MARKING

For validity purposes, the following marking must be added to all equipment covered by this certificate:

Supplier: Brain Industries (Pty) Ltd
Equipment: LED Strip Light
Model/Type: HALO1-Alpha-230V
IA Number: MTEEx S/ 18.0384 X
Ex Rating: Ex tb IIIC T100°C IP66 Db or
Ex mb IIC T5 IP66 Db
Ex mb I T5 Mb
Serial No.: -----

Note: It is the responsibility of the supplier to ensure that the marking label complies with the ARP 0108: 2014, clause 7.

Responsible Testing Officer:

Reviewed by:

H De Wet, Testing Officer.

D Young, Editor.

MTEEx Laboratories

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MTEEx Laboratories takes no responsibility for any non-conforming tests / assessments / results which is not in compliance with the relative Standards. By marking the equipment as mentioned in the documentation, the manufacturer takes full responsibility that the equipment has indeed complied with the original type assessment and has been subjected to any routine verification(s) / test(s) respectively.